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# Employees Retirement System Review – 1<sup>st</sup> Quarter, 2021

City of Birmingham

## **Flagship Financial Partners**

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June 2<sup>nd</sup>, 2021



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# Prior Quarter Summary & Meeting Agenda

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- **4<sup>th</sup> Quarter, 2020 Meeting Summary:**

- The portfolio returned 11.7% during the Q4 period, outperforming its target index by 110bp.
- No changes were made to the portfolio.

- **1<sup>st</sup> Quarter, 2021 Meeting Agenda:**

- Quarterly Market Review
- Executive Summary
- Investment Review

# Quarterly Market Review

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# In 1Q, more cyclical equities outperformed

Performance, select asset classes.

	Q1 2021	Since March 23 trough	FY 2020	Trailing 1 year
Cash	0.0%	0.1%	0.5%	0.1%
US Gov't FI (short)	-0.1%	0.4%	3.2%	0.2%
US Gov't FI (intermediate)	-2.9%	-1.9%	7.7%	-2.4%
US Gov't FI (long)	-14.2%	-16.8%	18.1%	-17.3%
US TIPS	-1.5%	7.7%	11.0%	7.5%
US Municipal FI	-0.4%	13.5%	5.2%	5.5%
US IG Corp FI	-4.5%	14.5%	9.4%	7.9%
US HY Corp FI	0.9%	34.8%	6.1%	23.2%
EM FI (Hard)	-4.5%	23.8%	5.3%	16.0%
EM FI (Local)	-6.7%	18.9%	2.7%	13.0%
US All-cap	6.3%	88.1%	20.9%	62.5%
US Large cap growth	0.9%	86.7%	38.5%	62.7%
US Large cap value	11.3%	82.7%	2.8%	56.1%
US Mid cap	8.1%	104.2%	17.1%	73.6%
US Small cap	12.7%	124.3%	20.0%	94.8%
Int'l Developed Markets	3.5%	67.0%	7.8%	44.6%
Emerging Markets	2.3%	77.4%	18.3%	58.4%
Preferreds	-0.5%	45.5%	7.4%	20.3%
MLPs	22.0%	128.4%	-28.7%	103.1%
US Real Estate	8.9%	68.9%	-8.0%	37.8%
Senior loans	1.0%	33.7%	2.8%	15.3%

Source: Bloomberg, UBS, as of March 31, 2021.

The views expressed in this slide belong to CIO Americas, GWM



# After record highs, stocks are likely to stay volatile

S&P 500 index level, with callouts for select news items.



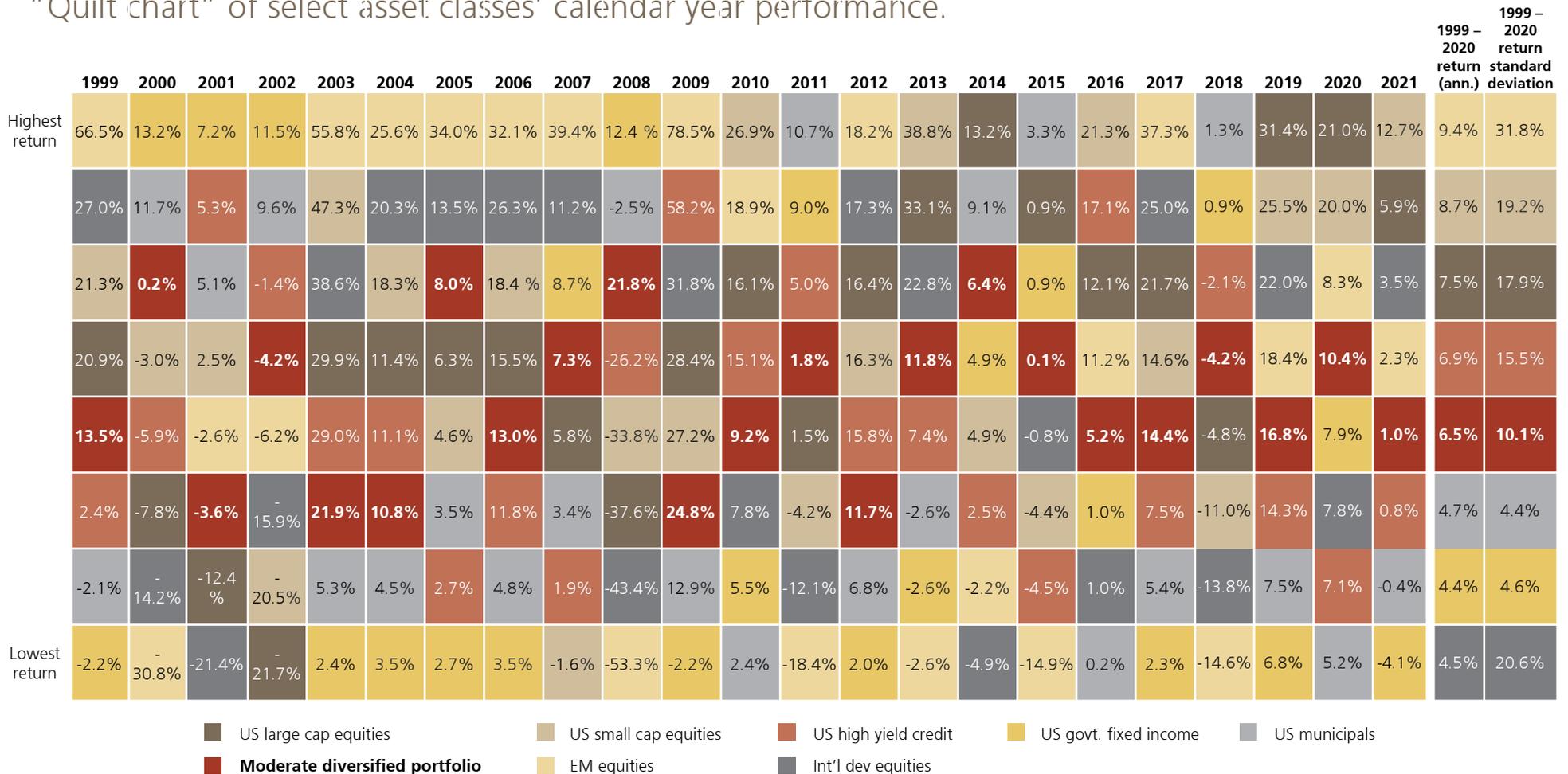
Source: Bloomberg, UBS, as of March 23, 2021.

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# Balanced portfolios are in positive territory through 1Q...

"Quilt chart" of select asset classes' calendar year performance.



Source: Bloomberg, UBS, as of March 31, 2021.

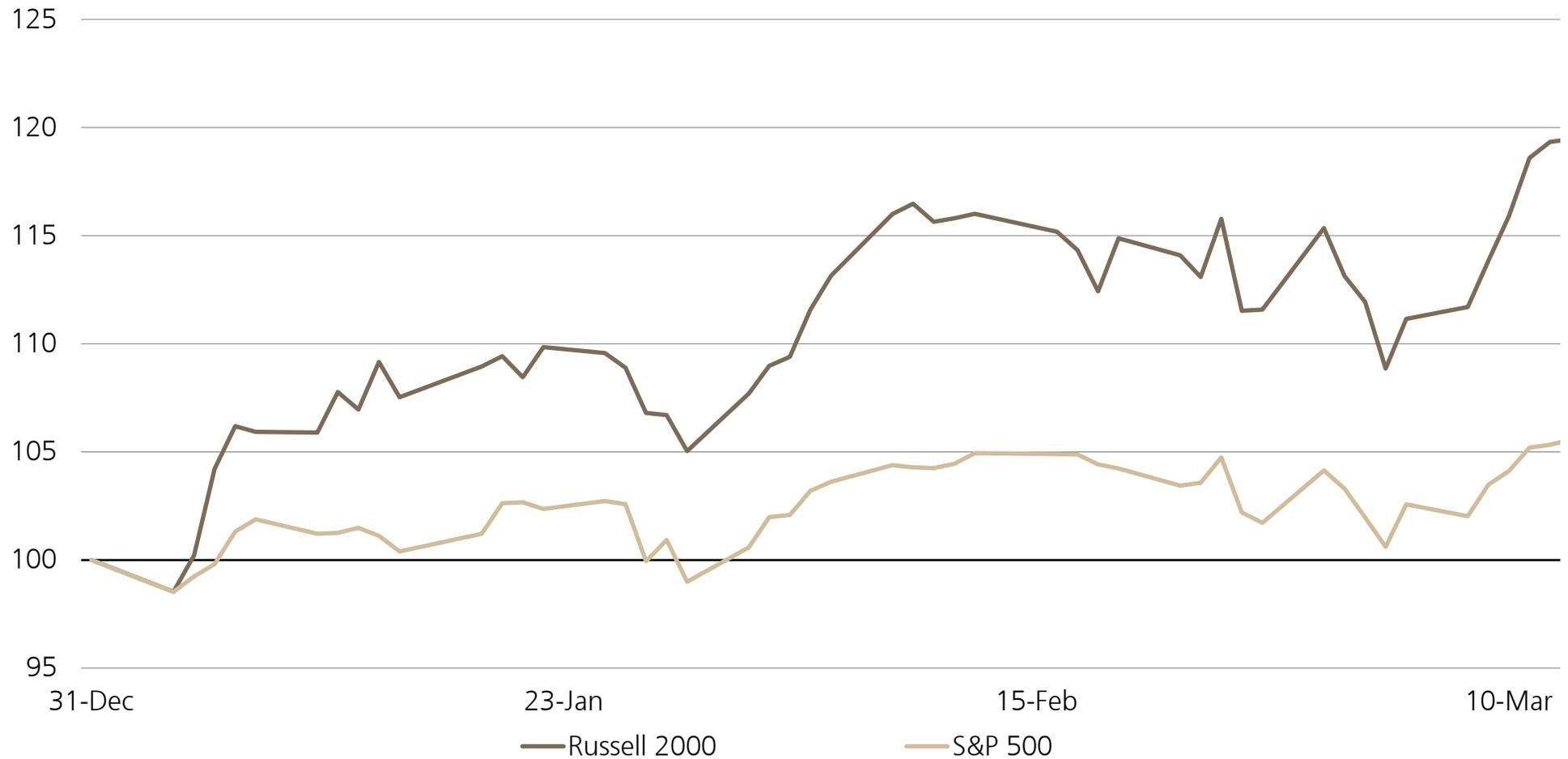
Note: The Moderate Diversified Portfolio performance calculations are a hypothetical analysis based on historical asset class returns. This backward-looking illustration assumes an investment in asset class indexes represented by the current Strategic Asset Allocation (SAA) for a moderate risk profile investor in a taxable portfolio without non-traditional assets. Performance calculations assume annual rebalancing, don't take into account any prior SAA for this investor profile, and include time periods before the SAA was created. See the latest "UBS House View: Detailed asset allocation tables" document for the detailed SAA. These calculations will not match the official published performance data, which reflect monthly rebalancing. For periods prior to 2009, this illustration assumes that the Bloomberg Barclays EM Local Currency Government Total Return Index allocation (inception date of July 4, 2008) was invested fully in the Bloomberg Barclays EM USD Aggregate Total Return Index.

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# ...thanks to strong performance by small stocks

Q1 2021 S&P 500 and Russell 2000 index total returns. Base=100 on December 31, 2020.



Source: Bloomberg, UBS, as of March 31, 2021.

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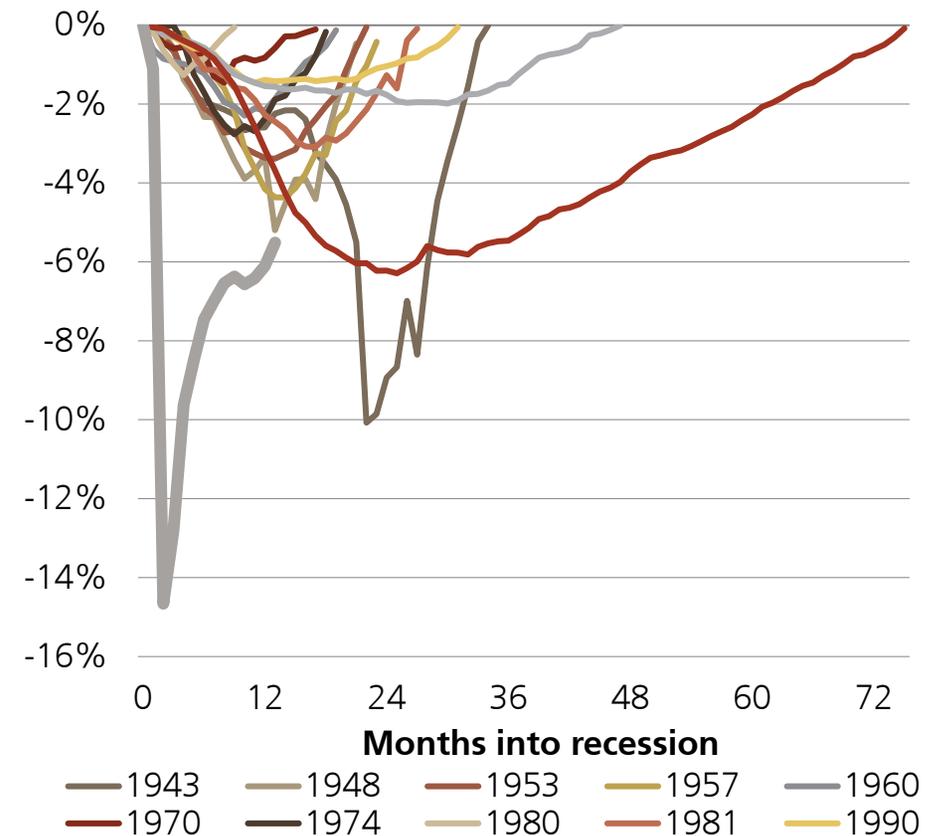


# 1Q 2021 economic review

- **Economic growth** has begun to meaningfully accelerate, with 4Q20 quarterly GDP growth rising to 4.3%. With further fiscal stimulus, and vaccination campaigns rolling out in force, economic growth is set to continue to accelerate, especially when compared to the low base of last year's growth.
- **The US labor market** has rebounded strongly, with the latest nonfarm payroll data coming in at 916,000, well above February's results of 379,000. However, the total number of employed people in the US is still over 8 million less than pre-pandemic levels.
- **Inflation** has remained subdued, but has ticked slightly higher as the economy has recovered. Year-over-year, core PCE at the end of the first quarter stood 1.4%, though market inflation expectation gauges have risen materially. With the Fed having changed its inflation targeting framework to one that allows prices to run above 2% to make up for time inflation was below the threshold, and with further fiscal stimulus in the pipeline and pent-up savings by US households, prices should begin to rise more meaningfully in the later part of 2021.

## The economy is starting to recover

Job losses, % of pre-recession peak in non-farm payrolls



Source: Bloomberg, UBS, as of March 31, 2021.

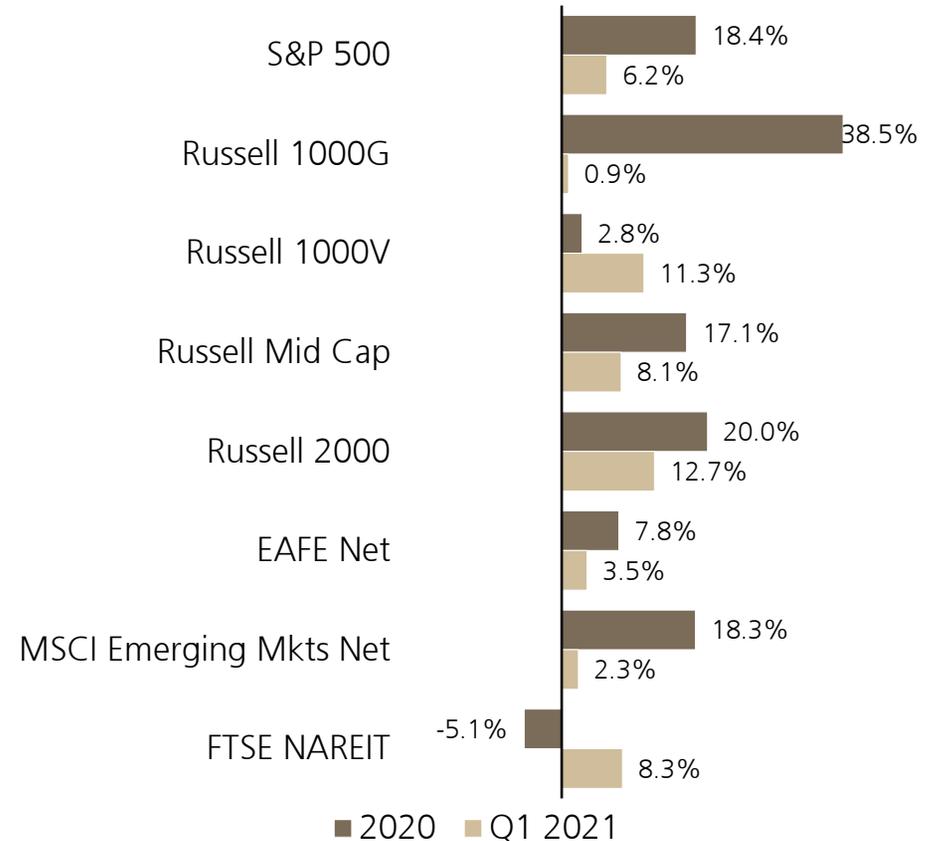
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# 1Q 2021 equity review

- Stocks have registered new all-time highs in 1Q21, thanks to continued extraordinary policy support on both the fiscal and monetary sides. Increased vaccination efforts and a slowing spread of COVID-19 contributed to growing optimism about the US economic recovery, boosting stocks.
- Within US large-cap stocks, value outperformed growth in Q1 for the second quarter in a row. Small-caps also continued their outperformance versus large-caps, bringing the two quarter outperformance total to 28%.
- International developed stocks had a positive first quarter, but continue to lag behind US stocks. Emerging market shares cooled off in 1Q21, as many countries have yet to fully control the spread of the virus and have yet to get vaccination efforts fully up and running.

## Total return for select asset classes



Source: Bloomberg, UBS, as of March 31, 2021.

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# US stocks, performance by size and style

Annualized return, select time periods, in %.

## 1Q 2021

<b>Large</b>	11.3	5.9	0.9
<b>Mid</b>	13.1	8.1	-0.6
<b>Small</b>	21.2	12.7	4.9
	<b>Value</b>	<b>Blend</b>	<b>Growth</b>

## 1-year

<b>Large</b>	56.1	60.6	62.7
<b>Mid</b>	73.8	73.6	68.6
<b>Small</b>	97.1	94.8	90.2
	<b>Value</b>	<b>Blend</b>	<b>Growth</b>

## 3-year

<b>Large</b>	11.0	17.3	22.8
<b>Mid</b>	10.7	14.7	19.4
<b>Small</b>	11.6	14.8	17.2
	<b>Value</b>	<b>Blend</b>	<b>Growth</b>

## 5-year

<b>Large</b>	11.7	16.7	21.0
<b>Mid</b>	11.6	14.7	18.4
<b>Small</b>	13.6	16.4	18.6
	<b>Value</b>	<b>Blend</b>	<b>Growth</b>

Source: Morningstar as of December 31, 2020.

### Representative indices used in style grid:

**Large cap value:** Russell 1000 Value Index

**Mid cap value:** Russell MidCap Value Index

**Small cap value:** Russell 2000 Value Index

**Large cap blend:** Russell 1000 Index

**Mid cap blend:** Russell MidCap Index

**Small cap blend:** Russell 2000 Index

**Large cap growth:** Russell 1000 Growth Index

**Mid cap growth:** Russell MidCap Growth Index

**Small cap growth:** Russell 2000 Growth Index

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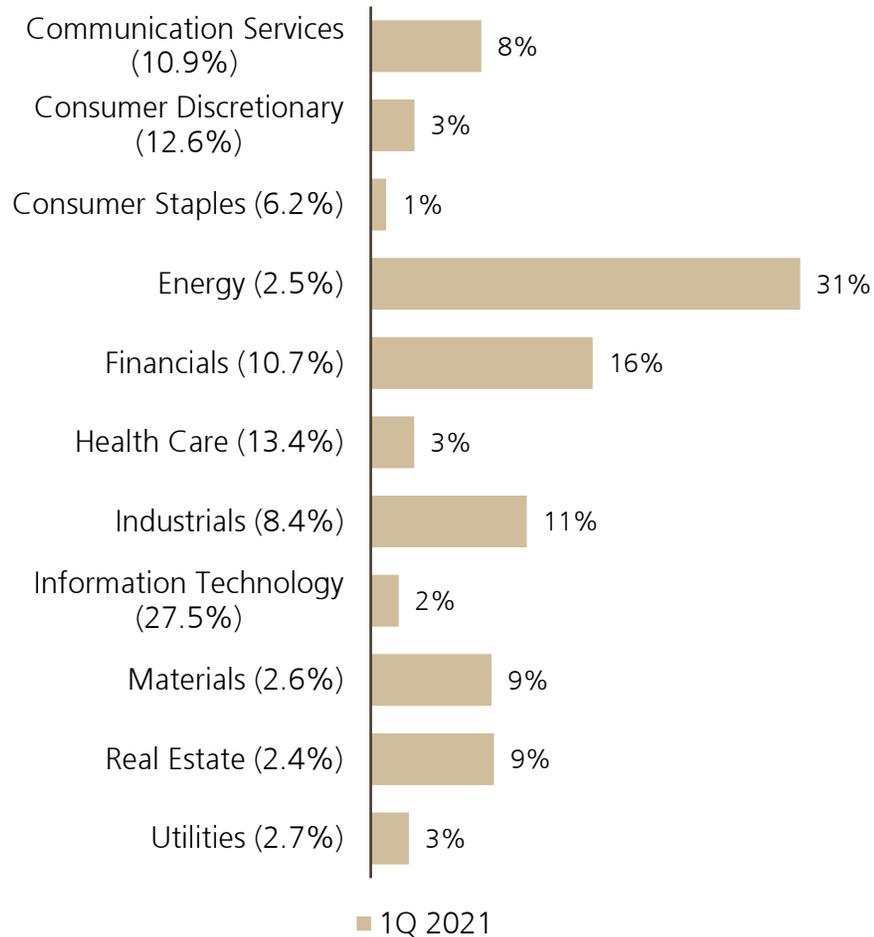
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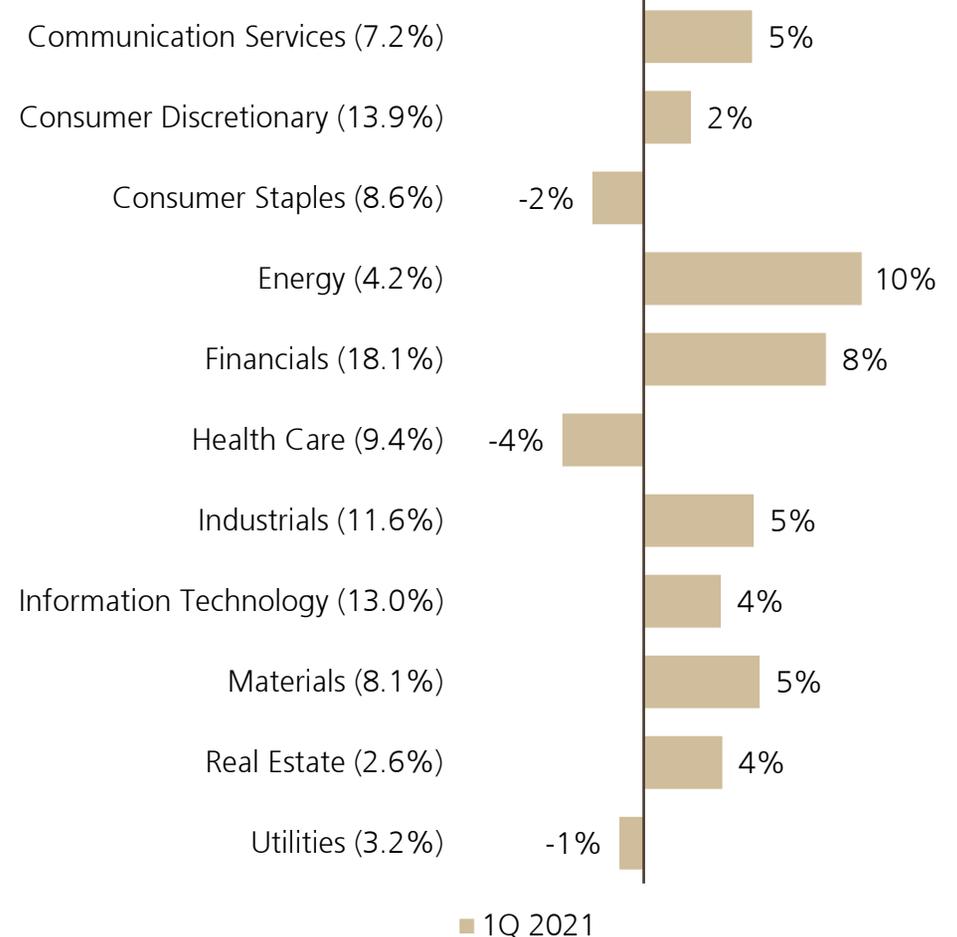
# Sector performance: S&P 500 and MSCI ACWI ex-US

Sector performance (weight), Q1 2021 returns.

## S&P 500



## MSCI ACWI ex-US



Source: FactSet, UBS, as of March 31, 2021.

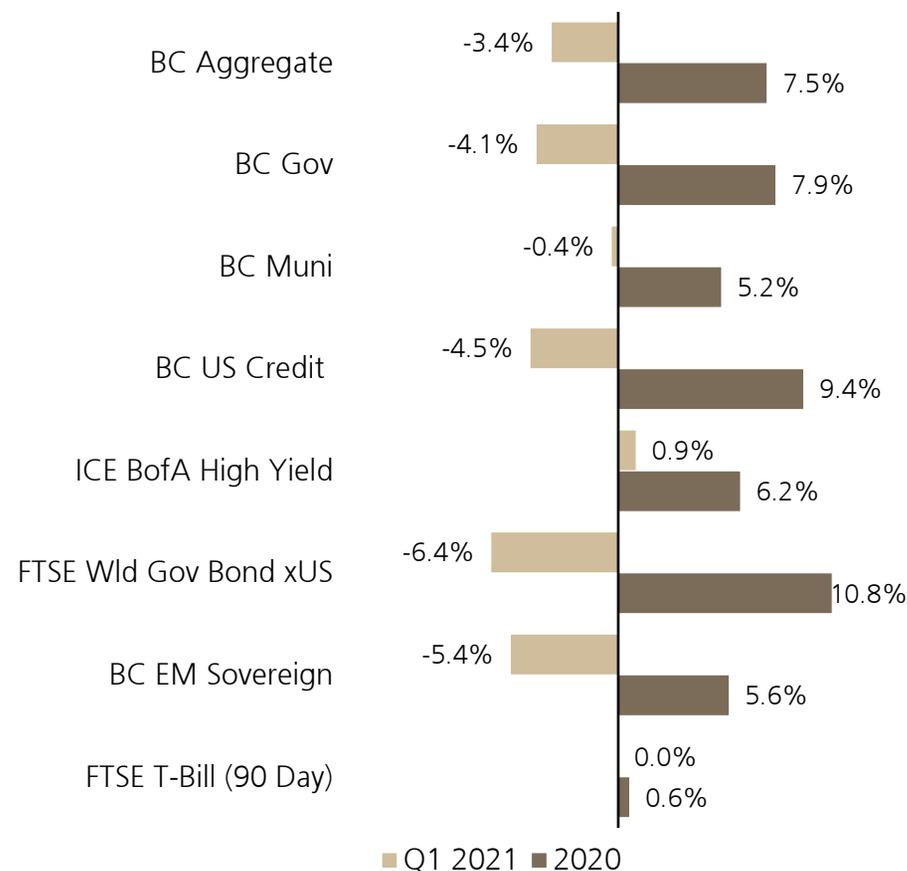
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# 1Q 2021 fixed income review

- Interest rates will remain a key driver in 2021 and beyond. We think the bulk of the move in Treasury rates this year has already occurred, but expect 10-year yields to rise to 2% by the end of the year. A steeper yield curve is a positive for the earnings of value companies, but may hurt some growth companies' lofty current valuations.
- Most credit segments posted negative returns for the first quarter of 2021. The main differentiating factor in returns was duration. Longer duration assets struggled as we saw longer-end Treasury yields rise substantially through the quarter. Shorter duration segments of the market like US high yield held up better than longer duration assets like US investment grade and emerging market credit.

## Total return for select asset classes



Source: Bloomberg, UBS, as of March 31, 2021.

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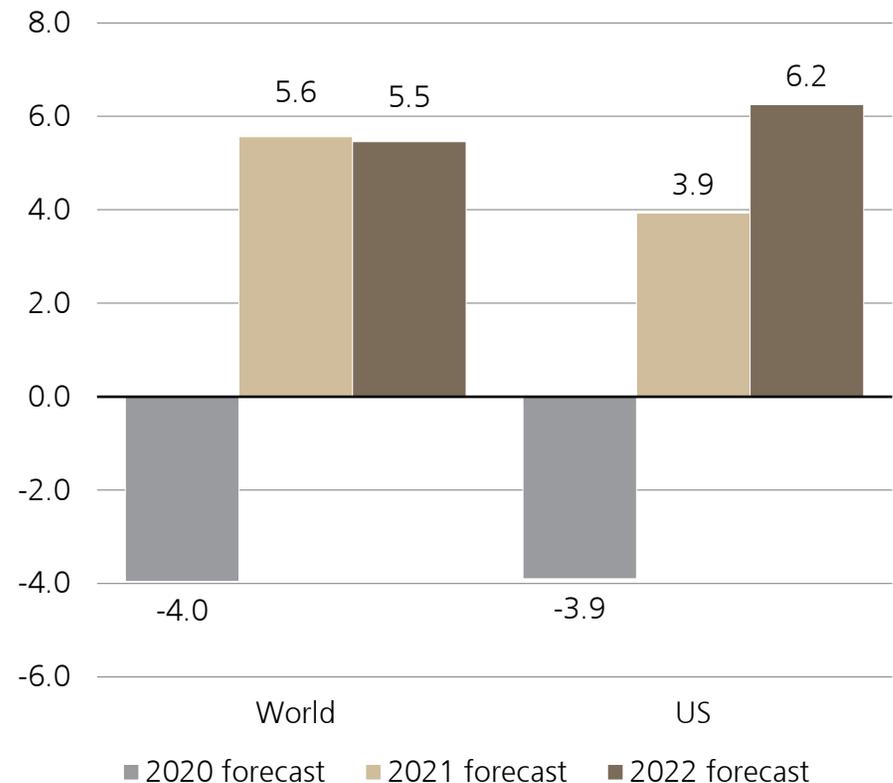


# 2Q21 economic and market outlook

- **Overview**—Global monetary policy remains extraordinarily supportive, and sizable fiscal stimulus has been implemented across the globe, with more likely to come. The positive results from massive inoculation efforts reduce downside risks, even as the virus' spread continues in many regions. Still, the exact path remains highly uncertain—please see our scenarios on the next page.
- **Earnings and valuations**—With the strong rally in stocks, we believe investors are looking past the earnings carnage of last year and focusing on earnings expectations for 2021 and beyond. Valuations appear reasonable based on our view for a 28% increase in S&P 500 profits in 2021 to USD 182 per share, and a further 12% improvement to USD 205 in 2022. This still equates to an S&P 500 Price-to-Earnings (P/E) multiple near 22x, higher than the average multiple of 16.7x in the five years before COVID-19.
- **Interest rates**—Although equity valuations look high in aggregate, interest rates will remain a key driver in 2021 and beyond. As long as economic activity continues to recover, low interest rates will support valuations. We think the bulk of the move in Treasury rates this year has already occurred, but expect 10-year yields to rise to 2% by the end of the year. A steeper yield curve is a positive for the earnings of value companies, but may hurt some growth companies' lofty current valuations.

## We expect a deep (but short-lived) recession

US and global GDP q/q growth, with UBS forecasts, in % (annualized)



Source: UBS, as of March 31, 2021.

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# Given the uncertainty, we focus on **three scenarios...**

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## Upside

- Developed countries' GDP back to pre-pandemic levels by 3Q21. Inflation rises more persistently and Fed announces taper of asset purchases to start in 2021.
- Discretionary fiscal impulse continues to support the economy.
- Vaccine rollout accelerates, reaching most adults in the US and Europe in 2Q, allowing for an earlier lifting of economic restrictions.
- A partial rollback of existing trade tariffs raises global growth.

## Central

- Developed countries' GDP back to pre-pandemic levels by 4Q21. US inflation peaks in April then falls back below 2%.
- Central banks stay accommodative. Fed discusses tapering, but only to commence in 2022.
- Real rates remain low and only move higher gradually over the next 12 months.
- Fiscal impulse fades moderately and gradually as governments adapt to economic recovery.
- Limited public fear and restrictions fading sustainably with sufficient vaccinations by mid-2021, despite recurring COVID-19 outbreaks.
- The US takes a more multilateral and predictable approach to trade.

## Downside

- Developed countries' GDP returns to pre-pandemic levels in 2022. Inflation rises more persistently and Fed announces taper of asset purchases to start in 2021.
- Diminishing fiscal impulse unable to compensate for economic weakness. Vaccine availability is delayed, or mutations reduce efficacy significantly.
- Heightened public fear of COVID-19 and strict restrictions on business activity keep recurring throughout 2021.
- Growth is hurt by renewed US-EU-China trade tensions.

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Source: UBS.

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# ...which help us identify **opportunities** amidst **uncertainty**.

UBS CIO central, downside, and upside December 2021 expectations.

Index	Current (April 08)	December 2021 forecasts, projected change		
		Central scenario	Upside scenario	Downside scenario
S&P 500	4,092	4,200 2.6%	4,400 7.5%	3,200 -21.8%
Euro Stoxx 50	3,978	4,000 0.6%	4,300 8.1%	3,100 -22.1%
MSCI EM	1,339	1500 12.0%	1650 23.2%	1100 -17.8%
Swiss Market Index	11,207	11,500 2.6%	12,500 11.5%	9,500 -15.2%
US IG spread (bps)	95	100 bps 5	90 bps -5	225 bps 130
US HY spread (bps)	323	300 bps -23	270 bps -53	550 bps 227
EM USD bonds spread (bps)	333	340 bps 7	300 bps -33	550 bps 217

Source: UBS, as of April 08, 2021.

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# Recap

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- Economic activity continues to recover and the recent passage of an additional fiscal stimulus package in the US and the beginning of inoculation efforts around the world are compelling reasons for investor optimism to stay elevated over the coming months.
- Given unprecedented monetary stimulus and our outlook for COVID-19 and vaccine availability, we maintain an overall risk-on asset allocation expressed through a preference for cyclically oriented equities and various credit segments.
- Despite our conviction for rising asset prices in the medium term, **we expect market volatility to moderate in 2021 but remain higher than recent history.**
- Tactically, **we see value in both equities and credit**, thanks to unprecedented fiscal and monetary support around the world and an economic expansion that is beginning to take root.
  - *Within fixed income*, we like **senior loans**, which should benefit from a recovery in corporate earnings as well as a modest rise in interest rates given their floating rate coupons.
  - We also like **US preferred securities**, which offer a larger spread cushion compared to other fixed income risk assets.
  - *Within equities*, we have a preference for **developed market (US and ex-US) small-cap stocks**. Like our preference for **US mid-caps**, these stocks are more leveraged to the pickup in economic growth that we expect as vaccines are distributed and economies reopen.
  - This month we introduced a preference for **value stocks versus growth stocks**. With the backdrop of economic reopening, pent-up consumer demand, broadening economic activity, and higher interest rates, earnings for value companies should grow at a faster rate than growth companies in this environment.
  - We also have a **most preferred view on emerging market equities**, which should benefit from an increase in commodity demand, a weaker US dollar, and a broadening in economic activity.
  - *In commodity markets*, we see value in **oil**.

Source: UBS, as of March 31, 2021.

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# Long-term market view

Calendar year and long-term return statistics for select asset classes.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1999 – 2020 return (ann.)	1999 – 2020 return standard deviation
Highest return	66.5%	13.2%	8.4%	11.5%	55.8%	25.6%	34.0%	32.1%	39.4%	12.4%	78.5%	26.9%	9.0%	18.2%	38.8%	13.2%	0.9%	21.3%	37.3%	0.9%	31.4%	21.0%	12.7%	9.8%	19.2%
	27.0%	11.6%	7.2%	10.3%	47.3%	20.2%	13.5%	26.3%	11.2%	5.2%	58.2%	25.5%	7.8%	17.3%	34.8%	13.2%	0.9%	17.1%	25.0%	0.0%	30.5%	20.0%	8.1%	9.4%	31.8%
	21.3%	8.2%	5.3%	-1.4%	40.1%	20.2%	12.7%	18.4%	8.7%	-21.8%	40.5%	18.9%	5.0%	17.3%	33.1%	6.4%	0.5%	13.8%	21.7%	-2.1%	25.5%	18.3%	5.9%	8.7%	19.2%
	20.9%	0.2%	2.5%	-4.2%	38.6%	18.3%	8.0%	15.5%	7.3%	-26.2%	31.8%	16.1%	1.8%	16.4%	22.8%	6.0%	0.1%	12.1%	18.5%	-4.2%	22.0%	17.1%	3.5%	7.5%	17.9%
	18.2%	-3.0%	-2.6%	-6.2%	29.9%	11.4%	6.3%	15.3%	7.0%	-33.8%	28.4%	15.1%	1.5%	16.3%	11.8%	4.9%	-0.8%	11.2%	14.6%	-4.8%	18.4%	10.4%	2.3%	6.9%	15.5%
	13.5%	-5.9%	-3.6%	-15.9%	29.0%	11.1%	4.6%	13.0%	5.8%	-37.6%	27.2%	9.2%	-1.5%	15.8%	7.4%	4.9%	-2.4%	5.2%	14.4%	-9.1%	16.8%	7.9%	1.0%	6.5%	10.1%
	2.4%	-7.8%	-5.6%	-16.2%	21.9%	10.8%	2.7%	11.8%	5.6%	-41.5%	24.8%	7.8%	-4.2%	11.7%	-2.0%	2.5%	-4.4%	2.6%	7.5%	-11.0%	14.3%	7.8%	0.8%	4.9%	3.5%
	-0.8%	-14.2%	-12.4%	-20.5%	4.1%	4.3%	2.7%	4.3%	1.9%	-43.4%	5.9%	6.5%	-12.1%	4.2%	-2.6%	-2.2%	-4.5%	1.0%	3.5%	-13.8%	8.7%	7.5%	-3.4%	4.4%	4.6%
Lowest return	-2.2%	-30.8%	-21.4%	-21.7%	2.4%	3.5%	2.4%	3.5%	-1.6%	-53.3%	-2.2%	5.5%	-18.4%	2.0%	-2.6%	-4.9%	-14.9%	1.0%	2.3%	-14.6%	6.8%	7.1%	-4.1%	4.5%	20.6%

	US large cap equities		US mid-cap equities		US small-cap equities		Int'l dev equities		EM equities
	Barclays US agg bond		US govt. fixed income		US high yield credit		<b>Moderate diversified portfolio</b>		

Source: Bloomberg, UBS, as of March 31, 2021.

Note: The Moderate Diversified Portfolio performance calculations are a hypothetical analysis based on historical asset class returns. This backward-looking illustration assumes an investment in asset class indexes represented by the current Strategic Asset Allocation (SAA) for a moderate risk profile investor in a taxable portfolio without non-traditional assets. Performance calculations assume annual rebalancing, don't take into account any prior SAA for this investor profile, and include time periods before the SAA was created. See the latest "UBS House View: Detailed asset allocation tables" document for the detailed SAA. These calculations will not match the official published performance data, which reflect monthly rebalancing. For periods prior to 2009, this illustration assumes that the Bloomberg Barclays EM Local Currency Government Total Return Index allocation (inception date of July 4, 2008) was invested fully in the Bloomberg Barclays EM USD Aggregate Total Return Index.



# Executive Summary

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## Birmingham Employees Retirement System - Asset Allocation

As of: 3/31/2021

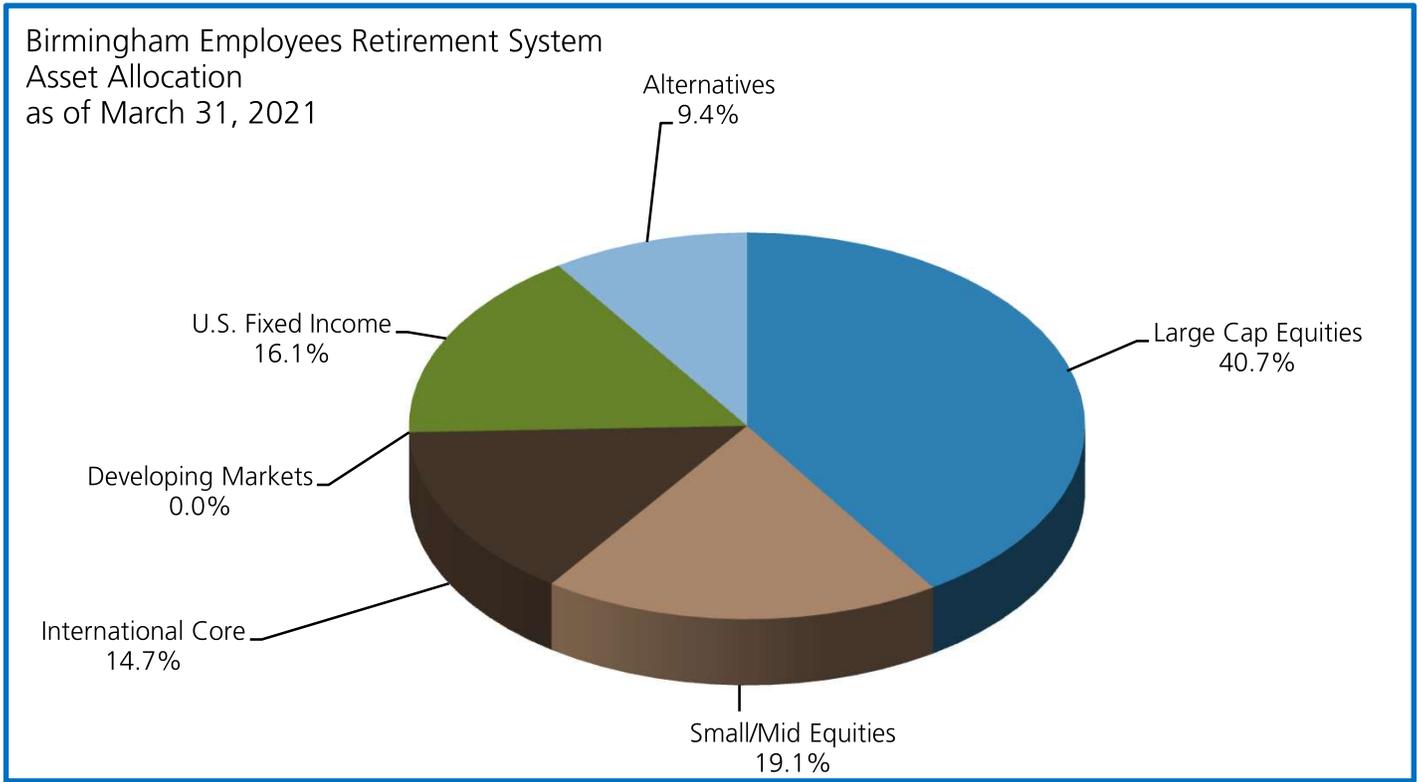
Manager	Market Value	% of Portfolio	Min.	% Allocation Target	Max.	% Delta	\$ Delta
<b>Equity</b>							
<b>US Large Cap Equity</b>							
Vanguard S&P 500 ETF	\$16,448,573	14.8%					
Polen Focus Growth	\$11,784,203	10.6%					
Westwood Large Cap Value	\$17,164,636	15.4%					
<b>Total US Large Cap Equity</b>	<b>\$45,397,412</b>	<b>40.7%</b>	<b>25.0%</b>	<b>37.0%</b>	<b>50.0%</b>	<b>3.7%</b>	<b>\$4,168,439</b>
<b>US Small/Mid Cap Equity</b>							
Vanguard Mid Cap Index ETF	\$7,439,554	6.7%					
Fiera Capital SMID Cap Growth	\$5,212,656	4.7%					
Gabelli Small Cap Value	\$8,587,464	7.7%					
<b>Total US Small/Mid Cap Equity</b>	<b>\$21,239,674</b>	<b>19.1%</b>	<b>10.0%</b>	<b>13.0%</b>	<b>20.0%</b>	<b>6.1%</b>	<b>\$6,753,819</b>
<b>Non US Equity</b>							
MFS International Diversification	\$16,345,496	14.7%					
<b>Total International</b>	<b>\$16,345,496</b>	<b>14.7%</b>	<b>5.0%</b>	<b>15.0%</b>	<b>20.0%</b>	<b>-0.3%</b>	<b>-\$368,953</b>
<b>Total Equity:</b>	<b>\$82,982,582</b>	<b>74.5%</b>	<b>40.0%</b>	<b>65.0%</b>	<b>90.0%</b>	<b>9.5%</b>	<b>\$10,553,305</b>
<b>Fixed Income</b>							
<b>US Fixed Income</b>							
Ducenta Squared Fixed Income	\$13,005,338	11.7%					
C.S. McKee Fixed Income	\$783,682	0.7%					
Bramshill Income Performance	\$4,132,557	3.7%					
<b>Total US Fixed Income:</b>	<b>\$17,921,577</b>	<b>16.1%</b>	<b>20.0%</b>	<b>25.0%</b>	<b>50.0%</b>	<b>-8.9%</b>	<b>-\$9,935,837</b>
<b>Total Fixed Income:</b>	<b>\$17,921,577</b>	<b>16.1%</b>	<b>20.0%</b>	<b>25.0%</b>	<b>60.0%</b>	<b>-8.9%</b>	<b>-\$9,935,837</b>
<b>Alternative Investments</b>							
Starwood Real Estate Income Trust	\$2,970,779	2.7%					
Graham Absolute Return Hedge Fund	\$3,801,227	3.4%					
Whitebox Multi-Strategy Hedge Fund	\$3,753,492	3.4%					
<b>Total Alternative Investments:</b>	<b>\$10,525,498</b>	<b>9.4%</b>	<b>0.0%</b>	<b>10.0%</b>	<b>15.0%</b>	<b>-0.6%</b>	<b>-\$617,468</b>
<b>Cash &amp; Equivalents</b>							
Cash	\$0	0.0%					
<b>Total Cash &amp; Equivalents:</b>	<b>\$0</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>20.0%</b>	<b>0.0%</b>	<b>\$0</b>
<b>Total Portfolio</b>							
<b>Total Portfolio:</b>	<b>\$111,429,657</b>	<b>100.0%</b>		<b>100.0%</b>			

This chart is for illustrative purposes only and may not reflect current market values. Values as of the date indicated may be rounded for convenience. % of Total of portfolio is computed using the market value and the total portfolio. The values have been provided by a third party considered to be reliable. However, UBS does not warrant the accuracy of this information and is not responsible for any inaccuracies.

IPS does not break out specific allocation requirements for US Large Cap and US Small/Mid Cap Equities. Total fixed income maximum allocation includes a 10% allocation to international fixed income.

Please refer to the final page for important disclosures

## Birmingham Employees Retirement System - Asset Allocation



## Birmingham Employees Retirement System - Performance Summary

As of: 3/31/2021

<u>Manager</u>	<u>Q1, 2021</u>	<u>1 Year</u> <u>Anlz.</u>	<u>3 Year</u> <u>Anlz.</u>	<u>5 Year</u> <u>Anlz.</u>	<u>7 Year</u> <u>Anlz.</u>	<u>10 Year</u> <u>Anlz.</u>	<u>Inception</u> <u>to Date</u>	<u>Inception</u> <u>Date</u>
<b>Portfolio</b>	<b>4.6%</b>	<b>39.1%</b>	<b>9.2%</b>	<b>9.8%</b>	<b>7.4%</b>	<b>7.6%</b>	<b>7.3%</b>	<b>12/1/1993</b>
<i>Target Index*</i>	<b>2.8%</b>	<b>34.9%</b>	<b>10.3%</b>	<b>10.0%</b>	<b>8.1%</b>	<b>8.2%</b>	<b>7.9%</b>	
<i>CPI + 3%</i>	<b>2.0%</b>	<b>5.6%</b>	<b>5.2%</b>	<b>5.3%</b>	<b>4.7%</b>	<b>4.8%</b>	<b>5.2%</b>	
<i>6.75% Actuarial Assumed Rate</i>	<b>1.6%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	
<b>Domestic Large Cap Equity</b>								
Vanguard S&P 500 ETF	<b>6.2%</b>	<b>56.3%</b>	<b>16.7%</b>	-	-	-	<b>16.3%</b>	5/1/2016
<i>S&amp;P 500 Index</i>	<b>6.2%</b>	<b>56.3%</b>	<b>16.8%</b>	-	-	-	<b>16.4%</b>	
Polen Focus Growth	<b>1.8%</b>	-	-	-	-	-	<b>12.1%</b>	6/1/2020
<i>Russell 1000 Growth Index</i>	<b>0.9%</b>	-	-	-	-	-	<b>12.4%</b>	
Westwood Large Cap Value	<b>9.0%</b>	<b>44.9%</b>	<b>11.2%</b>	<b>12.9%</b>	<b>10.9%</b>	<b>11.5%</b>	<b>9.2%</b>	7/1/2008
<i>Russell 1000 Value Index</i>	<b>11.3%</b>	<b>56.1%</b>	<b>11.0%</b>	<b>11.7%</b>	<b>9.4%</b>	<b>11.0%</b>	<b>9.2%</b>	
<b>Domestic Small/Mid Cap Equity</b>								
Vanguard Mid Cap Index ETF	<b>7.2%</b>	<b>70.6%</b>	-	-	-	-	<b>70.6%</b>	3/1/2020
<i>Spliced Vanguard Mid Cap Fund Index</i>	<b>7.2%</b>	<b>70.7%</b>	-	-	-	-	<b>70.7%</b>	
Fiera Capital SMID Cap Growth	<b>6.5%</b>	<b>98.9%</b>	<b>21.3%</b>	<b>21.1%</b>	-	-	<b>15.1%</b>	7/1/2015
<i>Russell Mid Cap Growth Index</i>	<b>-0.6%</b>	<b>68.6%</b>	<b>19.4%</b>	<b>18.4%</b>	-	-	<b>15.0%</b>	
Gabelli Small Cap Value	<b>17.2%</b>	<b>96.8%</b>	<b>8.7%</b>	<b>11.8%</b>	<b>9.1%</b>	<b>11.5%</b>	<b>10.6%</b>	3/1/2000
<i>Russell 2000 Value Index</i>	<b>21.2%</b>	<b>97.1%</b>	<b>11.6%</b>	<b>13.6%</b>	<b>8.9%</b>	<b>10.1%</b>	<b>10.0%</b>	
<b>International Equity</b>								
MFS International Diversification	<b>1.8%</b>	-	-	-	-	-	<b>25.0%</b>	6/1/2020
<i>MSCI EAFE Index</i>	<b>3.5%</b>	-	-	-	-	-	<b>25.8%</b>	
<b>U.S. Fixed Income</b>								
Ducenta Squared Fixed Income	<b>-3.2%</b>	<b>3.0%</b>	<b>5.4%</b>	<b>4.1%</b>	<b>4.1%</b>	<b>4.4%</b>	<b>4.9%</b>	9/1/2009
<i>Barclays Aggregate Bond Index</i>	<b>-3.4%</b>	<b>0.7%</b>	<b>4.7%</b>	<b>3.1%</b>	<b>3.3%</b>	<b>3.4%</b>	<b>3.6%</b>	
C.S. McKee Fixed Income	<b>-3.5%</b>	<b>2.4%</b>	<b>4.7%</b>	<b>3.2%</b>	<b>3.5%</b>	<b>3.8%</b>	<b>3.8%</b>	8/1/2009
<i>Barclays Aggregate Bond Index</i>	<b>-3.4%</b>	<b>0.7%</b>	<b>4.7%</b>	<b>3.1%</b>	<b>3.3%</b>	<b>3.4%</b>	<b>3.7%</b>	
Bramshill Income Performance	<b>-0.3%</b>	<b>16.4%</b>	-	-	-	-	<b>5.3%</b>	3/1/2019
<i>Barclays Aggregate Bond Index</i>	<b>-3.4%</b>	<b>0.7%</b>	-	-	-	-	<b>4.7%</b>	
<b>Alternative Investments</b>								
Starwood Real Estate Income Trust	<b>0.4%</b>	-	-	-	-	-	<b>0.6%</b>	1/1/2021
<i>FTSE NAREIT All Equity</i>	<b>8.3%</b>	-	-	-	-	-	<b>8.4%</b>	
Graham Absolute Return Hedge Fund	<b>6.6%</b>	<b>26.2%</b>	-	-	-	-	<b>5.6%</b>	4/1/2019
<i>HFRI Macro Index</i>	<b>4.1%</b>	<b>11.5%</b>	-	-	-	-	<b>6.6%</b>	
Whitebox Multi-Strategy Hedge Fund	<b>5.8%</b>	<b>30.6%</b>	-	-	-	-	<b>5.6%</b>	4/1/2019
<i>HFRI RV: Multi-Strategy Index</i>	<b>3.3%</b>	<b>17.2%</b>	-	-	-	-	<b>5.9%</b>	

\*Target Index is currently comprised of 25% S&P 500 Index, 15% Russell Mid Cap Index, 5% Russell 2000 Index, 10% MSCI EAFE Index, 5% MSCI Emerging Markets Index, 35% Bloomberg Barclays US Aggregate Index, and 5% HFRI Macro: Systematic Diversified Index.

Please refer to the final page for important disclosures



## Birmingham Employees Retirement System - Fee Analysis

As of: 3/31/2021

Manager	Market Value	Portfolio Allocation	UBS Consulting Fee %	Investment Mgr. Fee (%)	Total Annual Expense (%)	Total Q1, 2021 Estimated Expense (\$)
<b>Equity</b>						
<b>US Large Cap Equity</b>						
Vanguard S&P 500 ETF	\$16,448,573	14.8%	0.065%	0.03%	0.10%	\$3,907
Polen Focus Growth	\$11,784,203	10.6%	0.065%	0.60%	0.67%	\$19,591
Westwood Large Cap Value	\$17,164,636	15.4%	0.065%	0.50%	0.57%	\$24,245
<b>Total US Large Cap Equity</b>	<b>\$45,397,412</b>	<b>40.7%</b>				
<b>US Small/Mid Cap Equity</b>						
Vanguard Mid Cap Index ETF	\$7,439,554	6.7%	0.065%	0.04%	0.11%	\$1,953
Fiera Capital SMID Cap Growth	\$5,212,656	4.7%	0.065%	0.55%	0.62%	\$8,014
Gabelli Small Cap Value	\$8,587,464	7.7%	0.065%	1.00%	1.07%	\$22,864
<b>Total US Small/Mid Cap Equity:</b>	<b>\$21,239,674</b>	<b>19.1%</b>				
<b>Non US Equity</b>						
MFS International Diversification	\$16,345,496	14.7%	0.065%	0.75%	0.82%	\$33,304
<b>Total International</b>	<b>\$16,345,496</b>	<b>14.7%</b>				
<b>Total Equity:</b>	<b>\$82,982,582</b>	<b>74.5%</b>				
<b>Fixed Income</b>						
<b>US Fixed Income</b>						
Ducenta Squared Fixed Income	\$13,005,338	11.7%	0.065%	0.25%	0.32%	\$10,242
C.S. McKee Fixed Income	\$783,682	0.7%	0.065%	0.35%	0.42%	\$813
Bramshill Income Performance	\$4,132,557	3.7%	0.065%	1.38%	1.45%	\$14,929
<b>Total US Fixed Income</b>	<b>\$17,921,577</b>	<b>16.1%</b>				
<b>Total Fixed Income:</b>	<b>\$17,921,577</b>	<b>16.1%</b>				
<b>Alternative Investments<sup>^</sup></b>						
Starwood Real Estate Income Trust	\$2,970,779	2.7%	0.065%	1.25%	1.32%	\$9,766
Graham Absolute Return Hedge Fund	\$3,801,227	3.4%	0.065%	2.00%	2.07%	\$19,624
Whitebox Multi-Strategy Hedge Fund	\$3,753,492	3.4%	0.065%	1.50%	1.57%	\$14,686
<b>Total Alternative Investments</b>	<b>\$10,525,498</b>	<b>9.4%</b>				
<b>Cash &amp; Equivalents</b>						
Cash	\$0	0.0%	0.065%	0.00%	0.07%	\$0
<b>Total Cash &amp; Equivalents</b>	<b>\$0</b>	<b>0.0%</b>				
<b>Total Portfolio</b>						
<b>Total Portfolio:</b>	<b>\$111,429,657</b>	<b>100.0%</b>			<b>0.63%</b>	<b>\$183,938</b>

<sup>^</sup>Additional incentive fees apply.

\*Total Expenses reflect only the total estimated expenses of the underlying funds and do not include account-level expenses, such as trading costs.

\*\*Expense values reflect Net Expense Ratio per Morningstar Direct and fund prospectus. This fee includes a portion payable to both UBS and the third party investment manager. No portion of this fee is considered compensable revenue to the Institutional Consultant.

Gross expenses include a fund's management fee, administrative and servicing fees, advertising fees (if any) and other fees and expenses borne by the fund, and do not show the effect of any fee waivers or expense reimbursements (which would be shown in a "net expense ratio").

\*\*\* Investment Manager Fees reflect a negotiated rate with UBS

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The basis of the target allocation is the client's most recent IPS that UBSFS has on file.

Investment Manager Fees reflect a negotiated rate with UBS

Sources: Custodial Statements; IPS

Review code: IS1602741& IS1602841

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# Investment Review

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# Investment Monitoring Methodology

- **IPS Investment Criteria:**

1. Manager tenure greater than or equal to 3 years
2. \*3 year performance greater than benchmark / + 3 year R<sup>2</sup> is greater than 95%
3. 3 year performance greater than 50% of peers
4. 3 year Sharpe Ratio greater than 50% of peers
5. \*3 year Sortino Ratio greater than 50% of peers / +3 year Tracking Error less than 90% of its peers
6. \*5 year performance greater than benchmark / +5 year R<sup>2</sup> is greater than 95%
7. 5 year performance greater than 50% of peers
8. 5 year Sharpe Ratio greater than 50% of peers
9. \*5 year Sortino Ratio greater than 50% of peers / +5 year Tracking Error less than 90% of its peers
10. Expense Ratio less than 50% of peers
11. Investment Style is consistent with the fund's objectives.



**Passed IPS Screen**



**Informal Watch**



**Formal Watch**

*\*IPS Investment Criteria used for actively managed investment options / +IPS Criteria used for passively managed index investment options.*

- **Performance Statistic Definitions:**

Sharpe Ratio – Measures an investment's reward per unit of risk. It is calculated by taking the investment's average monthly return in excess of the Treasury bill return (presumed risk free rate of return) and dividing by the monthly standard deviation of excess returns.

Sortino Ratio – Quantifies an investment's reward per unit of downside risk. It is calculated similar to the Sharpe Ratio, except that it uses the monthly standard deviation of excess returns in negative markets in the denominator of the formula.

R<sup>2</sup> – Assesses the correlation between an investment's return with that of its benchmark index. R<sup>2</sup> values range from 0 to 100 and a high R<sup>2</sup> (greater than 95) implies that the investment returns are in-line with the movements of the benchmark index more than 95% of the time.

Tracking Error – Evaluates the consistency of returns by measuring the standard deviation of the difference between the returns of the investment option and those of the benchmark index. Tracking Error should be lower than 90% of the peer group.

- **Watch Methodology:**

**Passed IPS Screen:** An investment is in good standing if it passes at least 7 of the 11 Watchlist criteria.

**Informal Watch:** An investment will be placed on Informal Watch if it fails 5 of the 11 Watchlist criteria. An investment may be on Informal Watch for a total of 4 consecutive quarters, after which it must meet 7 of the 11 Watchlist criteria or be placed under Formal Watch.

**Formal Watch:** An investment will be placed on Formal Watch if it fails 6 or more of the Watchlist criteria. An investment may be on Formal Watch for 3 consecutive quarters, after which the Investment Advisor will take one of three steps as outlined in the IPS.



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## Birmingham Employees Retirement System 1<sup>st</sup> Quarter, 2021 Review (3.31.21)

Category	Investment Option	Plan Assets (3.31.21)	% of Assets	Plan Entry	1	2	3	4	5	6	7	8	9	10	11	Previous Quarter Status	Current Quarter Status
Large Blend	Vanguard S&P 500 ETF (VOO)	\$16,448,573	14.8%	May-16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Large Growth	Polen Focus Growth	\$11,784,203	10.6%	Jun-20	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓	✓
Large Value	Westwood Large Cap Value	\$17,164,636	15.4%	Jul-08	✓	*	*	*	*	*	*	✓	*	✓	✓	✓	FW
Mid Cap Blend	Vanguard Mid Cap Index ETF (VO)	\$7,439,554	6.7%	Mar-20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mid Cap Growth	Fiera Capital SMID Cap Growth	\$5,212,656	4.7%	Jul-15	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	IW	✓
Small Value	Gabelli Small Cap Value	\$8,587,464	7.7%	Mar-00	✓	*	*	✓	✓	*	✓	✓	✓	✓	✓	✓	✓
Foreign Large Blend	MFS International Diversification (MDIZX)	\$16,345,496	14.7%	Jun-20	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Intermediate Core Bond	Ducenta Squared Fixed Income	\$13,005,338	11.7%	Sep-09	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Intermediate Core Bond	C.S. McKee Fixed Income	\$783,682	0.7%	Aug-09	✓	✓	✓	✓	*	✓	✓	*	*	*	✓	✓	✓
Nontraditional Bond	Bramshill Income Performance (BRMSX)	\$4,132,557	3.7%	Mar-19	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	*	✓	✓	
Alternative Investments	Starwood Real Estate Income Trust	\$2,970,779	2.7%	Jan-21													
Alternative Investments	Graham Absolute Return Hedge Fund	\$3,801,227	3.4%	Apr-19													
Alternative Investments	Whitebox Multi-Strategy Hedge Fund	\$3,753,492	3.4%	Apr-19													
Cash	Cash	\$0	0.0%	Dec-93													

**Total Plan Assets:                      \$111,429,657                      100%**



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4. Although historical default rates are very low, all municipal bonds carry credit risk, with the degree of risk largely following the particular bond's sector. Additionally, all municipal bonds feature valuation, return, and liquidity risk. Valuation tends to follow internal and external factors, including the level of interest rates, bond ratings, supply factors, and media reporting. These can be difficult or impossible to project accurately. Also, most municipal bonds are callable and/or subject to earlier than expected redemption, which can reduce an investor's total return. Because of the large number of municipal issuers and credit structures, not all bonds can be easily or quickly sold on the open market.

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2021-384004  
Exp.: 04/30/2022, IS2102094





## Investment Performance

Period Ending March 31, 2021

**Prepared for:**  
**Birmingham Employees Retirement System**  
May 25, 2021

**Prepared by:**  
Steve Gasper

# Retirement Fund Composite

Please contact your UBS Institutional Consultant if you have any questions regarding this report, if your financial situation, individual needs or investment objectives have changed, or if you would like to initiate or modify any investment restrictions on this account.

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## Birmingham Employees Retirement System March 31, 2021

### Accounts Included in this Report

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Account Name	Account Number	Custodian Name
Vanguard Mid Cap ETF	10xxxxx23	Comerica
MFS International Diversification	10xxxxx40	Comerica
Polen Focus Growth	10xxxxx59	Comerica
Graham Absolute Return C/B Fund	10xxxxx07	Comerica
Whitebox Multi-Strategy Fund LP	10xxxxx25	Comerica
Bramshill Income Performance Fund-Inst	10xxxxx34	Comerica
Bradford & Marzec	10xxxxx89	Comerica
Vanguard S&P 500	10xxxxx62	Comerica
Cavendish Futures Fund	10xxxxx53	Comerica
Apex Capital Management	10xxxxx97	Comerica
Multiple Funds	10xxxxx50	Comerica
Westwood Holdings	10xxxxx54	Comerica
C.S. Mckee	10xxxxx70	Comerica

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## Birmingham Employees Retirement System

Period Ending March 31, 2021

Account Values								
	Latest Quarter	Fiscal YTD	Year to Date	One Year	Three Years	Five Years	Ten Years	Since Inception
Beginning Mkt Value	\$105,062,103.09	\$94,876,877.40	\$105,062,103.09	\$85,432,471.80	\$104,408,799.78	\$98,060,641.15	\$95,428,384.00	\$54,584,672.00
Net Contributions	(\$71,227.93)	(\$7,184,550.42)	(\$71,227.93)	(\$8,675,399.94)	(\$22,077,019.75)	(\$35,855,631.24)	(\$59,878,405.94)	(\$112,568,673.94)
Investment Earnings	\$6,438,781.35	\$23,737,329.53	\$6,438,781.35	\$34,672,584.65	\$29,097,876.48	\$49,224,646.60	\$75,879,678.45	\$169,413,658.45
Ending Mkt Value	\$111,429,656.51	\$111,429,656.51	\$111,429,656.51	\$111,429,656.51	\$111,429,656.51	\$111,429,656.51	\$111,429,656.51	\$111,429,656.51

Returns								
	Latest Quarter	Calendar YTD	One Year	Three Years	Five Years	Seven Years	Ten Years	Since Inception
Account	4.69%	4.69%	40.98%	9.67%	10.04%	8.45%	8.36%	7.55%
Policy Index	2.84%	2.84%	34.05%	11.44%	10.64%	8.76%	8.60%	8.27%
Difference	1.85%	1.85%	6.93%	-1.78%	-0.61%	-0.31%	-0.24%	-0.72%

Calendar Year Returns											
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Account	13.68%	19.61%	-7.46%	15.21%	8.00%	4.27%	4.42%	17.37%	11.56%	-0.67%	13.16%
Policy Index	15.32%	20.45%	-4.04%	15.06%	7.03%	0.25%	8.01%	15.08%	11.34%	0.81%	12.92%
Difference	-1.64%	-0.84%	-3.42%	0.15%	0.97%	4.02%	-3.60%	2.29%	0.22%	-1.48%	0.25%

Policy Index: 35% Bloomberg Barclays Aggregate Bond, 25% S&P 500 Index, 15% Russell Midcap, 10% MSCI Net EAFE, 5% HFRI Macro: Systematic Diversified Index, 5% MSCI Net Emerging Markets, 5% Russell 2000

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# Birmingham Employees Retirement System

Period Ending March 31, 2021

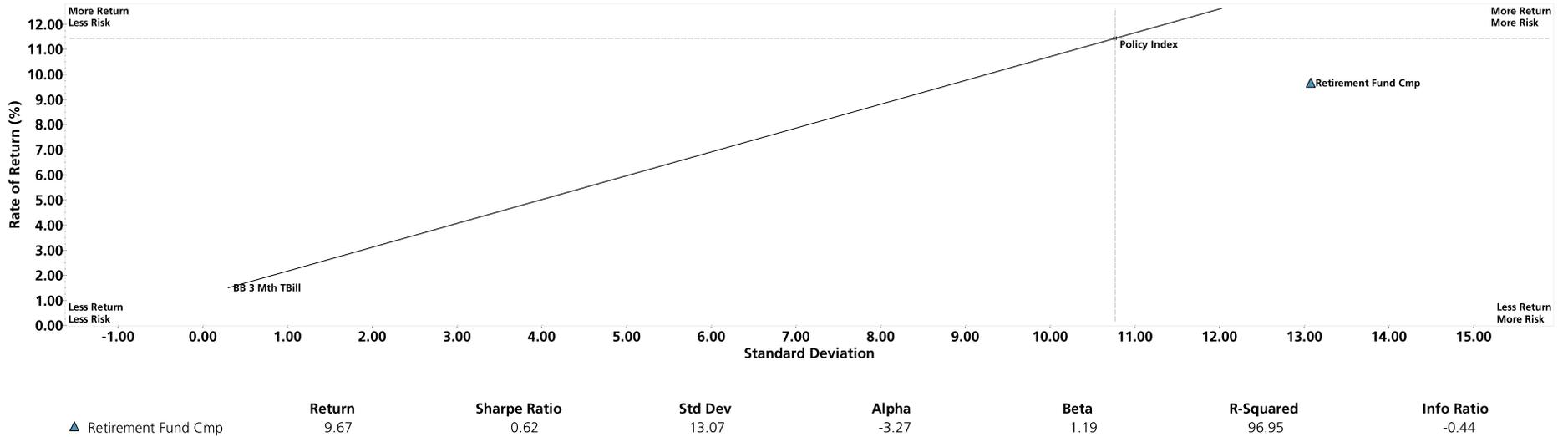
## Asset Allocation

Name	Incept. Date	Benchmark	Market Value	% Portfolio	\$ Target	\$ Difference	% Allocation Target
<b>TOTAL FUND</b>							
Bradford & Marzec	09/30/2009	BB Agg Bond	\$13,005,338	11.7%	---	\$13,005,338	---
C.S. Mckee	08/31/2009	BB Agg Bond	\$783,682	0.7%	---	\$783,682	---
Westwood Holdings	07/31/2008	Russell 1000 Value	\$17,164,636	15.4%	---	\$17,164,636	---
Gabelli Asset Management	03/31/2000	Russell 2000	\$8,587,464	7.7%	---	\$8,587,464	---
Apex Capital Management	07/31/2015	Russell Midcap Grwth	\$5,212,656	4.7%	---	\$5,212,656	---
Vanguard S&P 500	05/05/2016	S&P 500 Index	\$16,448,573	14.8%	---	\$16,448,573	---
Vanguard Mid Cap ETF	03/31/2020	CRSP US Mid Cap TR I	\$7,439,554	6.7%	---	\$7,439,554	---
Bramshill Income Performance Fund-Inst	03/27/2019	BB Agg Bond	\$4,132,557	3.7%	---	\$4,132,557	---
Whitebox Multi-Strategy Fund LP	04/09/2019	BB Agg Bond	\$3,753,492	3.4%	---	\$3,753,492	---
Graham Absolute Return C/B Fund	04/09/2019	BB Agg Bond	\$3,801,227	3.4%	---	\$3,801,227	---
Polen Focus Growth	06/22/2020		\$11,784,203	10.6%	---	\$11,784,203	---
MFS International Diversification	06/22/2020		\$16,345,496	14.7%	---	\$16,345,496	---
Starwood Real Estate Income	12/11/2020	Russell 2000	\$2,970,778	2.7%	---	\$2,970,778	---
<b>TOTAL:</b>	12/31/1993	Policy Index	\$111,429,657	100.0%	\$111,429,657	\$0	100.0%

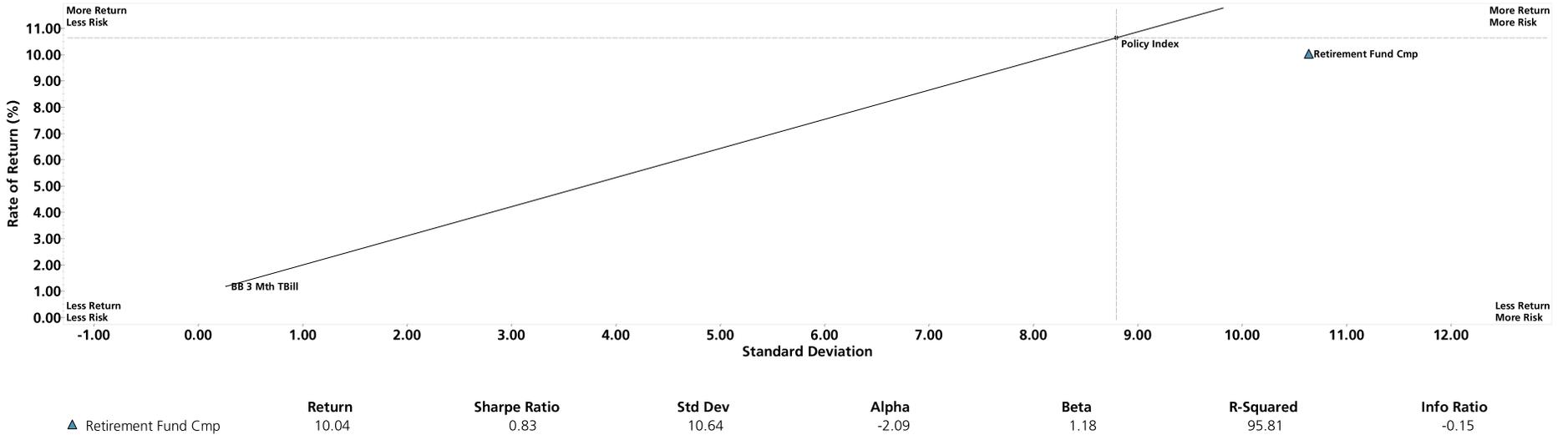
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Risk vs Reward

Three Years



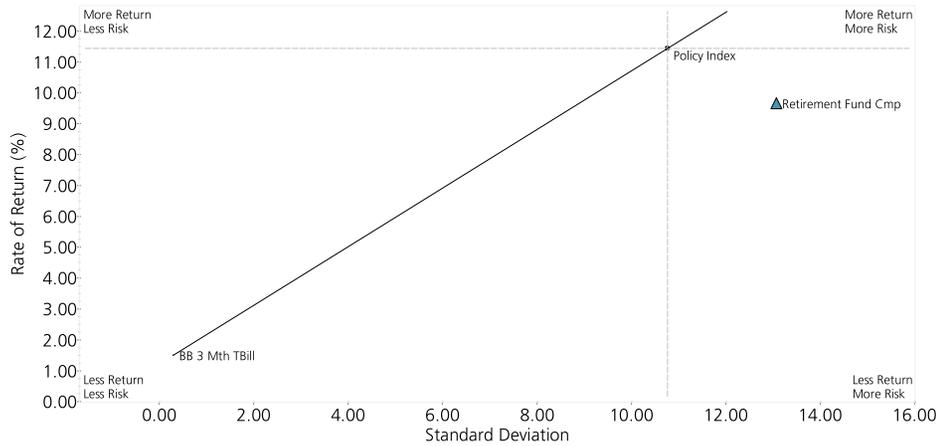
Five Years



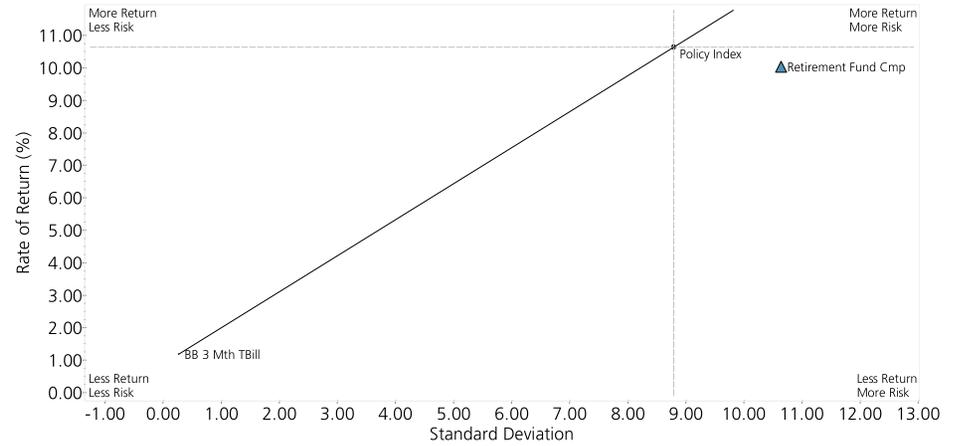
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Risk vs Reward

Three Years



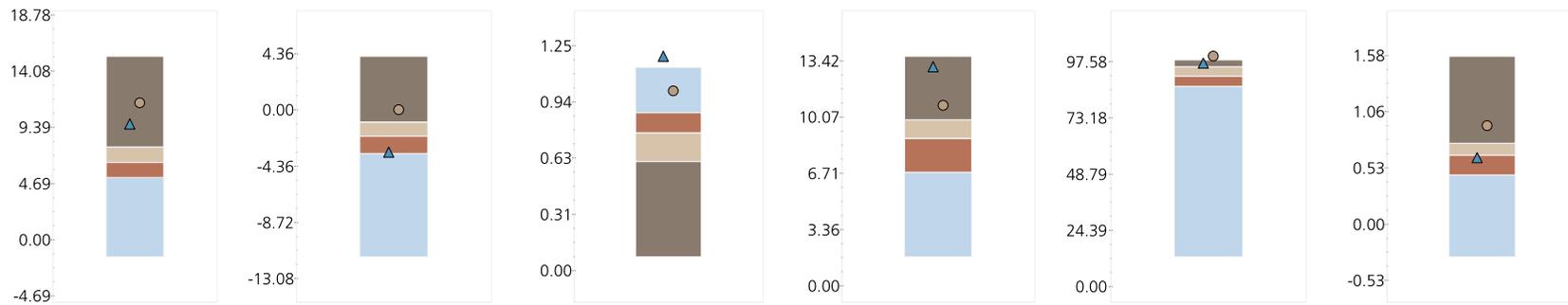
Five Years



	Return	Sharpe Ratio	Std Dev	Alpha	Beta	R-Squared	Info Ratio
▲ Retirement Fund Cmp	9.67	0.62	13.07	-3.27	1.19	96.95	-0.44

	Return	Sharpe Ratio	Std Dev	Alpha	Beta	R-Squared	Info Ratio
▲ Retirement Fund Cmp	10.04	0.83	10.64	-2.09	1.18	95.81	-0.15

Multi-Statistic Quartile Chart - Three Years



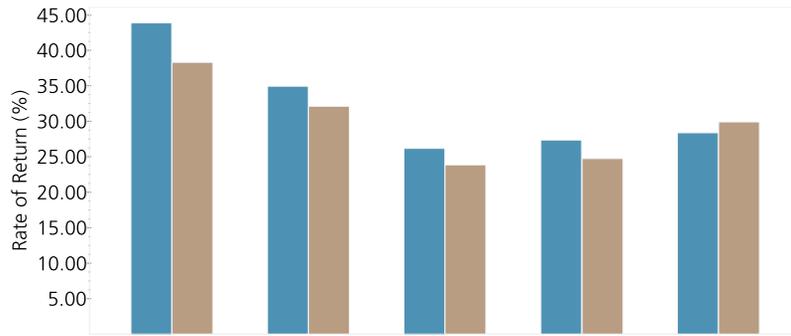
	Return		Alpha		Beta		Std Dev		R-Squared		Sharpe Ratio	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
▲ Retirement Fund Cmp	9.67	2	-3.27	73	1.19	1	13.07	1	96.95	10	0.62	54
● Policy Index	11.44	1	0.00	11	1.00	6	10.77	15	100.00	1	0.92	10

Comparison Universe: Conservative Allocation

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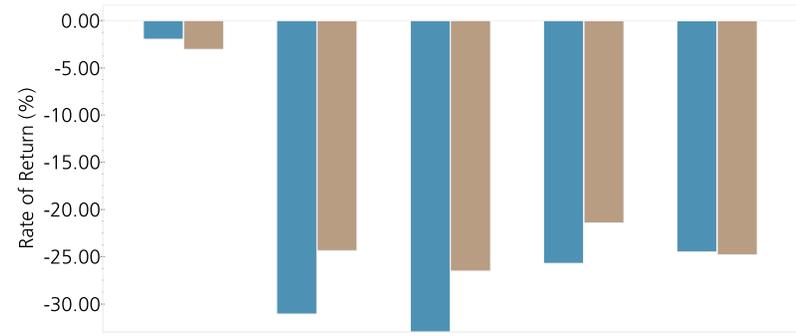
Market Cycle Analysis

Up Market Performance



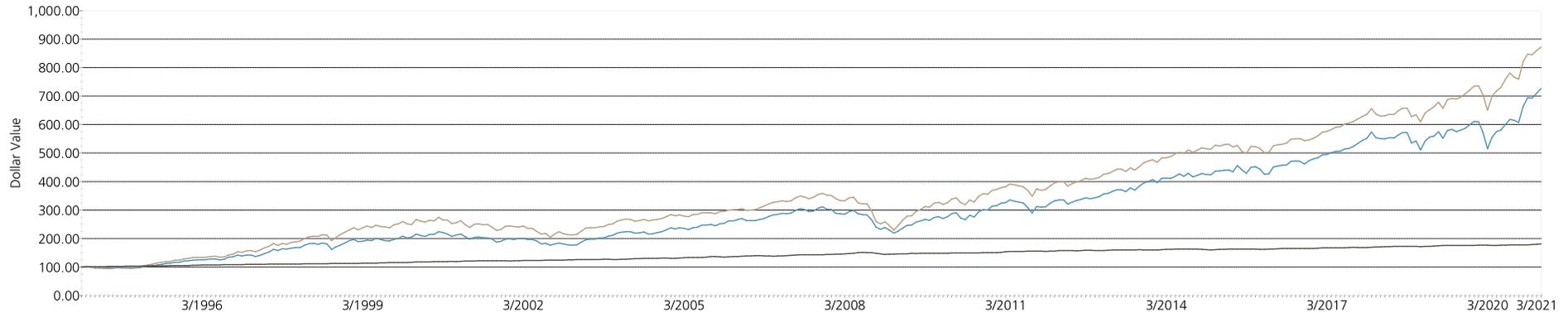
	One Year	Three Years	Five Years	Ten Years	Since Inception
Total Fund	43.90	34.95	26.20	27.40	28.39
Policy Index	38.32	32.18	23.92	24.78	29.94
Difference	5.58	2.77	2.28	2.62	-1.55
Ratio	1.15	1.09	1.10	1.11	0.95
Up Periods	9	26	47	84	218

Down Market Performance



	One Year	Three Years	Five Years	Ten Years	Since Inception
Total Fund	-2.03	-31.11	-32.96	-25.72	-24.52
Policy Index	-3.08	-24.38	-26.55	-21.45	-24.83
Difference	1.05	-6.72	-6.41	-4.27	0.31
Ratio	0.66	1.28	1.24	1.20	0.99
Down Periods	3	10	13	36	109

Growth of \$100 Dollars



	Latest Month	Latest Quarter	One Year	Three Years	Five Years	Ten Years	Since Inception
TOTAL FUND	\$ 102	\$ 105	\$ 141	\$ 132	\$ 161	\$ 223	\$ 727
Policy Index	\$ 101	\$ 103	\$ 134	\$ 138	\$ 166	\$ 228	\$ 871
CPI	\$ 101	\$ 102	\$ 102	\$ 106	\$ 111	\$ 118	\$ 181

\*While the CPI measures changes in the prices for goods and services, movements in the CPI that have occurred in the past are not necessarily indicative of changes that may occur in the future.  
 Policy Index: 35% Bloomberg Barclays Aggregate Bond, 25% S&P 500 Index, 15% Russell Midcap, 10% MSCI Net EAFE, 5% HFRI Macro: Systematic Diversified Index, 5% MSCI Net Emerging Markets, 5% Russell 2000  
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<b>Scenario</b>	<b>Description</b>	<b>Net Adjustment (+/-)</b>
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No differences in information were used in the creation of this performance report.

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Account Number	Account Name/Asset Name	Identifier/Strategy	*As of Date
10xxxxxx07	Graham Absolute Return C/B Fund	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx23	Vanguard Mid Cap ETF	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx25	Whitebox Multi-Strategy Fund LP	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx34	Bramshell Income Performance Fund-Inst	US Other Fixed Income	
10xxxxxx40	MFS International Diversification	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx42	Goldman Sachs - Strategic Income Fund - GSZIX	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx45	Seizert Capital Partners	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx53	Cavendish Futures Fund	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx59	Polen Focus Growth	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx62	Vanguard S&P 500	At the time of report creation, there is insufficient data available for UBS to perform this review	
10xxxxxx70	C.S. Mckee	US Intermediate Fixed Income	
10xxxxxx97	Apex Capital Management	At the time of report creation, there is insufficient data available for UBS to perform this review	

\*The "as of date" indicates the date of the most recent holdings information provided by your custodian for assets held outside of UBS. If that information was not sent to UBS in time for inclusion within this report, the information contained on this page may be stale. Please see "Important Information" for additional details related to eligible assets within your advisory program. Please contact your Institutional Consultant for a list of the eligible assets in your program or if you have any other questions.

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If this output is provided as part of a proposal, it is provided to you for discussion and consideration and is intended to aid (and be used by) your UBS Consultant or Financial Advisor in providing you with actual individualized investment recommendations. Therefore, they should only be considered in conjunction with the actual recommendations and advice of your UBS Consultant or Financial Advisor, our standard account documents, agreements, disclosures, including the ADV Disclosure for applicable advisory programs, and the additional factors that warrant consideration for your particular financial situation, including costs. The options presented are for discussion purposes only and do not constitute a recommendation to buy, hold, or sell any securities or investment products. This material is not intended and should not be construed to constitute investment advice and does not itself create a fiduciary relationship between you and UBS. You must make independent decisions with respect to any proposals contained within this report.

**Accounts and Assets Included:** UBS account statements are the only official records of holdings, balances, transactions, and security values of assets held in UBS accounts and are not replaced, amended or superseded by any of the information presented in this report. If assets that you hold at other financial institutions are included in this report, they are being provided as part of your IC or CAP Services Agreement or you have asked us to include those assets as an accommodation but they are not included as part of your IC or CAP Services Agreement with us. If assets are included solely as an accommodation, those assets are identified as such in this report. In either situation, the inclusion of assets held at another financial institution is based on information, including valuation and transactional information, furnished to UBS by you or your custodian. We have not verified, and are not responsible for, the accuracy or completeness of this information. This report is not intended to provide you with consolidated information or reporting regarding your holdings at other firms. You should review and maintain the original documents for those assets, such as account statements for individual accounts held away from UBS. Those documents contain their record of holdings, balances, transactions, and security values of assets held in those accounts, as well as notices, disclosures and other information important to you, and may also serve as a reference should questions arise regarding the accuracy of the information in this report. UBS Financial Services Inc. SIPC coverage would only apply to those assets held at UBS Financial Services Inc. You should contact your financial representative at any other financial institution where you hold an account to determine the availability of SIPC coverage, if any. We require that you hold and purchase only eligible managed assets in your UBS advisory accounts.

**Investment Monitoring:** Your IC or CAP Agreement defines the investment monitoring performed as part of your respective investment advisory program. If we have included assets held in UBS brokerage accounts, it is important that you understand that we do not act as an investment adviser or fiduciary on brokerage assets. We do not monitor brokerage account investments through the IC or CAP Programs and we do not monitor investments as a brokerage service unless specifically agreed to in writing. This report is provided solely to help you evaluate your account performance and/or progress toward your financial objectives. By providing this report to you, we are not agreeing to monitor any brokerage account investments contained within the report. If you want ongoing monitoring of your brokerage investments, please speak with your financial advisor about the possibility of including such investments as part of an investment advisory relationship with us. Inclusion of brokerage assets in this report also distorts the actual performance of your advisory assets.

**Valuation:** Values shown are not inclusive of margin balances. Every reasonable effort has been made to accurately price securities; however, we make no guarantee with respect to any security's price. To determine the value of securities in your account, we generally rely on third party quotation services. If a price is unavailable or believed to be unreliable, we may determine the price in good faith and may use other sources such as the last recorded transaction. We will generally rely on the value provided by you, the custodian or issuer of that security, when (i) securities are held at another custodian; (ii) investments not available through UBS or that our systems do not recognize. To obtain current quotations, when available, contact your Institutional Consultant or Financial Advisor. Such pricing may impact the performance information provided in these reports. If pricing is indicated as "NA", the required data for that field was not provided by the other financial institution or you; this will impact the performance information provided in these reports.

**Performance Analytics:** Unless otherwise noted, performance shown is based on Time Weighted Rate of Return. Periods greater than one year have been annualized, but annual performance may not represent a full calendar year depending on the inception date of the first account included in these reports. Standard deviations are shown only for periods of 12 months or longer. When you hold your assets at UBS, this report will generally show performance net of manager and UBS Institutional Consulting fees, unless you and your UBS Financial Advisor decided to reflect fee information differently. If you hold your assets away from UBS, this report will generally show performance net of manager and UBS Institutional Consulting fees if your custodian provides that level of fee information, unless you and your UBS Financial Advisor decided to reflect fee information differently. Therefore, this report may reflect performance before the deduction of manager fees and/or UBS Institutional Consulting advisory fees. The payment of fees and expenses will reduce the performance of the account and the reduction in performance will have a cumulative effect over time. The net effect of the payment of fees on the annualized performance, and the compounded or cumulative effect over time, is dependent on the amount of the fee and the account's investment performance. For example, an account that experiences an annual gross performance of 10% but incurs a 2.8% annual fee that is deducted quarterly on a prorated basis, will experience net annual performance of 7.1%, a reduction of 2.9% per year. Compounding will similarly affect the account's performance on a cumulative basis. Commencing with first quarter reporting in 2021, we have added a new exhibit, the Fees and Returns Summary, which provides detailed fee information for your review, including returns net of manager and UBS Institutional Consulting advisory fees from that date forward.

Performance information incorporates data as of the date your accounts became available for these reports, not as of your initial acquisition of a particular investment unless performance history is imported at client's instruction. For reports that reflect combined account information, the inception date will be the earliest performance start date of any of the individual accounts selected for the consolidation time period. If an individual account's performance information is not available for a full reporting time period (month to date, quarter to date, year to date or performance to date), that account's information will only be included for the period when available. For consolidated accounts that include different account inception dates, the consolidated Additions/Withdrawals, Income Earned and Investment Appreciation/ Depreciation will include all activity that occurred during the consolidated reporting time period. The inception date of each account is listed at the beginning of this report. Accounts that hold or held insurance products will be reported on from the month end date of when insurance and annuity activity could be obtained from the carrier. To the extent that your historical data contains a mixture of net and gross performance history related to manager or advisory fees, those distinctions will impact your performance reports to the extent that the different methods of reporting are blended. Note that various factors, including unpriced securities and certain holdings, adjustments or activity may cause the results shown in this report to differ from actual performance (see the Performance Reconciliation Adjustments section for detail on differences between your Custodial statement and information used to create this performance report). Note that these results may differ from other performance reports provided to you by UBS. Performance information may be impacted by the different ways each UBS entity or third party financial institution respectively records trade executions. Past performance is no guarantee of future results. Neither the UBS entities nor any of their respective representatives provide tax or legal advice. You must consult with your legal or tax advisors regarding your personal circumstances.

You have discussed the receipt of this individually customized report with your Financial Advisor. Your UBS account statements and trade confirmation are the official records of your accounts at UBS. We assign index benchmarks to our asset allocations, strategies in our separately managed accounts and discretionary programs based on our understanding of the allocation, strategy, the investment style and our research.

The benchmarks included in this report can differ from those assigned through our research process. As a result, you may find that the performance comparisons may differ, sometimes significantly, from that presented in performance reports and other materials that are prepared and delivered centrally by the Firm. Depending upon the composition of your portfolio and your investment objectives, the indexes used in this report may not be an appropriate measure for comparison purposes, and as such, are represented for illustration only. Your portfolio holdings and performance may vary significantly from the index. Your financial advisor can provide additional information about how benchmarks within this report were selected.

**Using Margin in your IC or CAP Investment Advisory Accounts.** Using margin in an advisory account is a more aggressive, higher risk approach to pursuing your investment objectives. Unless you have selected a strategy that requires the use of margin as part of its implementation, we do not recommend the use of margin in advisory accounts, including IC and CAP accounts. The decision to leverage in an advisory account rests solely with you and is made against our recommendation. Your decision should be made only if you understand: (1) the risks of margin in an advisory account; (2) how margin may affect your ability to achieve investment objectives; (3) that you may lose more than your original investment. You will pay interest to UBS on the outstanding margin loan balance. Using margin to purchase securities in an advisory account increases the amount of (but not the percentage of) the advisory fee you pay. Positive or negative performance of a margined advisory account will be magnified by virtue of using margin. You will not benefit from using margin in an advisory account if the performance of your account does not exceed the interest expense being charged on the loan plus the additional advisory account fees incurred by your account as a result of the deposit of the loan proceeds.

**Using Advisory Accounts as collateral for a credit line.** If you currently have UBS Bank USA Credit Line collateralized by advisory accounts, UBS Bank USA pays UBS Financial Services a servicing fee based on the amount of outstanding loan balances to compensate UBS for referring clients and for administrative and operational support relating to the loan. If you maintain a balance on a non-purpose loan, your Financial Advisor will receive compensation primarily based upon the outstanding balance and the corresponding spread on the loan. This provides an incentive for your Financial Advisor to refer you for a non-purpose loan and to draw down on the loan. As UBS and your Financial Advisor are compensated primarily through advisory fees paid on your account, we (and your Financial Advisor) benefit if you draw down on your loan to meet liquidity needs rather than sell securities or other investments in your UBS account, which would reduce our advisory fee. A draw down would preserve your Financial Advisor's advisory fee revenue and may generate additional loan-related compensation for him. This presents a potential conflict of interest for your Financial Advisor when addressing your needs for liquidity. Please consider your options and these conflicts of interest carefully when deciding whether to liquidate assets or draw down on a non-purpose loan.

Neither UBS, our affiliates nor our Financial Advisors will act as investment adviser to you with respect to the liquidation of securities held in an advisory account to meet a margin call or credit line loan demand.

**Benchmark Index Information:** For comparison purposes, these reports may contain a number of general broad market indices, which were selected to demonstrate the performance of broad market indicators that are readily recognized, rather than for direct performance comparisons, and do not reflect the performance of actual investments. The selection and use of benchmarks is not a promise or guarantee that your accounts will meet or exceed the stated benchmarks. Benchmark information is illustrative and relates to historical performance of market indexes and not the performance of actual investments. Indexes are not available for direct investment and reflect an unmanaged universe of securities. Indices assume no management, custody, transaction fees or expenses that would lower the performance results, and assume reinvestment of dividends and capital gains. Information about indices is based on information obtained from sources believed to be reliable, but no independent verification has been made. UBS does not guarantee the accuracy or completeness of any index information presented. Market index data is subject to review and revision, and UBS reserves the right to substitute indices or display only those indices for which current updated information is available. Information regarding the indexes shown in this report can be found at the end of this report.

**Risk Considerations:** Some of the general risk considerations associated with the investment options included in this report are described below. The descriptions are not meant to be a complete list of all investment risks. For more complete information regarding fees, expenses, risks and restrictions associated with these investments please review the offering documents and marketing materials. Investors should consult their tax advisor about their specific tax situation before investing in any securities. In addition, clients should familiarize themselves with the particular market risks and the other risks associated with the specific investment. All investments contain risk and may lose value.

**Cash and cash alternatives:** Cash and cash alternatives typically include money market securities or three-month T-Bills. These securities have short maturity dates and they typically provide a stable investment value as compared to other investments and current interest income. These investments may be subject to credit risks and inflation risks. Treasuries also carry liquidity risks for sales prior to maturity. Investments in money market funds are neither insured nor guaranteed by the Federal Deposit Insurance Corporation ("FDIC"), the U.S. government or any other government agency. There can be no assurance that the funds will be able to maintain a stable net asset value at \$1.00 per share or unit.

**Alternative Investments:** Non-traditional asset classes are alternative investments that include hedge funds, private equity, and private real estate (collectively, non-traditional or alternative investments). These investments can be subject to substantial risks (including the risks associated with limited liquidity, the use of leverage, short-sales and concentrated positions), may involve complex tax structures and strategies, and may not be easily valued. The risks of alternative investments should be carefully considered in light of your investment objectives, risk tolerance and net worth. Alternative investments are speculative and entail substantial risks, which may place your capital at risk. Alternative investments may not have been registered with the Securities and Exchange Commission or under any state securities laws. The market for such investments may be highly illiquid and subjectively valued, and these reports provide values for informational purposes only. Accuracy is not guaranteed. These values may differ substantially from prices, if any, at which a unit may be bought or sold and do not necessarily represent the value you would receive from the issuer upon liquidation. Issuer estimated values, if any, are generally updated on a regular (annual or semi-annual) basis and are supplied to us by the issuer, but may be calculated based on different information from what is used by third parties to derive their estimated values.

**U.S. Fixed Income:** Fixed income represents exposure (whether direct or indirect) to debt issued by private corporations, governments or federal agencies. Historically, fixed income has higher return than cash investments but their value can fluctuate dramatically as they are subject to risks including market, interest rate, issuer, credit, default and inflation risk. An investment in a portfolio may be worth more or less than its original cost when redeemed. In addition, fixed income generally has less volatility and long-term return than equities. U.S. fixed income may be further classified as high yield. These investments are high yielding but may also carry more risk. A bond funds yield and value of its portfolio fluctuate and can be affected by changes in interest rates, general market conditions and other political, social and economic developments.

**U.S. Equity:** Equities represent exposure (whether direct or indirect) to ownership interest in a corporation. Historically, equities are more risky than fixed income or cash investments as they experience greater volatility risk, which is the risk that the value of your investment may fluctuate over time. However, they have had higher returns. Investments in small and medium company stocks can be more volatile over the short term than investments in large company stocks, however, they may offer greater potential for appreciation.

**Non-U.S. equity and fixed income:** Non-U.S. equity and fixed income represent exposure (whether direct or indirect) to ownership interests and debt, respectively, of foreign governments and corporations that can be sub-divided into those from countries that have developed markets or emerging markets. Further, non-U.S. companies not reporting with the SEC may be subject to accounting, auditing, and financial reporting standards and requirements that differ from companies reporting with the SEC and may have less publicly available information about them than companies reporting with the SEC.

**International:** Investors in securities of issuers located outside of the United States should be aware that even for securities denominated in U.S. dollars, changes in the exchange rate between the U.S. dollar and the issuer's "home" currency can have unexpected effects on the market value and liquidity of those securities. Those securities may also be affected by other risks (such as political, economic or regulatory changes) that may not be readily known to a U.S. investor.

**Variable Annuities:** A variable deferred annuity is a long-term financial product designed for retirement purposes. It is a contractual agreement in which payment(s) are made to an insurance company, which agrees to pay out an income or a lump sum amount at a later date. There are fees and charges associated with a variable annuity contract, which include, but are not limited to, operations charges, sales and surrender charges, administrative fees, and additional charges for optional benefits. Variable annuities are sold by prospectus and you should carefully consider important information on the sub-accounts' investment objectives, risk, charges and expenses.

Please read the prospectus and offering documents carefully before you invest. Your Financial Advisor can provide a copy of the prospectus. For current month-end returns:

<http://advisor.morningstar.com/familyinfo.asp> <http://advisor.morningstar.com/familyinfo.asp>. Withdrawals from an annuity contract are taxable as ordinary income, not as capital gains and, if made prior to age 59 and 1/2, may be subject to an additional 10% federal income tax penalty. Withdrawals may also be subject to surrender charges. Withdrawals will reduce the death benefit, living benefits and cash surrender value. For tax purposes, withdrawals will come from any gain in the contract first. Please see the prospectus for complete details. Amounts in the annuity's variable investment portfolios are subject to fluctuation in value and market risk, including loss of principal. Unregistered group variable annuities and registered group variable annuities that are solely available for use in qualified plans are rated and ranked based on their position within the bell curve of the open end fund peer group (a.k.a. category), rather than the variable annuity subaccount peer group. These ratings and ranks are calculated by using an overlay of the open end fund peer group break points and therefore do not contribute to the category average or number of funds within the peer group. For variable annuity subaccounts, standardized return is total return based on its inception date within the separate account and is adjusted to reflect recurring and non-recurring charges such as surrender fees, contract charges, maximum

front-end load, maximum deferred load, maximum M&E risk charge, administration fees, and actual ongoing fund-level expenses. The benchmark used for each individual subaccount performance is an index that has been assigned to the particular manager or fund.

**Mutual Fund Performance Information:** Mutual Funds are sold by prospectus and you should carefully consider important information on the fund's investment objectives, risk, charges and expenses. Please read the prospectus and offering documents carefully before you invest. Your UBS Institutional Consultant can provide a copy of the prospectus. For current month-end returns: <http://advisor.morningstar.com/familyinfo.asp> <http://advisor.morningstar.com/familyinfo.asp>. This analysis may incorporate mutual fund and exchange traded fund performance results. Analytics

shown are calculated based on the fund's Net Asset Value, which may reflect the reinvestment of dividends and capital gains, as well as the deduction of 12b-1 fees and fund internal expenses (e.g. fund management fees). The analytics do not reflect the deduction of the sales load, where applicable, the UBS Consulting fee(s), where applicable, or the impact of taxes. Had the sales load, fee or taxes been included, the results used in this analysis would have been reduced.

**Wilshire Trust Universe Comparison Service Information:** These reports may contain comparative peer performance data provided by Wilshire Associates Incorporated (Wilshire®), entitled "Quartile Ranking Comparison." Output will be presented as a universe organized by asset type, plan type, plan size or other basis. Wilshire®, the Wilshire Trust Universe Comparison Service® and TUCS® are service marks of Wilshire Associates Incorporated and have been licensed for use by UBS Financial Services Inc. All content of TUCS is ©2021 Wilshire Associates Incorporated, all rights reserved.

**Ranking Methodology:** Universe ranking assigns a whole number rank between 1 and 99 for a set of values. This is the distribution. Ranking is determined by comparing a value to the values in the set, and using the rank assigned to the value that is equal to or 'better' than the value being compared. A 'better' value is based on whether a higher value is better or a lower value is better. A set of values can be ranked either high to low (as in rates of return, where a higher value is better than a lower value) or low to high (such as Beta). **Policy Index:** A point of reference for evaluating a portfolio's investment performance. A Policy Index can be comprised of single or multiple benchmarks (weighted blend). Portfolios with multiple benchmarks will be depicted with a description of benchmarks and weights that comprise the policy. **The benchmarks that constitute the policy index change over time as your portfolio changes. For historical policy index information, see the Benchmark Comparisons Used in this Report exhibit.**

**Gain/(Loss) Information:** When data is available from UBS, estimated unrealized gains/losses are calculated for individual security lots. For assets transferred from another financial institution, gain/loss information will be reflected only for the period of time the assets have been held at UBS entities. For assets held at other financial institutions, information provided by you or that entity, if any, is reflected. Total realized gain/loss information may include calculations based upon non-UBS entities cost basis information. UBS Financial Services Inc. does not independently verify or guarantee the accuracy or validity of any information provided by sources other than UBS Financial Services Inc. When original cost information is unavailable, gain/loss amounts will represent current market value and total gains/losses may be inaccurate. Date information for when a particular security was acquired, when available, appears on these reports. When no acquisition date is provided for a security, these reports reflect "N/A" and omit this information. As a result, these figures may not be accurate and are provided for informational purposes only.

**Interest and Dividend Income:** When shown on this report, information does not reflect your account's tax status or reporting requirements. You should use only official IRS forms for tax reporting purposes. The classification of private investment distributions can only be determined by referring to the official year-end tax-reporting document provided by the issuer.

**Contributions and Withdrawals:** When shown on a report, information regarding contributions and withdrawals may represent the net value of all cash and securities contributions and withdrawals, and may include program fees (including wrap fees) and other fees added to or subtracted from your accounts from the first day to the last day of the period covered by these reports. Program fees may be separately identified or included in withdrawals except when paid via an invoice or through a separate account billing arrangement.

**Cash Flow:** Cash Flow analysis is based on the historical dividend, coupon and interest payments you have received as of the Record Date in connection with the securities listed and assumes that you will continue to hold the securities for the periods for which cash flows are projected. This may or may not include principal paybacks for the securities listed. These potential cash flows are subject to change due to a variety of reasons, including but not limited to, contractual provisions, changes in corporate policies, changes in the value of the underlying securities and interest rate fluctuations. The effect of a call on any security(s) and the consequential impact on its potential cash flow(s) is not reflected in this report. Payments that occur in the same month in which the report is generated -- but prior to the report run ("As of") date -- are not reflected in this report. In determining the potential cash flows, UBS relies on information obtained from third party services it believes to be reliable but does not independently verify or guarantee the accuracy or validity of any information provided by third parties. Cash flows for mortgage-backed, asset-backed, factored, and other pass-through securities are based on the assumptions that the current face amount, principal pay-down, interest payment and payment frequency remain constant.

Calculations may include principal payments, are intended to be an estimate of future projected interest cash flows and do not in any way guarantee accuracy.

**Important information about advisory & brokerage services:** As a firm providing wealth management services to clients, UBS Financial Services Inc. offers investment advisory services in its capacity as an SEC-registered investment adviser and brokerage services in its capacity as an SEC-registered broker-dealer. Investment advisory services and brokerage services are separate and distinct, differ in material ways and are governed by different laws and separate arrangements. It is important that clients understand the ways in which we conduct business and that they carefully read the agreements and disclosures that we provide to them about the products or services we offer. A small number of our financial advisors are not permitted to offer advisory services to you, and can only work with you directly as UBS broker-dealer representatives. Your financial advisor will let you know if this is the case and, if you desire advisory services, will be happy to refer you to another financial advisor who can help you. Our agreements and disclosures will inform you about whether we and our financial advisors are acting in our capacity as an investment adviser or broker-dealer. For more information, please review the PDF document at [ubs.com/relationshipssummary](https://ubs.com/relationshipssummary). While we strive to make sure the nature of our services is clear in the materials we publish, if at any time you would like clarification on the nature of your accounts or the services you are receiving, please speak with your UBS Institutional Consultant.

The ACCESS, SWP, AAP, MAC and Institutional Consulting ("IC") programs offer some of the same Separately Manage Account ("SMA") Managers for different SMA Manager fees. The amount of the fee paid to each SMA Manager is a function of that SMA Manager's investment style and the fee negotiated with the SMA Manager either by UBS (in ACCESS, SWP) or by you (in MAC or IC). Depending on your asset level and ability to negotiate the investment management fee with the SMA Manager in the dual-contract structure of the MAC or IC program, you may find that the single-contract structure in ACCESS and SWP provides a more cost-effective option or vice versa. In addition, based on the combination of our fees and your SMA Manager's fees, the overall fee for your SMA account in ACCESS, SWP, MAC or IC may exceed 3% of the account value. Please review your options and overall costs carefully with your Financial Advisor before investing.

## Calculation Definitions

**Accrued Interest:** In accounting, accrued interest refers to the amount of interest that has been incurred, as of a specific date, on a loan or other financial obligation but has not yet been paid out. Accrued interest can either be in the form of accrued interest revenue, for the lender, or accrued interest expense, for the borrower. The term accrued interest can also refer to the amount of bond interest that has accumulated since the last time a bond interest payment was made.

**Alpha:** Alpha measures the difference between an investment's actual performance, and its expected performance as indicated by the returns of a selected market index. A positive Alpha indicates the risk-adjusted performance is above that index. In calculating Alpha, Standard Deviation (total risk) is used as risk measure. Alpha is often used to judge the value added or subtracted by a manager.

**Annual Income** is money (or some equivalent value) that an individual or business receives, usually in exchange for providing a good or service or through investing capital. Income is used to fund day-to-day expenditures. Investments, pensions, and Social Security are primary sources of income for retirees. For individuals, income is most often received in the form of wages or salary. Business income can refer to a company's remaining revenues after paying all expenses and taxes. In this case, income is referred to as "earnings." Most forms of income are subject to taxation.

**Appreciation/Depreciation:** Appreciation or Depreciation is the change in market value minus net cash flows. The value indicates by how much the portfolio value has changed due to changes in asset values. Appreciation would be an increase, Depreciation would be a decrease.

**Average Exposure:** Average Exposure is generally, the average allocation to a segment or an asset. Calculated as the beginning market value plus the weighted net cash flows as a percentage of the total portfolio market value.

**Beta:** Beta is defined as a Manager's sensitivity to market movements and is used to evaluate market related, or systematic risk. Beta is a measure of the linear relationship, over time, of the Manager's returns and those of the Benchmark. Beta is computed by regressing the Manager's excess returns over the risk free rate (cash proxy) against the excess returns of the Benchmark over the risk free rate. An investment that is as equally volatile as the market will have a Beta of 1.0; an investment half as volatile as the market will have a Beta of 0.5; and so on. Thus, Betas higher than 1.0 indicate that the fund is more volatile than the market.

**Composite Benchmark:** The Composite Benchmark is a weighted average benchmark based on the allocation of funds within each of the portfolios in the composite and the risk index assigned to each portfolio.

**Correlation (R):** The Correlation represents the degree to which investments move in tandem with one another and is a critical component of diversified portfolio construction. The Correlation varies between a minimum of -1 (move in opposite direction) and a maximum of 1 (completely correlated). Lower Correlations enhance diversification and lead to better risk-adjusted returns within diversified portfolios. An R of less than 0.3 is often considered low Correlation.

**Cost:** This is the Cost basis information. Cost basis is the original value of an asset for tax purposes, usually the purchase price, adjusted for stock splits, dividends, and return of capital distributions. This value is used to determine the capital gain, which is equal to the difference between the asset's cost basis and the current market value.

**Coupon Rate:** A coupon rate is the yield paid by a fixed-income security; a fixed-income security's coupon rate is the annual coupon payments paid by the issuer relative to the bond's face or par value. The coupon rate, or coupon payment, is the yield the bond paid on its issue date. This yield changes as the value of the bond changes, thus giving the bond's **Yield to Maturity**. The portfolio's coupon rate is the weighted average of the assets' coupon rates.

**Current Yield:** This measure looks at the current price of a bond instead of its face value and represents the return an investor would expect if he or she purchased the bond and held it for a year. This measure is not an accurate reflection of the actual return that an investor will receive in all cases because bond and stock prices are constantly changing due to market factors.

**Distribution of Excess Returns:** Distribution of Excess Returns displays an arrangement of statistical data that exhibits the frequency of occurrence of the investment's returns in excess of the selected Market Index.

**Distribution of Assets:** Distribution of Assets displays monthly data related to net contributions, market values, rates of return, and Index Values.

**Down Market (Mkt) Capture Ratio:** Down Market Capture Ratio is a measure of an investment's performance in down markets relative to the market itself. A down market is one in which the market's return is less than zero. The lower the investment's Down Market Capture Ratio, the better the investment protected capital during a market decline. A negative Down Market Capture Ratio indicates that an investment's returns rose while the market declined.

**Downside Capture Return:** The downside capture return is the cumulative performance of the portfolio in all periods during which the risk benchmark posted a negative return.

**Downside Probability:** The downside probability is the ratio of the number of periods during which the portfolio posted a negative return to the total number of periods under study. If, for example, during a 12 month span, the portfolio realized 5 months of negative returns, the downside probability would be equal to 5/12 or 42 percent. The sum of the downside and upside probabilities must equal 1.0. The downside probability does not consider the extent to which the portfolio will fail to exceed the target index. It merely considers the likelihood that the target will not be exceeded. It is important to bear in mind this point when comparing the downside probabilities of more than one portfolio. It is not necessarily correct, for example, to deem portfolio A riskier than portfolio B simply because A has a higher downside probability.

**Downside Risk (Semi Standard Deviation, Semi Std Dev, or Downside Deviation):** Downside Risk only identifies volatility on the down side. Downside Risk measures the variability of returns below zero, whereas Standard Deviation attributes volatility in either direction to risk. The Downside Risk method calculates the deviations below zero for each observed return. Each time a return falls below zero, the sum is divided by the number of observations and the square root is taken. This result is then shown on an annualized basis.

**Dynamic Index:** A weighted average blended benchmark of the risk indices assigned to each asset class, based on the asset allocation of the portfolio for a given period. The benchmark index weighting adjusts with changes to the asset allocation. A Dynamic Index should not be used when measuring against the client's *Investment Policy Statement*.

**Effective Duration:** A duration calculation for bonds with embedded options. Effective duration takes into account that expected cash flows will fluctuate as interest rates change.

**Excess:** Denotes that a statistic is being measured relative to the Market Index selected. The data set analyzed consists of the periodic differences between the investment's measure and the selected Market Index's definition. **Expense Ratio:** Often referred to as the Net Expense Ratio, Morningstar pulls the net annual expense ratio from the fund's audited annual report. Annual-report expense ratios reflect the actual fees charged during a particular fiscal year. The annual report expense ratio for a fund of funds is the wrap or sponsor fee only. The expense ratio expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as initial or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. If the fund's assets are small, its expense ratio can be quite high because the fund must meet its expenses from a restricted asset base. Conversely, as the net assets of the fund grow, the expense percentage should ideally diminish as expenses are spread across the wider base. Funds may also opt to waive all or a portion of the expenses that make up their overall expense ratio.

**Gross Dollar Weighted Return:** Gross Dollar Weighted Return is the internal rate of return, excluding money manager fees.

**Gross Expense Ratio:** Represents the total gross expenses (net expenses with waivers added back in) divided by the fund's average net assets. If it is not equal to the net expense ratio, the gross expense ratio portrays the fund's expenses had the fund not waived a portion, or all, of its fees. Thus, to some degree, it is an indication of fee contracts. Some fee waivers have an expiration date; other waivers are in place indefinitely.

**Gross Time Weighted Return:** Gross Time Weighted Return is the Modified Dietz return, excluding money manager fees.

**Index Value:** Index Value is the unit value series based on the return stream. It can be used to calculate rates of return between any two dates in the report.

**Information Ratio:** The Information Ratio is a measure of value added by an investment manager. It is the ratio of (annualized) excess return above the selected Market Index to (annualized) Tracking Error. Excess return is calculated by linking the difference of the manager's return for each period minus the selected Market Index return for each period, then annualizing the result.

**Investment Class:** Group of financial instruments which have similar financial characteristics and which tend to behave similarly in the marketplace.

**Investment Style:** Method and philosophy followed by a manager when selecting financial instruments.

**Management Firm:** Professional organization managing various assets in order to meet specified investment goals for the benefit of its clients.

**Manager Capture Ratio:** The Manager Capture Ratio is manager return divided by the selected Market Index return. It shows what portion of the market performance was captured by the manager under certain market conditions: up market, down market, or both.

**Market Experience:** Market Experience is the presumable market value of the portfolio if it and its cash flows had grown at the policy index rate of return. It lets the reader know if active management has aided or hurt the portfolio.

**Maturity Date:** The maturity date is the date on which the principal amount of a note, draft, acceptance bond or other debt instrument becomes due. On this date, which is generally printed on the certificate of the instrument in question, the principal investment is repaid to the investor, while the interest payments that were regularly paid out during the life of the bond, cease to roll in. The maturity date also refers to the termination date (due date) on which an installment loan must be paid back in full.

**Net Cash Flow:** For the total portfolio, net cash flow is aggregate contributions minus aggregate withdrawals. At the asset class level, net cash flow is aggregate purchases minus aggregate sales minus aggregate income. It is used in the numerator of the Modified Dietz return calculation. It is the same as "New Money" and "Flow".

**Net Dollar Weighted Return:** Net Dollar Weighted Returns is the internal rate of return, including money manager fees.

**Net Time Weighted Return:** Net Time Weighted Return is the Modified Dietz return, including money manager fees.

**New Money:** For the total portfolio, New Money is aggregate contributions minus aggregate withdrawals. At the asset class level, New Money is aggregate purchases minus aggregate sales minus aggregate income. It is used in the numerator of the Modified Dietz return calculation. It is the same as "Net Cash Flow" and "Flow".

**Par value:** Par value is the face value of a bond. The market price of a bond may be above or below par, depending on factors such as the level of interest rates and the bond's credit status. Par value for a bond is typically \$1,000 or \$100 because these are the usual denominations in which they are issued.

**Performance Attribution:** Attribution analysis is a sophisticated method for evaluating the performance of a portfolio or fund manager. Manager Contribution focuses on three factors: the manager's investment style, their specific asset selections, and the market timing of those selections. It attempts to provide a quantitative analysis of the aspects of a fund manager's investment selections and philosophy that lead to that fund's performance. Asset Allocation provides an analysis of the effects on relative performance (i.e., performance vs. an index) that are related to a portfolio's allocation between asset classes. Total Fund Attribution combines the Manager Contribution results with the impacts of Asset Allocation decisions.

**Real rate of return** is the annual percentage of profit earned on an investment, adjusted for inflation. Therefore, the real rate of return accurately indicates the actual purchasing power of a given amount of money over time. Adjusting the nominal return to compensate for inflation allows the investor to determine how much of a nominal return is real return. In addition to adjusting for inflation, investors also must consider the impact of other factors such as taxes and investing fees in order to calculate real returns on their money or to choose among various investing options.

**Tracking error** is the divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark. This is often in the context of a hedge fund, mutual fund, or exchange-traded fund (ETF) that did not work as effectively as intended, creating an unexpected profit or loss. Tracking error is reported as a standard deviation percentage difference, which reports the difference between the return an investor receives and that of the benchmark they were attempting to imitate.

**Treynor ratio**, also known as the reward-to-volatility ratio, is a performance metric for determining how much excess return was generated for each unit of risk taken on by a portfolio. Excess return in this sense refers to the return earned above the return that could have been earned in a risk-free investment. Although there is no true risk-free investment, treasury bills are often used to represent the risk-free return in the Treynor ratio. Risk in the Treynor ratio refers to systematic risk as measured by a portfolio's beta. Beta measures the tendency of a portfolio's return to change in response to changes in return for the overall market.

**Upside market Capture ratio:** The Upside Capture Ratio is the ratio of the Upside Capture Return -of a portfolio against a benchmark index- divided by the Market Benchmark Index's return (from zero or positive returns).

**Upside Capture Return;** The Upside Capture Return, which is measured based a related benchmark index's returns, is the portfolio's compound return for returns in periods, in which the respective benchmark index's return is above or equal to zero.

**Yield to maturity (YTM) is the total return anticipated on a bond if the bond is held until it matures. Yield to maturity is considered a long-term bond yield but is expressed as an annual rate. In other words, it is the internal rate of return (IRR) of an investment in a bond if the investor holds the bond until maturity, with all payments made as scheduled and reinvested at the same rate.**

**Policy Index:** A point of reference for evaluating a portfolio's investment performance. A policy Index can be comprised of single or multiple benchmarks (weighted blend). Portfolios with multiple benchmarks will be depicted with a description of benchmarks and weights that comprise the policy.

**Rate of Return, ROR, Return %, ROI:** All Return terms refer to the Modified Dietz return.

**Relative Risk:** Relative risk is simply the ratio of the standard deviation of the portfolio to the standard deviation of the risk index. The statistic reveals how much of the variation of the risk index is "shared" by the portfolio. A relative risk of 1.0 indicates that the portfolio has the same level of return variability as the risk index. A relative risk of less than 1.0 indicates that the portfolio has shown a lower dispersion of returns than the index. A relative risk in excess of 1.0 indicates that the portfolio returns have been more dispersed than those of the index.

**Riskless Index:** The theoretical rate of return of an investment with zero risk. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time. The 3 month T-Bill is the usual index used for riskless.

**R-Squared (R2):** The diversification measure R2 indicates the percentage of volatility in portfolio returns which can be "explained" by market volatility. This statistic indicates the degree to which the observed values of one variable, such as the returns of a managed portfolio, can be explained by, or are associated with the values of another variable, such as a Market Index. It is especially helpful in assessing how likely it is that Alpha and Beta are statistically significant. The R2 values generally range from 0.0 to 1.0. An investment with an R2 of 1.0 is perfectly correlated with the market whereas an investment with an R2 of 0.0 will behave independently of the market. An R2 of 0.95, for example, implies that 95% of the fluctuations in a portfolio are explained by fluctuations in the market.

**Sector Allocations:** The percentage a manager has allocated to specific economic sectors.

**Sharpe Ratio:** The Sharpe Ratio indicates the excess return per unit of total risk as measured by Standard Deviation. It is a ratio of the arithmetic average of excess returns over the risk free rate to the Standard Deviation. The Sharpe Ratio is a measure of the premium earned for the risk incurred by the portfolio.

**Sortino Ratio:** The Sortino Ratio is a measure of reward per unit of risk. With Sortino, the numerator (i.e., reward) is defined as the incremental compounded average return over the minimum acceptable return (MAR). The denominator (i.e., risk) is defined as the downside deviation of the returns below the MAR. Since the downside deviation is the standard deviation of those returns which fail to exceed the MAR, the result of the Sortino Ratio is a measure of the average reward per unit of loss. As with Sharpe and Treynor, the Sortino Ratio only has value when it is used as the basis of comparison between portfolios. The higher the Sortino Ratio, the better.

**Standard Deviation:** A measure of the extent to which observations in a series vary from the arithmetic mean of the series. The Standard Deviation of a series of asset returns is a measure of volatility or risk of the asset.

**Target Allocation:** The Target Allocation is the allocation goal of the portfolio approaches and long- and short-term holding periods.

**HFRI Relative Value:** Equally weighted index of investment managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types.

**Unit Values:** Unit Value links periodic rates of return, beginning with an initial value of 100. It can be used to calculate rates of return between any two dates in the report.

#### Index Definitions

**JP Morgan Global Ex-U.S. Bond Index:** Consists of regularly traded, fixed-rate domestic government debt instruments from 12 international bond markets. Countries included are Austria, Belgium, Canada, Denmark, France, Germany, Italy, Japan, the Netherlands, Spain, Sweden and the United Kingdom.

**MSCI AC World Index ex USA:** Consists of approximately 2,000 securities across 47 markets, with emerging markets representing approximately 18%. MSCI attempts to capture approximately 85% of the market capitalization in each country.

**MSCI EAFE Index (Europe, Australasia, Far East):** A free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada. As of June 2007, the MSCI EAFE Index consisted of the following 21 developed market country indexes: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom.

**MSCI Emerging Markets Index:** A free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. As of November 2008, the MSCI Emerging Markets Index consisted of the following 24 emerging market country indexes: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey.

**MSCI Europe Index:** A free float-adjusted market capitalization-weighted index that is designed to measure the equity market performance of the developed markets in Europe. As of June 2007, the MSCI Europe Index consisted of the following 16 developed market country indexes: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

**MSCI Japan Index:** A free float-adjusted market capitalization-weighted index that is designed to measure the equity market performance of Japan.

**NAREIT Index:** Benchmarks the performance of the REIT industry since its inception in 1972. It was designed to provide a comprehensive assessment of overall industry performance. Some REITs available from over-the-counter markets are not included due to the lack of real-time pricing.

**NCREIF Property Index (NPI):** A quarterly time series composite total rate of return measure of investment performance of a large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

**Russell 1000® Index:** Measures the performance of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000® Index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 92% of the U.S. market.

**Russell 1000® Growth Index:** Measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 1000® Value Index:** Measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values. **Russell 2000® Growth Index:** Measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 2000® Value Index:** Measures the performance of the small-cap value segment of the U.S. equity universe. It includes those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

**Russell Mid-Cap® Growth Index:** Measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell mid-cap companies with higher price-to-book ratios and higher forecasted growth values.

**Russell Mid-Cap® Value Index:** Measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell mid-cap companies with lower price-to-book ratios and lower forecasted growth values.

**S&P 500 Index:** Covers 500 large cap industrial, utility, transportation, and financial companies of the US markets. The index represents about 75% of NYSE market capitalization and 30% of NYSE issues. It is a capitalization weighted index calculated on a total return basis with dividends reinvested.

**TASS Index of CTAs:** Is a dollar-weighted index based on historical managed futures performance of CTAs with established track records.

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**City of Birmingham Employees Retirement Fund**  
Composite Performance Review  
Report for Periods Ending March 31, 2021



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# City of Birmingham Employees Retirement Fund

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# FIRST QUARTER 2021 MARKET SUMMARY

*The continued rollout of COVID-19 vaccinations and the associated resumption of global economic activity helped send risky asset prices, high-quality sovereign interest rates, and inflationary expectations significantly higher in the first quarter of 2021, with U.S.-based assets generally outperforming those internationally domiciled. While some incoming U.S. economic data continued to appear spotty—notably a beleaguered, albeit improving, labor market—numerous survey-based measures of economic activity have improved to secularly high levels.*

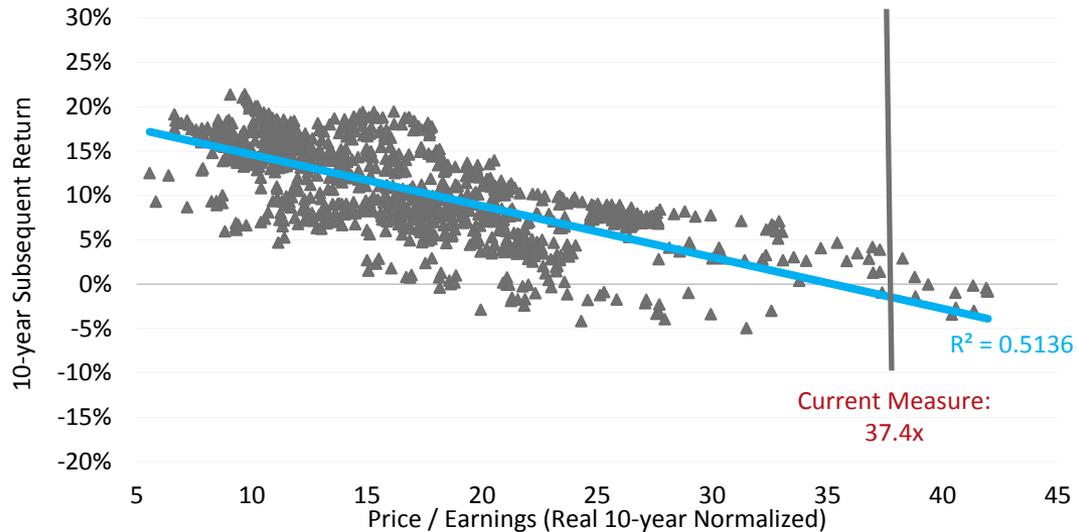
*Global equity performance in the first quarter of 2021 was strongly positive, with small cap outperforming large cap and the outperformance of the value equity style over the growth style. Treasury interest rates—both nominal and, to a lesser degree, inflation-adjusted (i.e., real)—rose materially, reflecting rising investor fears of positive near-term inflation surprises. Below investment grade credit performance was positive for the quarter, particularly for the floating-rate bank loan sector, which outperformed high yield credit. Real asset returns, outside of the safe haven precious metals sector, were strongly positive, with energy-related corners generating outsized performance amid percolating inflationary sentiment and an ongoing rebound in overall economic activity.*

# MARKET INSIGHTS

- Valuations, as measured by price-to-normalized 10-year inflation-adjusted earnings, rose to levels not witnessed since December 2000.
- Almost all valuation metrics are highly elevated, with many valuation metrics well above one standard deviation expensive.
- Long-term returns from these levels have historically been below 5%.

## HIGH VALUATIONS WEIGH ON RETURN EXPECTATIONS

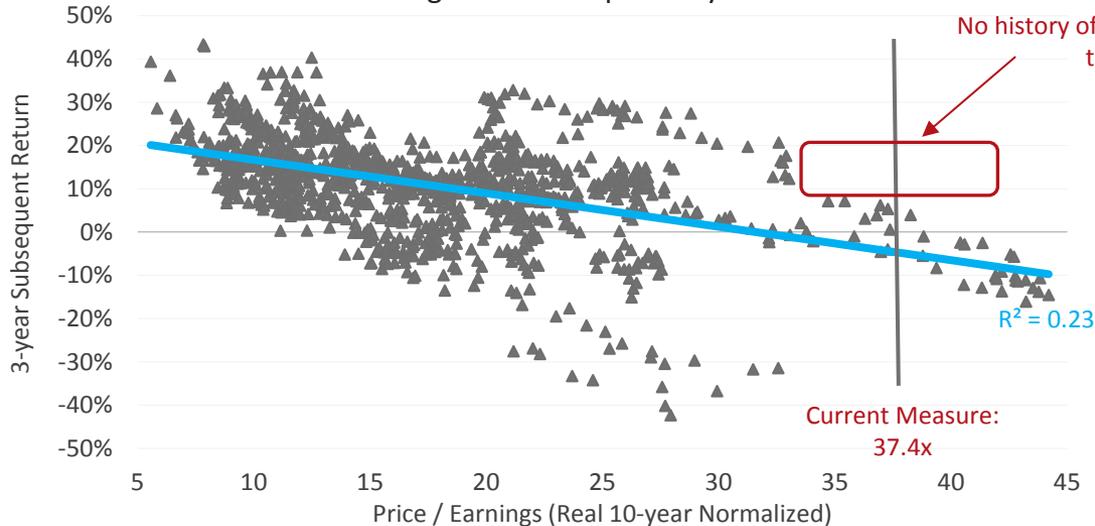
U.S. Price-to-Normalized Earnings and Subsequent 10-year Returns



Data source: Robert Shiller and Standard & Poor's, data as of April 8, 2021

## THREE-YEAR RETURNS MAY FACE HEADWINDS

U.S. Price-to-Normalized Earnings and Subsequent 3-year Returns



Data source: Robert Shiller and Standard & Poor's, data as of April 8, 2021

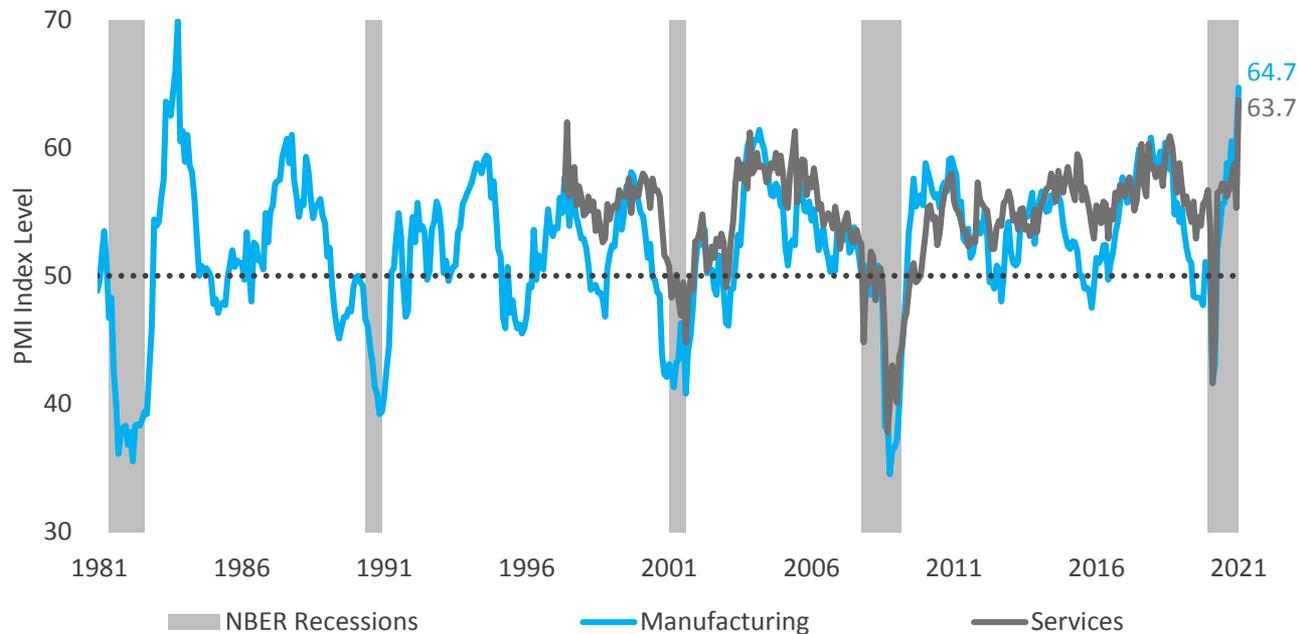
- 3-year returns have also been muted from valuation levels comparable to the current measure, never having reached double-digit levels.
- Markets have never witnessed positive 3-year returns from valuations above 38x, as measured by price-to-normalized 10-year inflation-adjusted earnings.

# ECONOMIC INSIGHTS

- In March, some survey-based composites that seek to capture general business activity sentiment, such as the Institute for Supply Management's (ISM) Purchasing Manager Index (PMI) composites, increased to multi-decade highs.
- Sentiment across the manufacturing base, as reflected by the ISM's Manufacturing PMI, improved to the highest level since December 1983, while the broader and more economically critical Services PMI increased to the highest level since July 1997, when the index series began.

## BOTH MANUFACTURING AND SERVICES EXPERIENCING LARGE INCREASES IN BUSINESS ACTIVITY

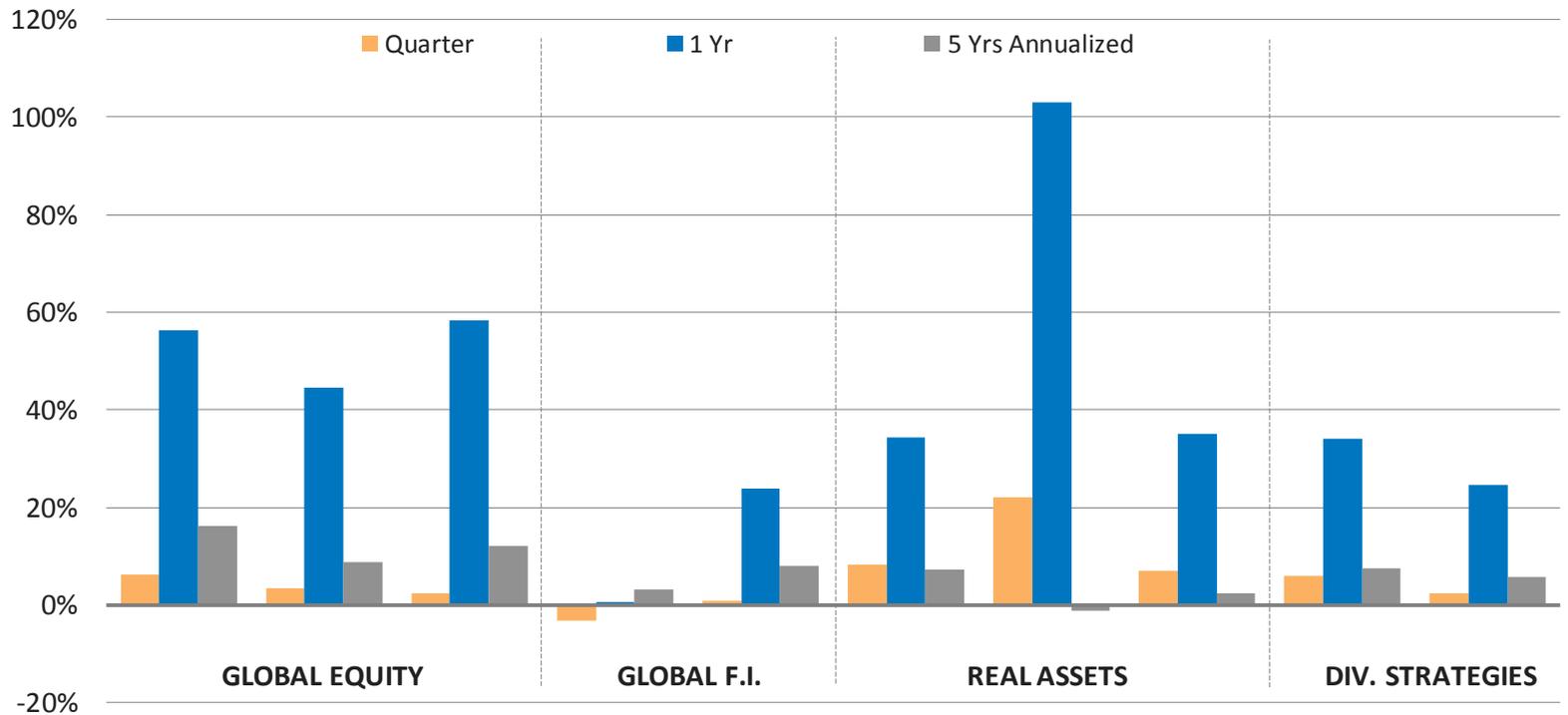
ISM Manufacturing and Services PMI & Cycles



Data sources: ISM, NBER, Bloomberg, L.P.; Data as of March 2021

# MARKET RETURNS

## MAJOR ASSET CLASS RETURNS



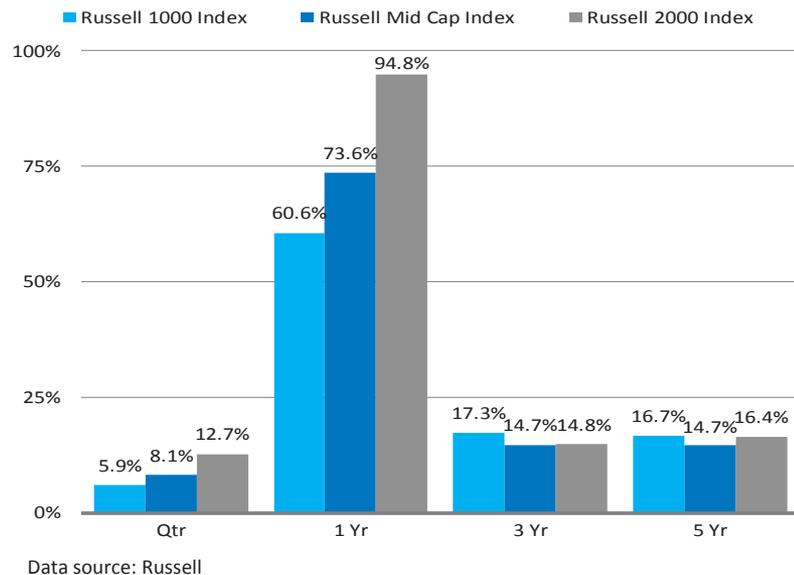
	GLOBAL EQUITY			GLOBAL F.I.		REAL ASSETS			DIV. STRATEGIES	
	S&P 500 Index	MSCI EAFE Index	MSCI Emerging Mkts Index	Blmbrg Barclays U.S. Agg Index	Blmbrg Barclays HY Index	FTSE NAREIT All Equity Index	Alerian MLP Index	Blmbrg Cmdty Index	HFRI Fund Wtd Comp. Index	HFRI Fund of Fund Index
Quarter	6.2%	3.5%	2.3%	-3.4%	0.8%	8.3%	22.0%	6.9%	6.1%	2.5%
1 Yr	56.3%	44.6%	58.4%	0.7%	23.7%	34.2%	103.1%	35.0%	34.1%	24.6%
5 Yrs Annualized	16.3%	8.8%	12.1%	3.1%	8.1%	7.2%	-1.3%	2.3%	7.5%	5.7%

Data sources: Lipper and HedgeFund Research

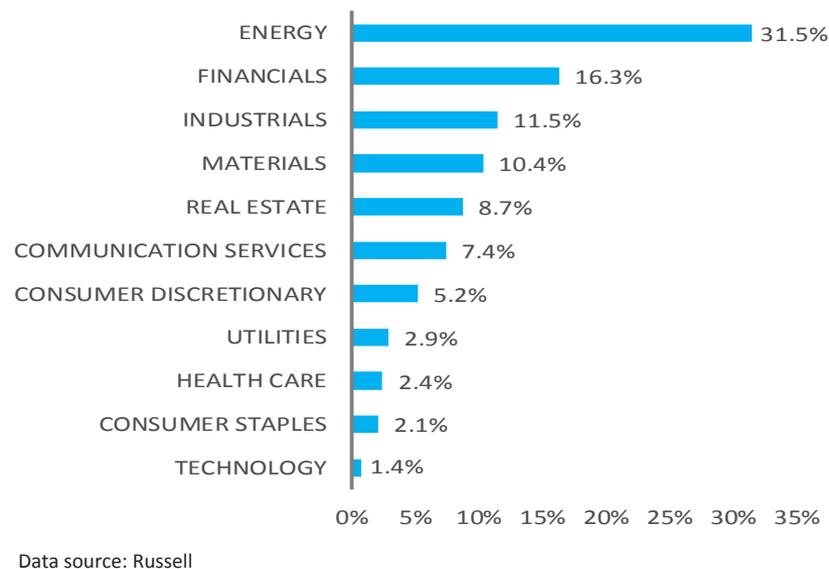
# GLOBAL EQUITY, U.S.

- Global equity markets rallied during the first quarter of 2021 due to the ramp-up in vaccine distribution in many parts of the world and improvement in global trade activity. In the U.S., widespread vaccinations and a third significant fiscal stimulus package contributed to investor optimism.
- The volatility during the quarter could be attributed to targeted stock trading by retail investors, a rise in interest rates, and inflationary pressures despite the Federal Reserve's (Fed's) assurance that inflation is likely to undershoot expectations.
- The rotation of demand for large cap and growth stocks into small cap and value stocks, which began in fourth quarter of 2020, continued its trend throughout the first quarter. The Russell 1000 Value Index (+10.7%) posted its largest outperformance over the Russell 1000 Growth Index (+0.7%) in two decades.

## LARGE CAP, MID CAP, AND SMALL CAP



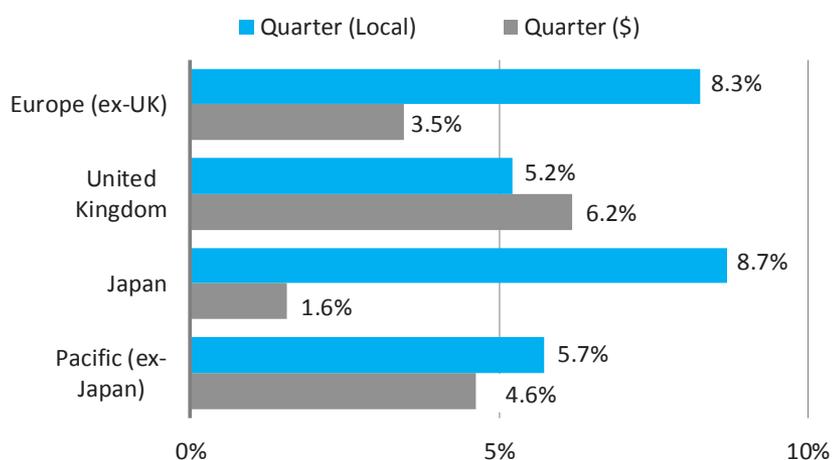
## RUSSELL 3000 SECTOR PERFORMANCE



# GLOBAL EQUITY, NON-U.S.

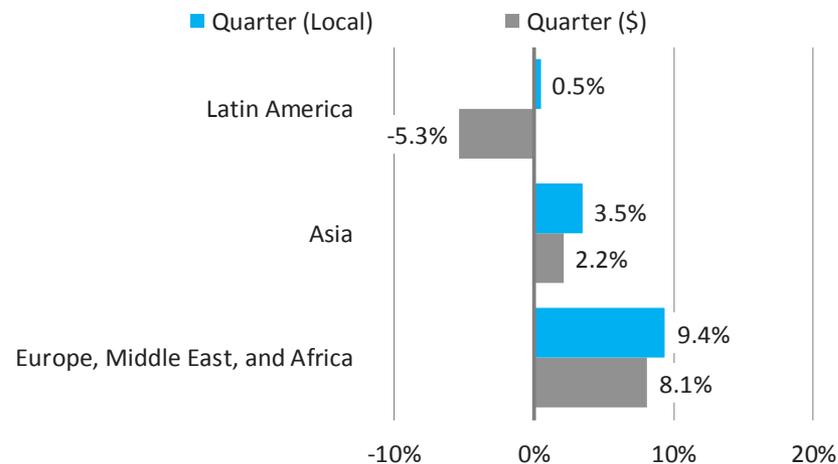
- Equities in the UK rallied as the service sector and the manufacturing purchasing manager’s index (PMI) showed signs of a rebound due to significant strides in vaccination rates and easing lockdown measures. Previously hard-hit economically sensitive areas of the market such as materials, energy, and financials posted strong returns.
- While European equities shared a similar story, markets remained cautious about rising COVID-19 infection rates and localized lockdown measures in some EU member states. The supply shortfall for vaccines raised tension between the EU and UK as vaccines continued to be exported from the EU.
- Japanese equity returns were positive as signs of recovery in corporate profits improved and value stocks rallied, but weakness of the yen weighed on returns for U.S. investors. Taiwan and Singapore were the strong performing markets in Asia, as Taiwan saw strength in internet and semiconductor stocks and the three largest banks in Singapore gained.
- Emerging markets had a volatile quarter, with the pace of vaccination falling short of expectations. A sharp uptick in infections in countries such as Brazil and India led to renewed local lockdown measures, but with disparate performance. Brazilian equities ended the quarter in the red, while equities in India gained approximately 5%. Chinese returns were also negative for the quarter due in part to a sell-off in internet stocks and a tighter monetary policy outlook.

## MSCI EAFE REGIONAL QUARTERLY RETURNS



Data source: MSCI Barra

## MSCI EM REGIONAL QUARTERLY RETURNS



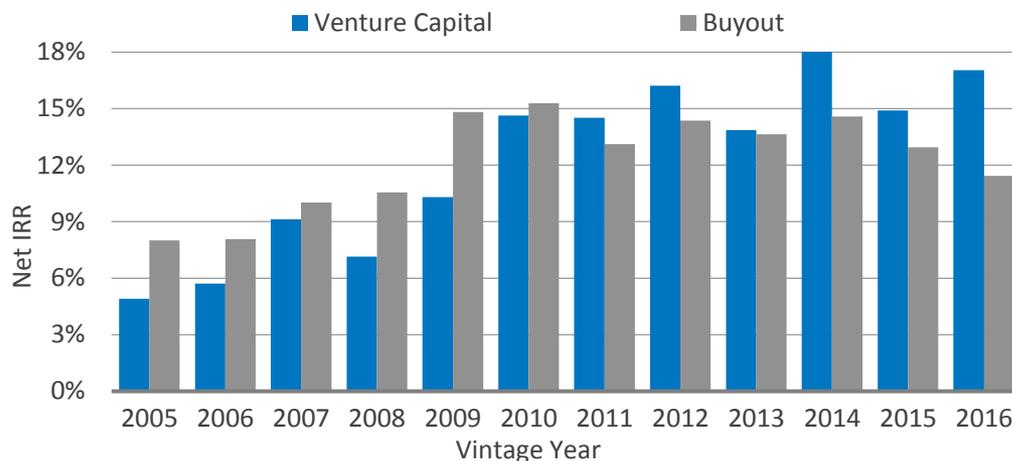
Data source: MSCI Barra

# GLOBAL EQUITY, PRIVATE

- Private equity reports performance on a lag and the latest performance is available through September 30, 2020. The third quarter was a time of significant volatility in both the financial markets and the economy, as society adjusted to COVID-19 and vaccine breakthroughs had yet to be announced.
- Median private equity returns for both venture capital and buyout funds have generally been in the low- to upper-teens since the 2010 vintage years.
- Median buyout funds from the mid-2000s through 2010 vintage years outperformed, then venture funds from the following decade's vintage years generally performed better than buyout.
- Commitments to private equity funds were off to a strong start in the first quarter. Fundraising can be volatile quarter over quarter. If the first quarter pace continues, then this year could be a high watermark for fundraising.

## MEDIAN VENTURE CAPITAL AND BUYOUT VINTAGE YEAR IRR

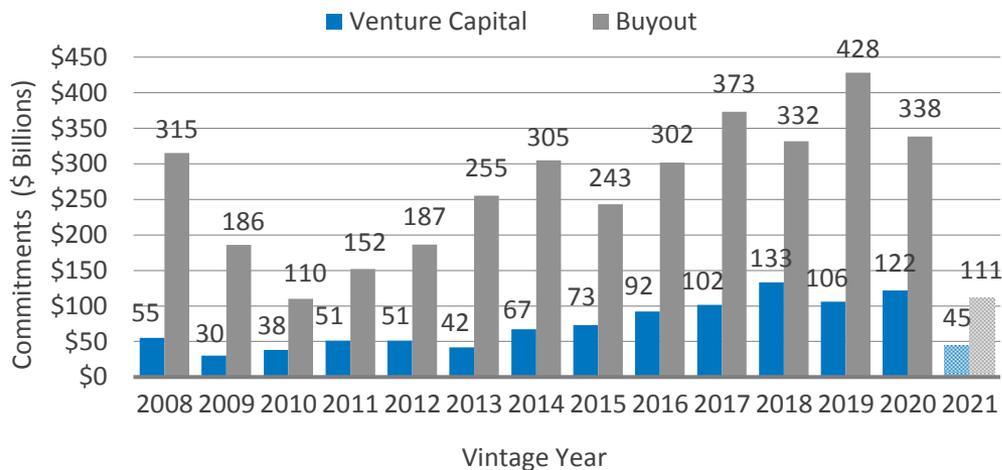
As of September 30, 2020



Data source: Thomson One; The most recent private equity return information available is through September 30, 2020

## VENTURE CAPITAL AND BUYOUT FUNDRAISING ACTIVITY

As of March 31, 2021

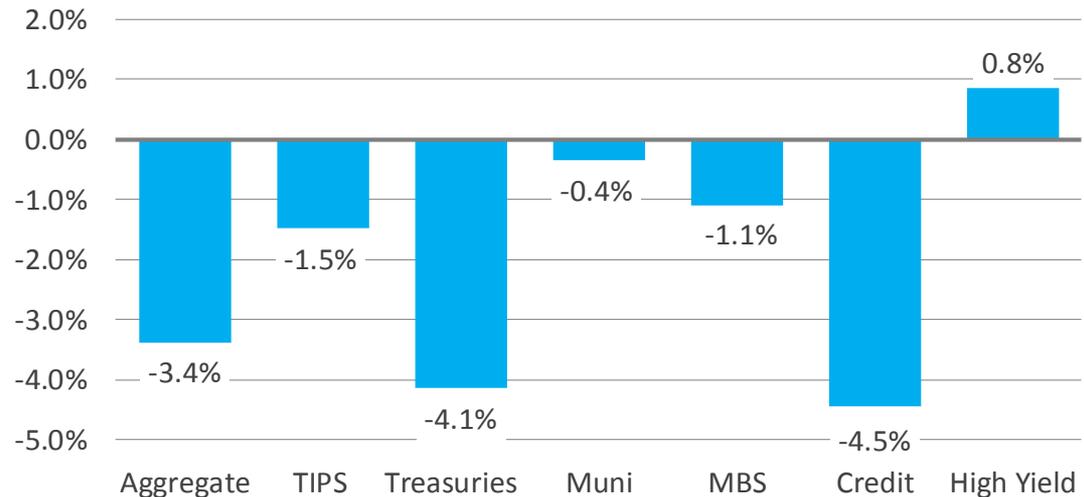


Data source: Pitchbook

# GLOBAL FIXED INCOME

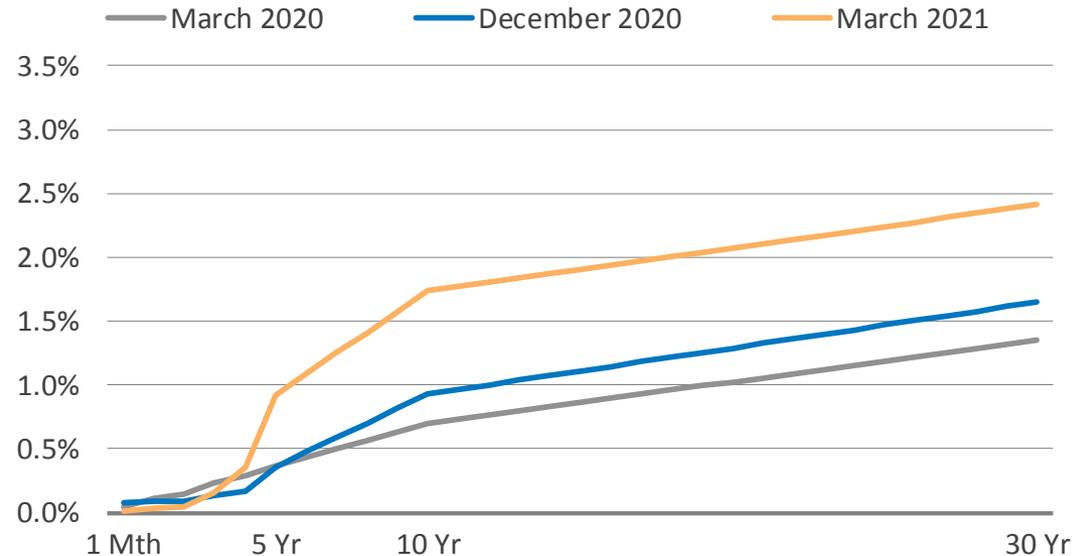
- 10-year Treasury yields rose by 81 basis points (bps) during the first quarter as expectations for GDP growth continued to improve. The upward move was the largest since 2016 and the fifth-largest since 1990.
- TIPS outperformed nominal Treasuries by 260 bps as 10-year breakeven inflation rates rose to 2.37%, their highest level since the “Taper Tantrum” of 2013. The Fed publicly pushed back against concerns surrounding the potential for sustained inflation throughout the quarter and maintained its commitment to an accommodative policy stance.
- Although credit spreads continued to tighten for most sectors, excess returns from spread compression were limited by the magnitude of the rise in Treasury yields. As a result, most spread sectors exhibited negative price returns as nominal yields rose, with lower-yielding, longer duration sectors such as investment-grade credit experiencing negative absolute returns.

## BLOOMBERG BARCLAYS U.S. FIXED INCOME INDEX RETURNS



Data source: Barclays

## U.S. TREASURY YIELD CURVE

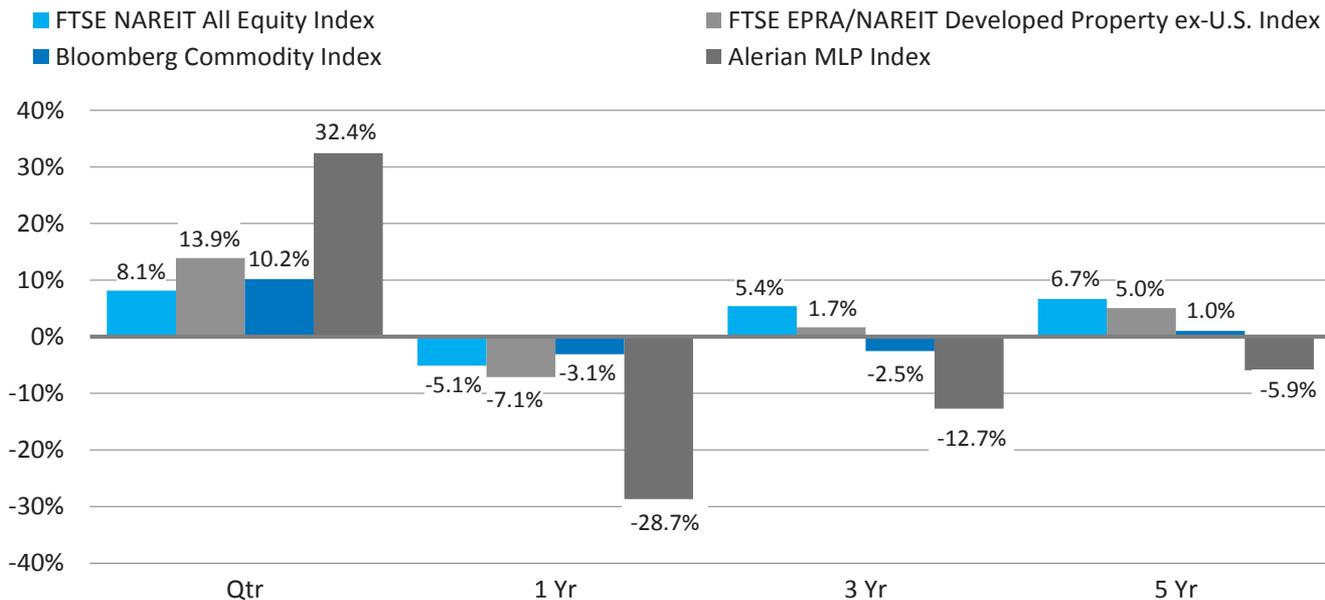


Data source: Bloomberg, L.P.

# REAL ASSETS

- U.S. REITs saw a continued demand for more economically-sensitive property sectors, which were expected to benefit from the vaccine rollout across the U.S. Specifically, property types most negatively impacted by the pandemic – malls and hotels – rebounded sharply in the first quarter. Conversely, property types which outperformed in 2020 – data centers and cell towers – witnessed lagging performance.
- WTI oil spot prices rose to just under \$60/barrel for the first quarter, a 22% gain from year-end 2020. Oil benefited from an improving supply/demand outlook driven by increased travel as economies reopened. Further price increases, however, may be limited by OPEC’s production targets. Global oil demand has recovered to approximately 96 million barrels per day, nearing the 100 million per day demand in place before the pandemic.
- Master limited partnerships (MLPs), as measured by the Alerian MLP Total Return Index, posted sizeable increases during the quarter, driven by strength in the broad energy sector and gains in oil and natural gas prices.

## PUBLIC REAL ASSETS – REAL ESTATE, COMMODITIES, AND MLPs

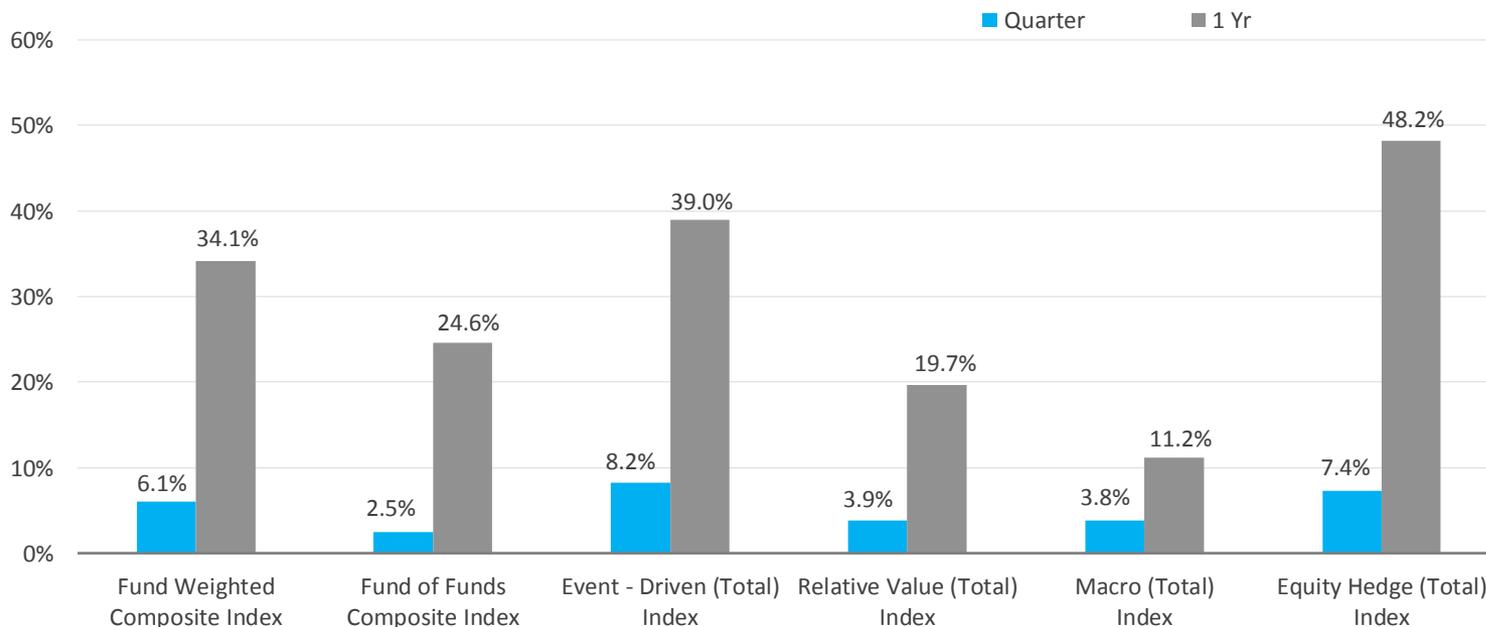


Data sources: NAREIT, Bloomberg, L.P., and Alerian

# DIVERSIFYING STRATEGIES, HEDGE FUNDS

- Hedge funds ended the quarter with positive returns, supported by sector dislocations in global equity markets, as well as continued uncertainty surrounding international vaccination efforts.
- Equity hedge managers' strong performance was predominantly driven by the continuation of retail investor trading. Early in the quarter, performance was hindered by retail trading. Later in the quarter, an array of unwinding positions in single-name equities, triggered by prime brokerage margin calls on a large family-office investor, buoyed returns.
- Event-driven managers posted the strongest performance, which came primarily from distressed/restructuring and special situations managers, as broader equity and credit markets responded to positive vaccination efforts.
- Global macro and relative value manager returns were both positive for the quarter, with dislocations in commodity and foreign exchange markets driving positive performance for dislocation strategies, although negatively impacting concentrated long-biased managers.

## HFRI INDICES PERFORMANCE RETURNS IN U.S. DOLLARS



Data source: HFRI

# City of Birmingham Employees Retirement Fund

## Composite Performance Review

Report for Periods Ending March 31, 2021

Annualized

	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr	Since 12/93
<b>Total Fund</b>	<b>4.6%</b>	<b>39.1%</b>	<b>9.2%</b>	<b>9.8%</b>	<b>7.4%</b>	<b>7.6%</b>	<b>7.3%</b>
Target Index <sup>1</sup>	2.8	34.9	10.3	10.0	8.1	8.2	7.9
CPI + 3%	2.0	5.6	5.2	5.3	4.7	4.8	5.2
6.75% Actuarial Assumed Rate	1.6	6.7	6.7	6.7	6.7	6.7	6.7

**Footnotes:**  
<sup>1</sup>Target Index is currently comprised of: 25.0% S&P 500 Index, 15.0% Russell Midcap Index, 5.0% Russell 2000 Index, 10.0% MSCI EAFE Index, 5.0% MSCI Emerging Markets Index, 35.0% Bloomberg Barclays US Aggregate Index, and 5.0% HFRI Macro: Systematic Diversified Index. Please see Appendix for benchmark history.



# City of Birmingham Employees Retirement Fund

## Summary of Investment Performance

Report for Periods Ending March 31, 2021

	Annualized						Since Inception	Date	Market Value
	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr			
<b>Total Fund</b>	<b>4.6%</b>	<b>39.1%</b>	<b>9.2%</b>	<b>9.8%</b>	<b>7.4%</b>	<b>7.6%</b>	<b>7.3%</b>	12/93	\$111,429,657
Target Index 1	2.8	34.9	10.3	10.0	8.1	8.2	7.9		
CPI + 3%	2.0	5.6	5.2	5.3	4.7	4.8	5.2		
6.75% Actuarial Assumed Rate	1.6	6.7	6.7	6.7	6.7	6.7	6.7		
<b>Equity Segment Return</b>	<b>6.4</b>	<b>54.9</b>	<b>11.2</b>	<b>13.1</b>	<b>9.3</b>	<b>9.8</b>	<b>8.8</b>	1/95	82,982,582
S&P 500 Index	6.2	56.3	16.8	16.3	13.6	13.9	10.6		
<b>Large Cap Equity</b>									
<b>Vanguard 500 Index Fund</b>	<b>6.2</b>	<b>56.3</b>	<b>16.7</b>	-	-	-	<b>16.3</b>	5/16	16,448,573
S&P 500 Index	6.2	56.3	16.8	-	-	-	16.4		
<b>Westwood Holdings Group</b>	<b>9.0</b>	<b>44.9</b>	<b>11.2</b>	<b>12.9</b>	<b>10.9</b>	<b>11.5</b>	<b>9.2</b>	7/08	17,164,636
Russell 1000 Value Index	11.3	56.1	11.0	11.7	9.4	11.0	9.2		
<b>Polen Focus Growth Strategy</b>	<b>1.8</b>	-	-	-	-	-	<b>12.1</b>	9/20	11,784,203
Russell 1000 Growth Index	0.9	-	-	-	-	-	12.4		
<b>Mid Cap Equity</b>									
<b>Vanguard Mid Cap Index Fund</b>	<b>7.2</b>	<b>70.6</b>	-	-	-	-	<b>70.6</b>	3/20	7,439,554
Spliced Vanguard Mid Cap Fund Index	7.2	70.7	-	-	-	-	70.7		
<b>Apex Capital</b>	<b>6.5</b>	<b>98.9</b>	<b>21.3</b>	<b>21.1</b>	-	-	<b>15.1</b>	7/15	5,212,656
Russell Midcap Index	8.1	73.6	14.7	14.7	-	-	12.2		
Russell Midcap Growth Index	-0.6	68.6	19.4	18.4	-	-	15.0		
<b>Small Cap Equity</b>									
<b>Gabelli Asset Management</b>	<b>17.2</b>	<b>96.8</b>	<b>8.7</b>	<b>11.8</b>	<b>9.1</b>	<b>11.5</b>	<b>10.6</b>	3/00	8,587,464
Russell 2000 Index	12.7	94.8	14.8	16.4	11.0	11.7	8.4		
Russell 2000 Value Index	21.2	97.1	11.6	13.6	8.9	10.1	10.0		
<b>International Equity</b>									
<b>MFS International Diversification</b>	<b>1.8</b>	-	-	-	-	-	<b>25.0</b>	6/20	16,345,496
MSCI EAFE Index	3.5	-	-	-	-	-	25.8		

# City of Birmingham Employees Retirement Fund

## Summary of Investment Performance

Report for Periods Ending March 31, 2021

	Annualized						Since Inception	Date	Market Value
	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr			
<b><u>Fixed Income Segment Return</u></b>	<b>-2.5%</b>	<b>5.5%</b>	<b>5.1%</b>	<b>3.8%</b>	<b>3.6%</b>	<b>4.0%</b>	<b>6.1%</b>	12/93	\$17,921,577
Bloomberg Barclays US Aggregate Index	-3.4	0.7	4.7	3.1	3.3	3.4	5.1		
Consumer Price Index - US	1.3	2.6	2.2	2.3	1.7	1.8	2.2		
<b><u>Fixed Income</u></b>									
<b>C.S. McKee Investment Managers</b>	<b>-3.5</b>	<b>2.4</b>	<b>4.7</b>	<b>3.2</b>	<b>3.5</b>	<b>3.8</b>	<b>3.8</b>	8/09	783,682
Bloomberg Barclays US Aggregate Index	-3.4	0.7	4.7	3.1	3.3	3.4	3.7		
<b>Ducenta Squared Asset Management</b>	<b>-3.2</b>	<b>3.0</b>	<b>5.4</b>	<b>4.1</b>	<b>4.1</b>	<b>4.4</b>	<b>4.9</b>	9/09	13,005,338
Bloomberg Barclays US Aggregate Index	-3.4	0.7	4.7	3.1	3.3	3.4	3.6		
<b>Bramshill Income Performance Fund</b>	<b>-0.3</b>	<b>16.4</b>	-	-	-	-	<b>5.3</b>	3/19	4,132,557
Bloomberg Barclays US Aggregate Index	-3.4	0.7	-	-	-	-	4.7		
<b><u>Real Estate Segment Return</u></b>	<b>0.4</b>	-	-	-	-	-	<b>0.4</b>	12/20	2,970,779
FTSE NAREIT All Equity Index	8.3	-	-	-	-	-	8.3		
<b>Starwood</b>	-	-	-	-	-	-	<b>0.6</b>	1/21	2,970,778
FTSE NAREIT All Equity Index	-	-	-	-	-	-	8.4		
<b><u>Hedge Funds</u></b>									
<b>Graham Absolute Return</b>	<b>6.6</b>	<b>26.2</b>	-	-	-	-	<b>5.6</b>	4/19	3,801,227
HFRI Macro Index	4.1	11.5	-	-	-	-	6.6		
<b>Whitebox Multi Strategy</b>	<b>5.8</b>	<b>30.6</b>	-	-	-	-	<b>5.6</b>	4/19	3,753,492
HFRI RV: Multi-Strategy Index	3.3	17.2	-	-	-	-	5.9		

### Footnotes:

\* Performance returns are net of investment management fees.

\* Calculated returns may differ from the manager's due to differences in security pricing and/or cash flows.

\* Manager and index data represent the most current available at the time of report publication.

\* Hedge fund and private capital manager market values and rates of return may be based on estimates and may be revised until completion of an annual audit by the manager.

\* For managers and indices that report returns on a lag, 0.0% is utilized for the most recent time period until the actual return data are reported.

\* The fiscal year ends in December.

<sup>1</sup> Target Index is currently comprised of: 25.0% S&P 500 Index, 15.0% Russell Midcap Index, 5.0% Russell 2000 Index, 10.0% MSCI EAFE Index, 5.0% MSCI Emerging Markets Index, 35.0% Bloomberg Barclays US Aggregate Index, and 5.0% HFRI Macro: Systematic Diversified Index. Please see Appendix for benchmark history.

# City of Birmingham Employees Retirement Fund

## Schedule of Asset and Style Allocation

<b>Asset Class</b>	<b>Current Weight</b>
Large Cap Equity	40.7%
Mid Cap Equity	11.4%
Small Cap Equity	7.7%
International Equity	14.7%
Emerging Markets	0.0%
Fixed Income	16.1%
Public Real Estate	2.7%
Hedge Fund	6.8%
Private Equity	0.0%
Cash	0.0%
<b>Total</b>	<b>100.0%</b>

# City of Birmingham Employees Retirement Fund

## Schedule of Asset and Style Allocation

Asset Class - Style	Manager	Portfolio Invested	Portfolio Cash	Market Value	Current Weight
Large Cap Equity - Broad	Vanguard 500 Index Fund	100.0%	0.0%	\$16,448,573	14.8%
Large Cap Equity - Growth	Polen Focus Growth Strategy	98.1%	1.9%	\$11,784,203	10.6%
Large Cap Equity - Value	Westwood Holdings Group	100.0%	0.0%	\$17,164,636	15.4%
Mid Cap Equity - Broad	Vanguard Mid Cap Index Fund	100.0%	0.0%	\$7,439,554	6.7%
Mid Cap Equity - Growth	Apex Capital	98.0%	2.0%	\$5,212,656	4.7%
Small Cap Equity - Value	Gabelli Asset Management	94.5%	5.5%	\$8,587,464	7.7%
International Equity - Core	MFS International Diversification	99.8%	0.2%	\$16,345,496	14.7%
Fixed Income - Core	C.S. McKee Investment Managers	94.5%	5.5%	\$783,682	0.7%
Fixed Income - Core Plus	Ducenta Squared Asset Management	95.2%	4.8%	\$13,005,338	11.7%
Fixed Income - Multi-Strategy	Bramshill Income Performance Fund	100.0%	0.0%	\$4,132,557	3.7%
Public Real Estate - Value Added	Starwood	100.0%	0.0%	\$2,970,778	2.7%
Hedge Fund - Diversifying Strategies	Graham Absolute Return	100.0%	0.0%	\$3,801,227	3.4%
Hedge Fund - Multi-Strategy	Whitebox Multi Strategy	100.0%	0.0%	\$3,753,492	3.4%
<b>Total</b>				<b>\$111,429,656</b>	<b>100.0%</b>

# City of Birmingham Employees Retirement Fund

## Investment Metrics

Report for Periods Ending March 31, 2021

Performance Objectives	Result	Objective Achieved
<b>Measurement Period:</b> Moving 3 Year		
Return > CPI + 3.0%	Return over CPI + 3.0% = 4.0%	Yes
Return > Benchmark	Return over benchmark = -1.2%	No
Beta < 1.20	Beta = 1.12	Yes
Alpha > 0.0%	Alpha = -2.3%	No

Statistical Measures	Sharpe Ratio	Standard Deviation	Tracking Error	Information Ratio
<b>Total Fund</b>	<b>0.5</b>	<b>14.5%</b>	<b>2.3%</b>	<b>-0.5</b>
Target Index	0.7	12.9	0.0	--

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 108,021	\$ 85,441
Net Contributions/(Distributions)	\$ (1,550)	\$ (6,194)
<b>Market Appreciation/(Depreciation)</b>	<b>\$ 4,959</b>	<b>\$ 32,183</b>
<b>Ending Market Value</b>	<b>\$ 111,430</b>	<b>\$ 111,430</b>

\* Risk Statistics are based on monthly data.

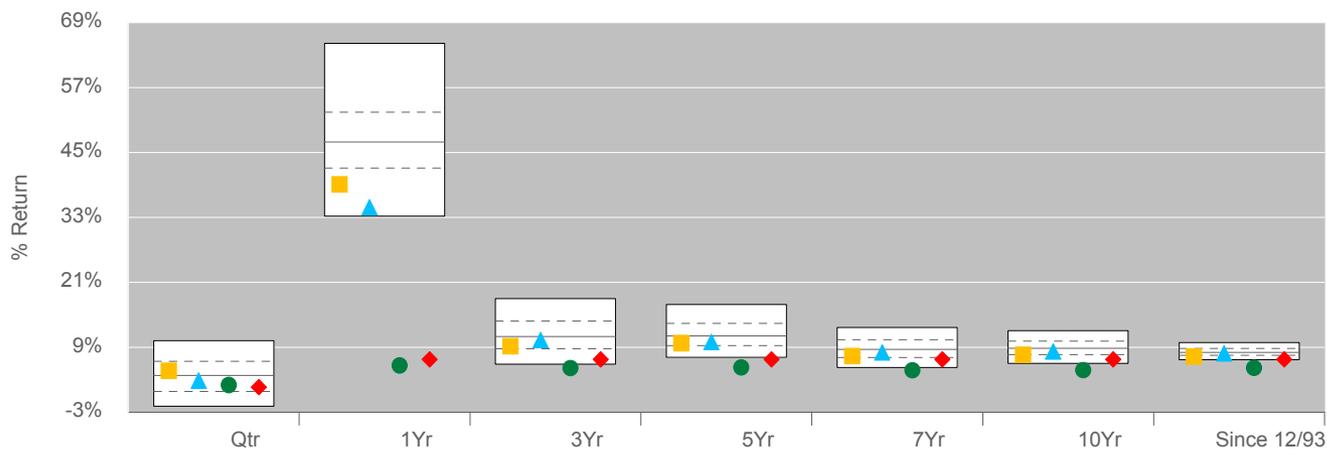
\* Target Index is currently comprised of: 25.0% S&P 500 Index, 15.0% Russell Midcap Index, 5.0% Russell 2000 Index, 10.0% MSCI EAFE Index, 5.0% MSCI Emerging Markets Index, 35.0% Bloomberg Barclays US Aggregate Index, and 5.0% HFRI Macro: Systematic Diversified Index. Please see Appendix for benchmark history.

# City of Birmingham Employees Retirement Fund

## Total Fund

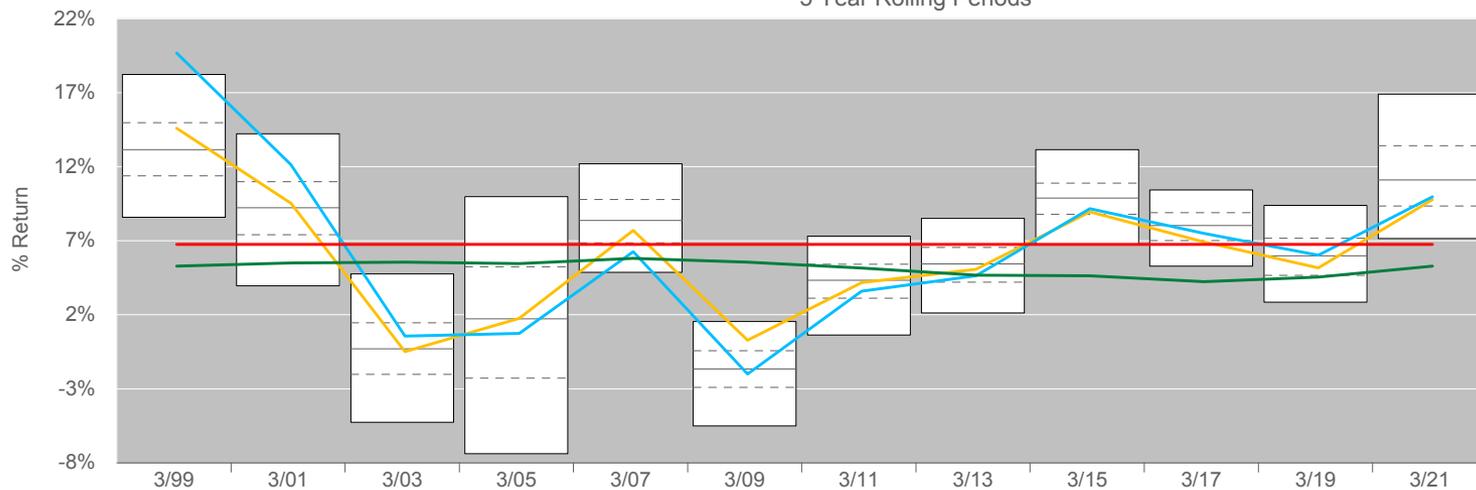
### Blended Universe

For Report Periods Ending March 31, 2021



	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr	Since 12/93
5th	10.2%	65.2%	18.0%	16.9%	12.7%	12.1%	9.9%
25th	6.4	52.5	13.9	13.4	10.4	10.1	8.8
50th	3.8	46.9	11.0	11.1	8.6	8.8	8.1
75th	0.8	42.1	8.8	9.3	7.1	7.7	7.5
95th	-1.9	33.2	5.9	7.1	5.2	6.0	6.7

Report From March 31, 1994 to March 31, 2021  
5 Year Rolling Periods



### Blended Universe

- 30.0% Broad Large Cap
- 15.0% Broad Mid Cap
- 10.0% Broad Small Cap
- 10.0% International Equity
- 5.0% Emerging Markets
- 30.0% Core Fixed Income

# City of Birmingham Employees Retirement Fund

## Equity Segment Return

### Cumulative Value Added and Portfolio Value Over Time

Report for Periods Ending March 31, 2021



	(Millions)
Beginning Market Value	\$10.23
Net Contributions/(Distributions)	(\$38.69)
Market Appreciation/(Depreciation)	\$111.44
<b>Ending Market Value</b>	<b>\$82.98</b>



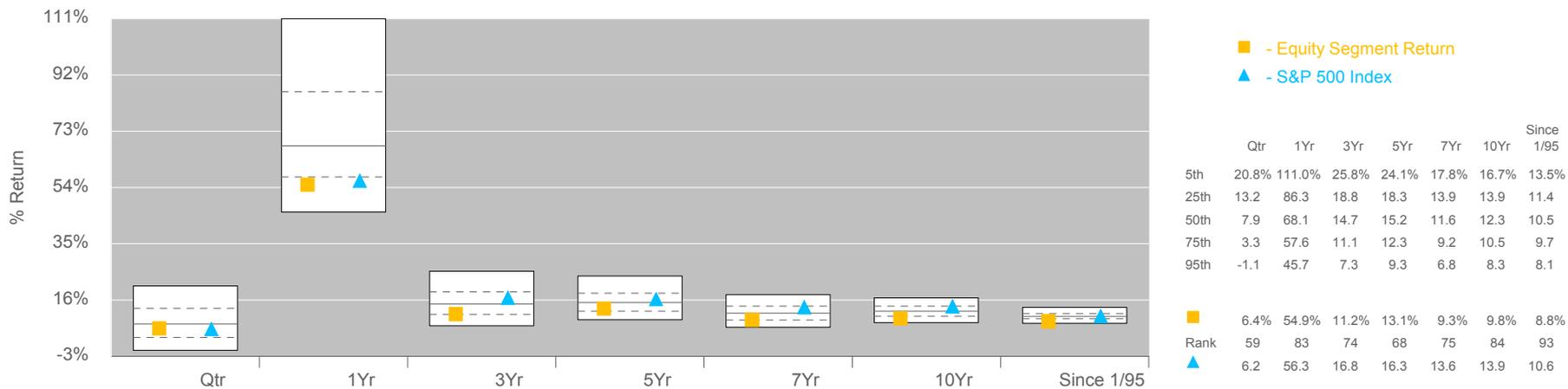
	Ending Value
Equity Segment Return	\$82.98
S&P 500 Index	\$156.53

# City of Birmingham Employees Retirement Fund

## Equity Segment Return

### Broad Equity Universe

For Report Periods Ending March 31, 2021



Report From March 31, 1996 to March 31, 2021

5 Year Rolling Periods



# City of Birmingham Employees Retirement Fund

## Vanguard 500 Index Fund

Summary of Performance and Statistics  
Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	3Yr	Since Inception	Inception Date
<b>Vanguard 500 Index Fund</b>	<b>6.2%</b>	<b>56.3%</b>	<b>16.7%</b>	<b>16.3%</b>	5/16
S&P 500 Index	6.2	56.3	16.8	16.4	

Risk Statistics (3 years)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
<b>Vanguard 500 Index Fund</b>	<b>1.00</b>	<b>0.0%</b>	<b>1.00</b>	<b>21.7%</b>	<b>0.0%</b>	<b>-0.9</b>
S&P 500 Index	1.00	0.0	1.00	21.7	0.0	--

Portfolio Statistics	Trailing P/E	Trailing P/B	Wtd Avg Mkt Cap	Current Yield	Equity Annual Turnover
<b>Vanguard 500 Index Fund</b>	<b>32.4</b>	<b>4.3</b>	<b>468,478.0M</b>	<b>1.5%</b>	<b>--%</b>
S&P 500 Index	32.4	4.3	468,478.0	1.5	--

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 15,456	\$ 10,554
Net Contributions/(Distributions)	\$ 0	\$ 0
<b>Market Appreciation/(Depreciation)</b>	<b>\$ 993</b>	<b>\$ 5,895</b>
<b>Ending Market Value</b>	<b>\$ 16,449</b>	<b>\$ 16,449</b>

\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

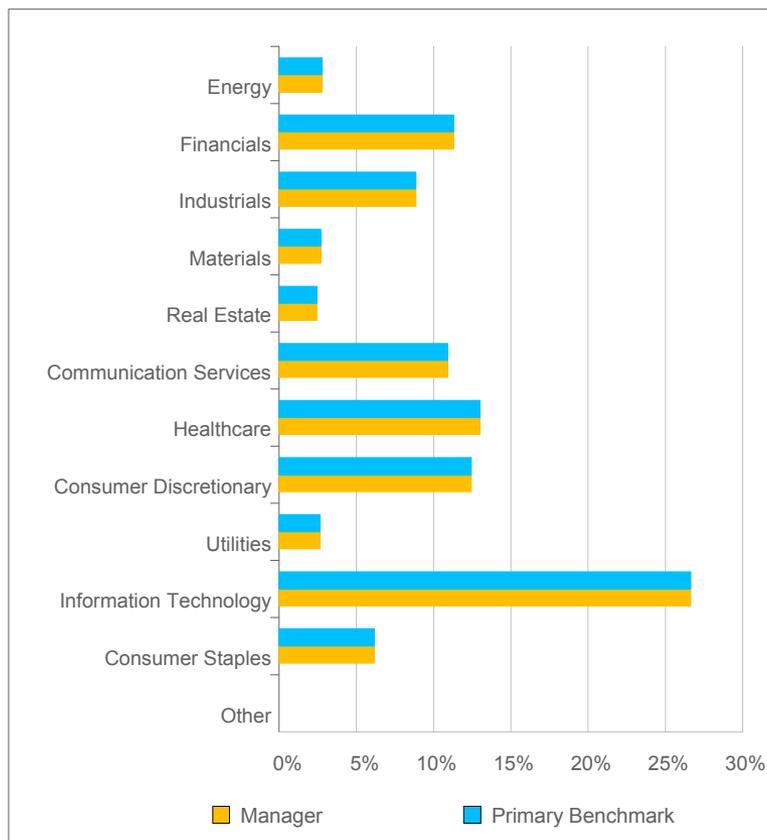
# City of Birmingham Employees Retirement Fund

## Vanguard 500 Index Fund

### Equity Sector

Report For Periods Ending March 31, 2021

#### Sector Allocation



Sector	Sector Weightings		Market Total Returns	
	Manager	Primary Benchmark	3 Months	12 Months
Energy	3%	3%	30.9%	75.2%
Financials	11	11	16.0	67.5
Industrials	9	9	11.4	69.6
Materials	3	3	9.1	78.3
Real Estate	2	2	9.0	9.0
Communication Services	11	11	8.1	60.9
Healthcare	13	13	3.2	34.0
Consumer Discretionary	12	12	3.1	70.3
Utilities	3	3	2.8	19.4
Information Technology	27	27	2.0	66.6
Consumer Staples	6	6	1.2	28.4
Other	0	0	-	-

#### Top Five Holdings

	Weighting
Apple Inc.	5.7%
Microsoft Corporation	5.3
Amazon Inc.	3.9
Facebook Class A Inc.	2.1
Alphabet Inc.	1.8

Number of Holdings: 505

\* Sector weightings may not add up to 100% due to rounding.

\* Manager data represents the most current available at the time of report publication.

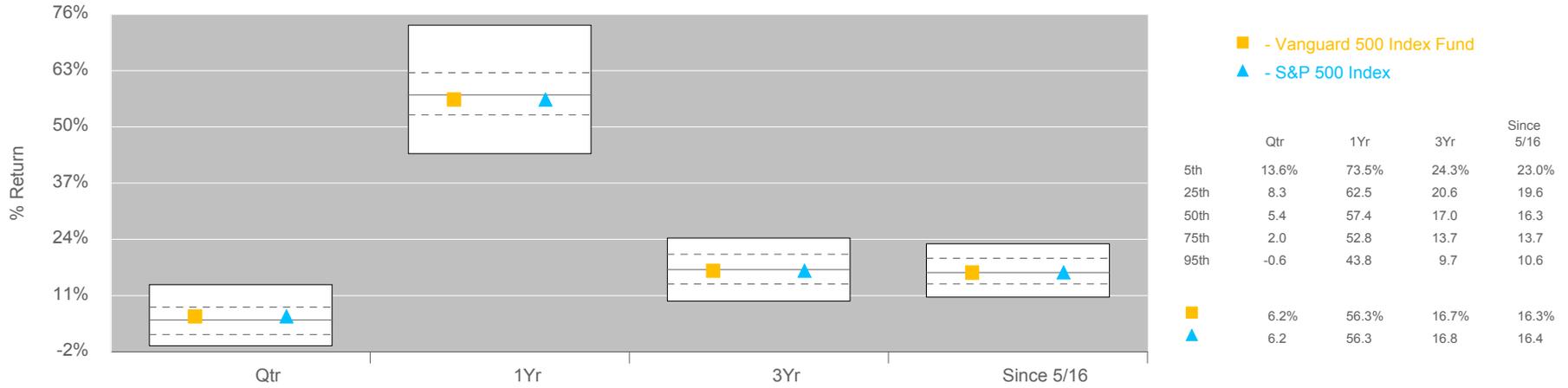
\* Effective fourth quarter 2018, Telecommunication Services was replaced by Communication Services by the Global Industry Classification Standard (GICS). Some members of Consumer Discretionary, Technology, and Telecommunication Services were reclassified as Communication Services.

# City of Birmingham Employees Retirement Fund

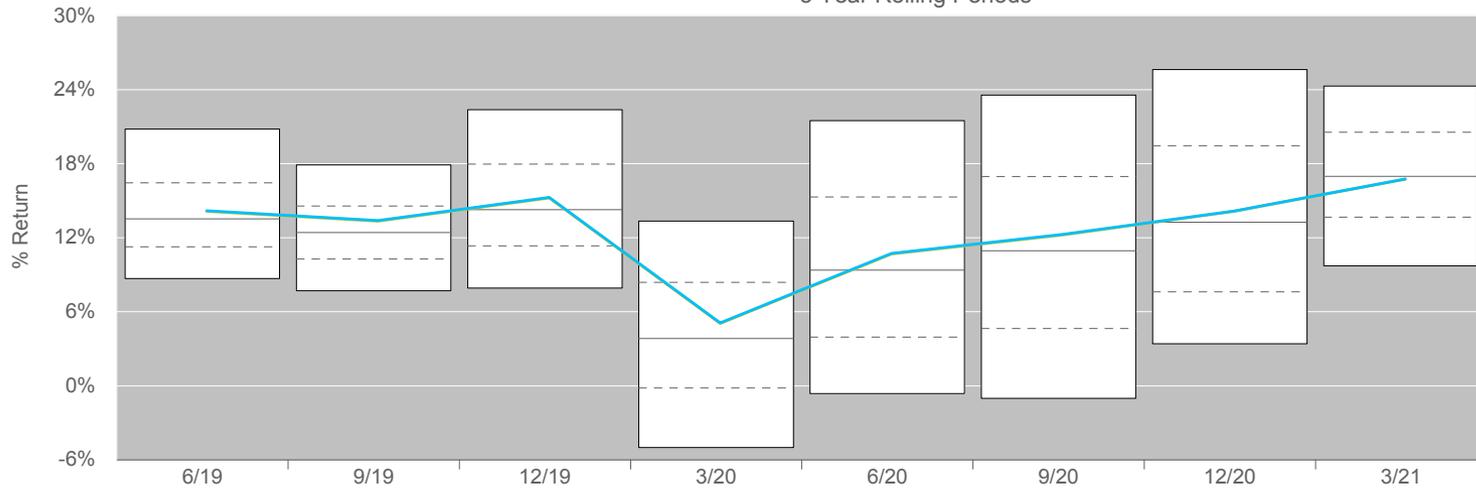
## Vanguard 500 Index Fund

### Broad Large Cap Universe

For Report Periods Ending March 31, 2021



Report From June 30, 2016 to March 31, 2021  
3 Year Rolling Periods



# City of Birmingham Employees Retirement Fund

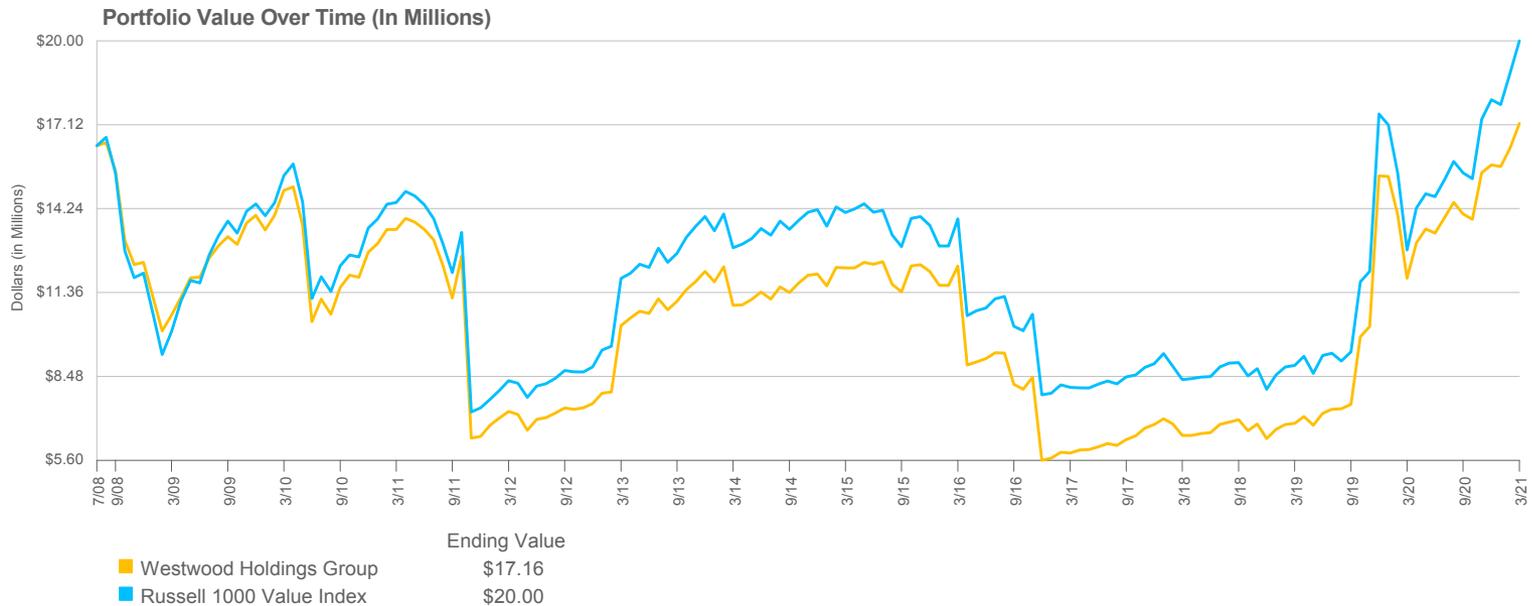
## Westwood Holdings Group

### Cumulative Value Added and Portfolio Value Over Time

Report for Periods Ending March 31, 2021



	(Millions)
Beginning Market Value	\$16.41
Net Contributions/(Distributions)	(\$8.72)
Market Appreciation/(Depreciation)	\$9.48
<b>Ending Market Value</b>	<b>\$17.16</b>



# City of Birmingham Employees Retirement Fund

## Westwood Holdings Group

Summary of Performance and Statistics  
Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr	Since Inception	Inception Date
<b>Westwood Holdings Group</b>	<b>9.0%</b>	<b>44.9%</b>	<b>11.2%</b>	<b>12.9%</b>	<b>10.9%</b>	<b>11.5%</b>	<b>9.2%</b>	7/08
Russell 1000 Value Index	11.3	56.1	11.0	11.7	9.4	11.0	9.2	

Risk Statistics (3 years)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
<b>Westwood Holdings Group</b>	<b>0.87</b>	<b>1.5%</b>	<b>0.97</b>	<b>19.9%</b>	<b>4.0%</b>	<b>0.1</b>
Russell 1000 Value Index	1.00	0.0	1.00	22.6	0.0	--

### Asset Growth Summary (in thousands)

	Qtr	1Yr
Beginning Market Value	\$ 15,747	\$ 11,849
Net Contributions/(Distributions)	\$ 0	\$ 0
<b>Market Appreciation/(Depreciation)</b>	<b>\$ 1,418</b>	<b>\$ 5,316</b>
<b>Ending Market Value</b>	<b>\$ 17,165</b>	<b>\$ 17,165</b>

\* Risk Statistics are based on monthly data.

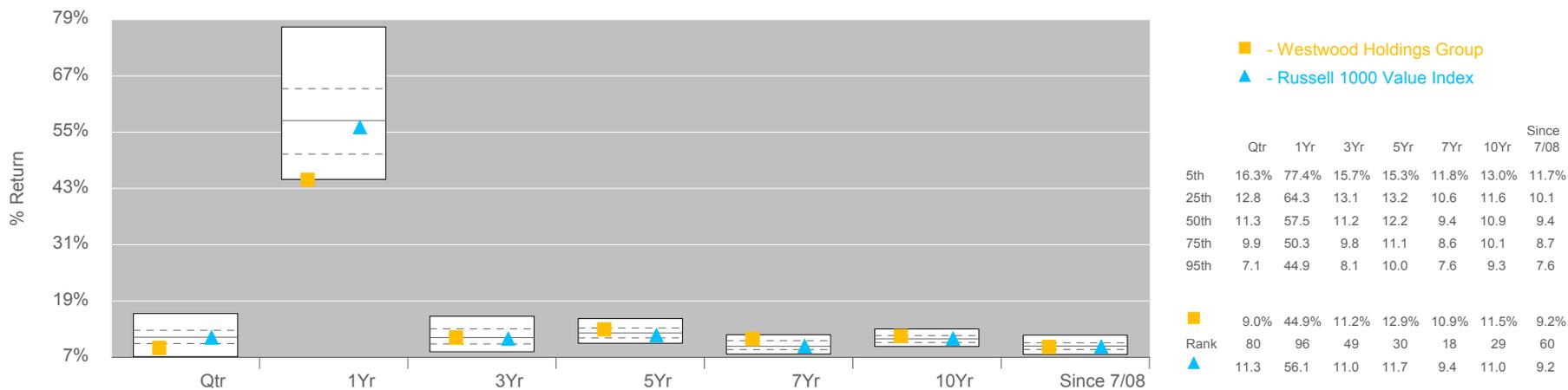
\* Manager data represents the most current available at the time of report publication.

# City of Birmingham Employees Retirement Fund

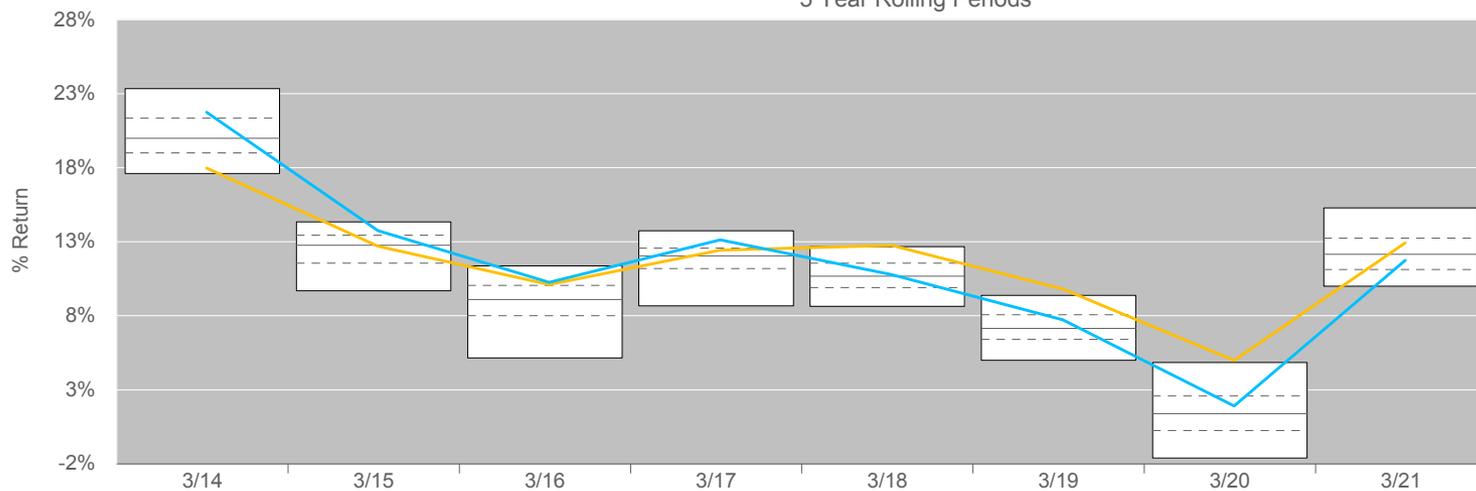
## Westwood Holdings Group

### Large Cap Value Universe

For Report Periods Ending March 31, 2021



Report From March 31, 2009 to March 31, 2021  
5 Year Rolling Periods



# City of Birmingham Employees Retirement Fund

## Vanguard Mid Cap Index Fund

### Summary of Performance and Statistics

Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	Since Inception	Inception Date
<b>Vanguard Mid Cap Index Fund</b>	<b>7.2%</b>	<b>70.6%</b>	<b>70.6%</b>	3/20
Spliced Vanguard Mid Cap Fund Index	7.2	70.7	70.7	

Risk Statistics (Since 3/20)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
<b>Vanguard Mid Cap Index Fund</b>	<b>1.00</b>	<b>-0.1%</b>	<b>1.00</b>	<b>29.4%</b>	<b>0.0%</b>	<b>-1.2</b>
Spliced Vanguard Mid Cap Fund Index	1.00	0.0	1.00	29.4	0.0	--

Portfolio Statistics	Trailing P/E	Trailing P/B	Wtd Avg Mkt Cap	Current Yield	Equity Annual Turnover
<b>Vanguard Mid Cap Index Fund</b>	<b>45.1</b>	<b>3.6</b>	<b>20,645.2M</b>	<b>1.3%</b>	<b>--%</b>
Spliced Vanguard Mid Cap Fund Index	45.1	3.6	20,645.2	1.3	--

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 6,937	\$ 6,625
Net Contributions/(Distributions)	\$ 0	\$ (2,913)
<b>Market Appreciation/(Depreciation)</b>	<b>\$ 503</b>	<b>\$ 3,728</b>
<b>Ending Market Value</b>	<b>\$ 7,440</b>	<b>\$ 7,440</b>

\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

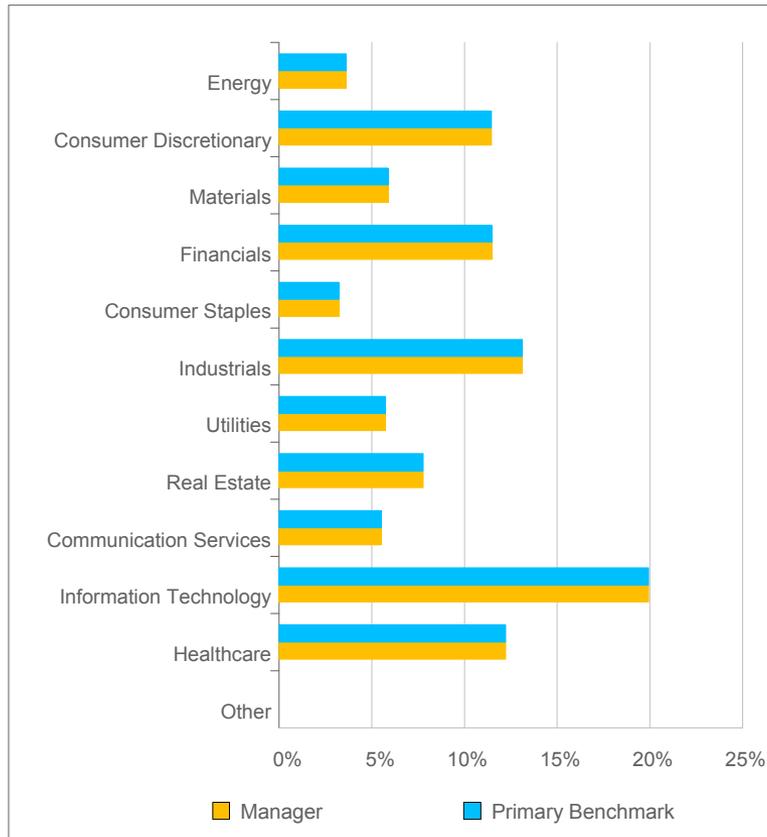
# City of Birmingham Employees Retirement Fund

## Vanguard Mid Cap Index Fund

### Equity Sector

Report For Periods Ending March 31, 2021

#### Sector Allocation



Sector	Sector Weightings		Market Total Returns	
	Manager	Primary Benchmark	3 Months	12 Months
Energy	4%	4%	34.7%	174.8%
Consumer Discretionary	11	11	21.4	156.7
Materials	6	6	21.1	96.2
Financials	11	11	18.7	74.6
Consumer Staples	3	3	15.4	72.3
Industrials	13	13	13.6	87.6
Utilities	6	6	9.8	19.2
Real Estate	8	8	8.2	8.2
Communication Services	6	6	6.6	55.4
Information Technology	20	20	6.4	93.6
Healthcare	12	12	4.6	59.1
Other	0	0	-	-

#### Top Five Holdings

	Weighting
IDEXX Laboratories Inc	0.7%
Microchip Technology Inc	0.7
Chipotle Mexican Grill Inc	0.6
Amphenol Corp	0.6
Digital Realty Trust Inc	0.6

Number of Holdings: 362

\* Sector weightings may not add up to 100% due to rounding.

\* Manager data represents the most current available at the time of report publication.

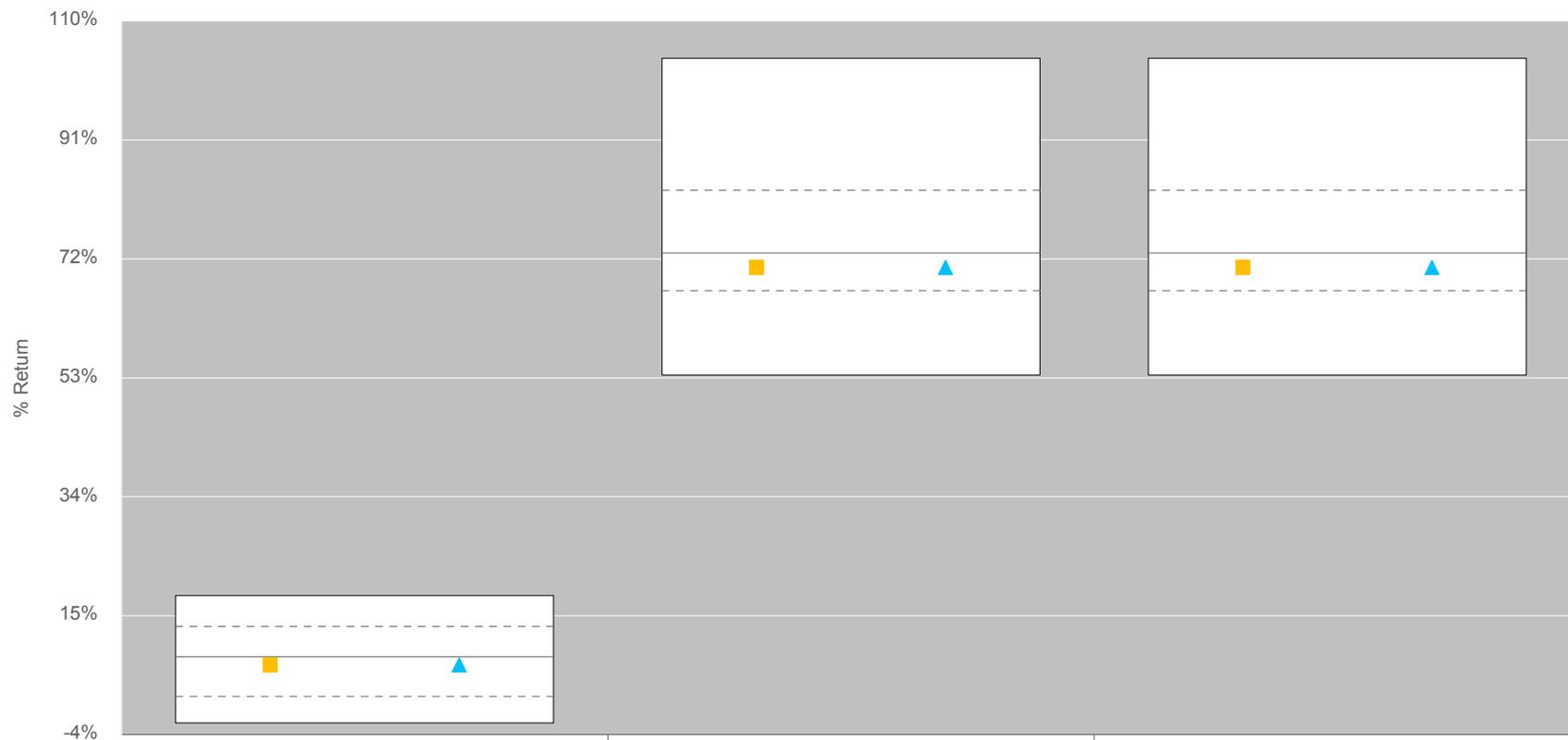
\* Effective fourth quarter 2018, Telecommunication Services was replaced by Communication Services by the Global Industry Classification Standard (GICS). Some members of Consumer Discretionary, Technology, and Telecommunication Services were reclassified as Communication Services.

# City of Birmingham Employees Retirement Fund

## Vanguard Mid Cap Index Fund

### Broad Mid Cap Universe

For Report Periods Ending March 31, 2021



	Qtr	1Yr	Since 3/20
5th Percentile	18.2%	104.1%	104.1%
25th Percentile	13.3	83.0	83.0
50th Percentile	8.4	73.0	73.0
75th Percentile	2.1	66.9	66.9
95th Percentile	-2.1	53.4	53.4
■ - Vanguard Mid Cap Index Fund	7.2%	70.6%	70.6%
▲ - Spliced Vanguard Mid Cap Fund Index	7.2	70.7	70.7

# City of Birmingham Employees Retirement Fund

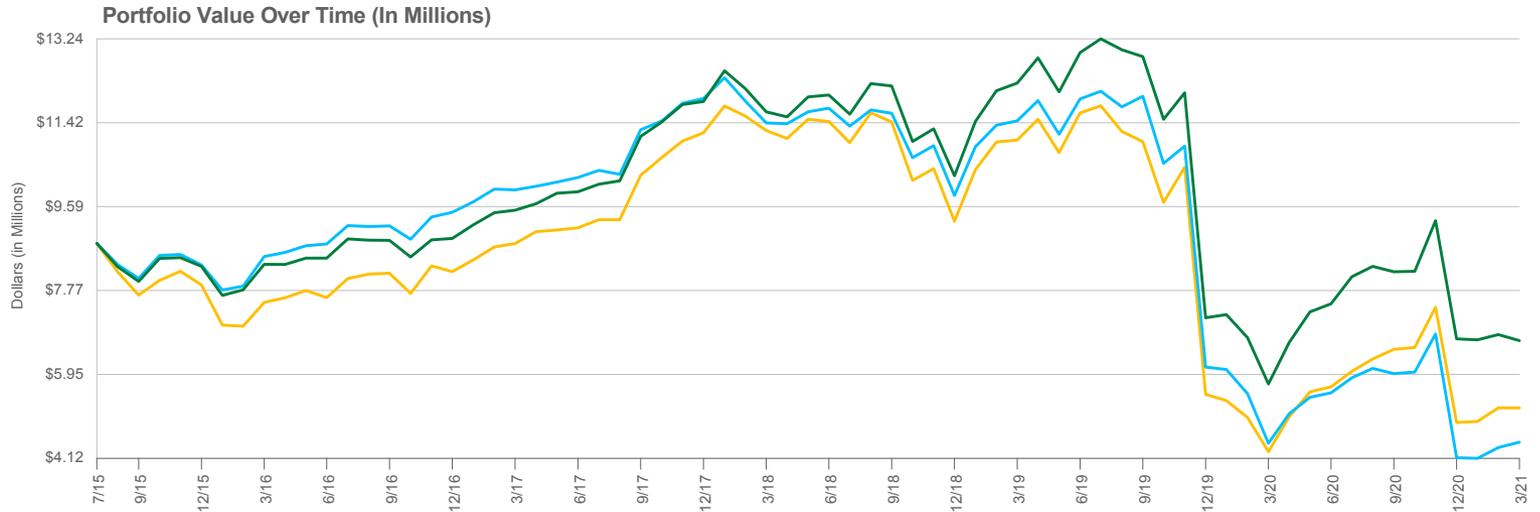
## Apex Capital

### Cumulative Value Added and Portfolio Value Over Time

Report for Periods Ending March 31, 2021



	(Millions)
Beginning Market Value	\$8.80
Net Contributions/(Distributions)	(\$9.97)
Market Appreciation/(Depreciation)	\$6.39
<b>Ending Market Value</b>	<b>\$5.21</b>



	Ending Value
Apex Capital	\$5.21
Russell Midcap Index	\$4.47
Russell Midcap Growth Index	\$6.68

# City of Birmingham Employees Retirement Fund

## Apex Capital

Summary of Performance and Statistics  
Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	3Yr	5Yr	Since Inception	Inception Date
<b>Apex Capital</b>	<b>6.5%</b>	<b>98.9%</b>	<b>21.3%</b>	<b>21.1%</b>	<b>15.1%</b>	<b>7/15</b>
Russell Midcap Index	8.1	73.6	14.7	14.7	12.2	
Russell Midcap Growth Index	-0.6	68.6	19.4	18.4	15.0	

Risk Statistics (3 years)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
<b>Apex Capital</b>	<b>1.02</b>	<b>6.2%</b>	<b>0.90</b>	<b>29.3%</b>	<b>7.7%</b>	<b>0.9</b>
Russell Midcap Index	1.00	0.0	1.00	25.8	0.0	--
Russell Midcap Growth Index	0.94	5.5	0.92	26.1	6.0	0.3

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 4,895	\$ 4,262
Net Contributions/(Distributions)	\$ 0	\$ (2,923)
<b>Market Appreciation/(Depreciation)</b>	<b>\$ 318</b>	<b>\$ 3,874</b>
<b>Ending Market Value</b>	<b>\$ 5,213</b>	<b>\$ 5,213</b>

\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

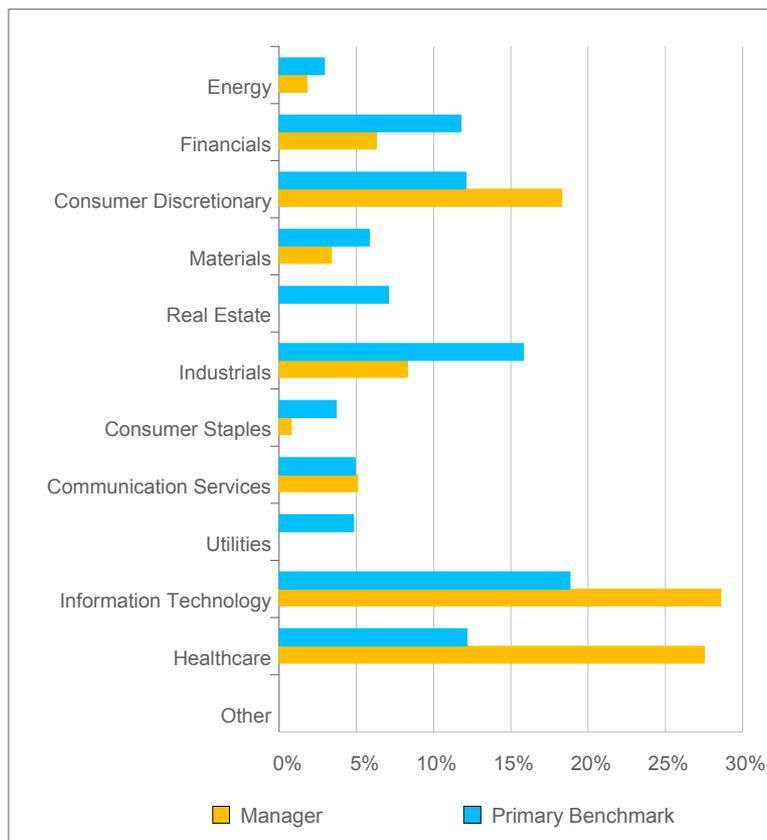
# City of Birmingham Employees Retirement Fund

## Apex Capital

### Equity Sector

Report For Periods Ending March 31, 2021

#### Sector Allocation



Sector	Sector Weightings		Market Total Returns	
	Manager	Primary Benchmark	3 Months	12 Months
Energy	2%	3%	29.7%	130.1%
Financials	6	12	16.5	82.3
Consumer Discretionary	18	12	13.6	111.8
Materials	3	6	12.9	92.7
Real Estate	0	7	11.2	45.0
Industrials	8	16	10.4	79.7
Consumer Staples	1	4	6.0	34.5
Communication Services	5	5	5.8	107.0
Utilities	0	5	3.6	18.6
Information Technology	29	19	0.6	78.0
Healthcare	28	12	0.5	59.9
Other	0	0	-	-

#### Top Five Holdings

	Weighting
ETSY INC	2.8%
BAUSCH HEALTH COS INC	2.8
ENTEGRIS INC	2.4
CITIZENS FINANCIAL GROUP	2.4
SYNCHRONY FINANCIAL	2.4

Number of Holdings: 69

\* Sector weightings may not add up to 100% due to rounding.

\* Manager data represents the most current available at the time of report publication.

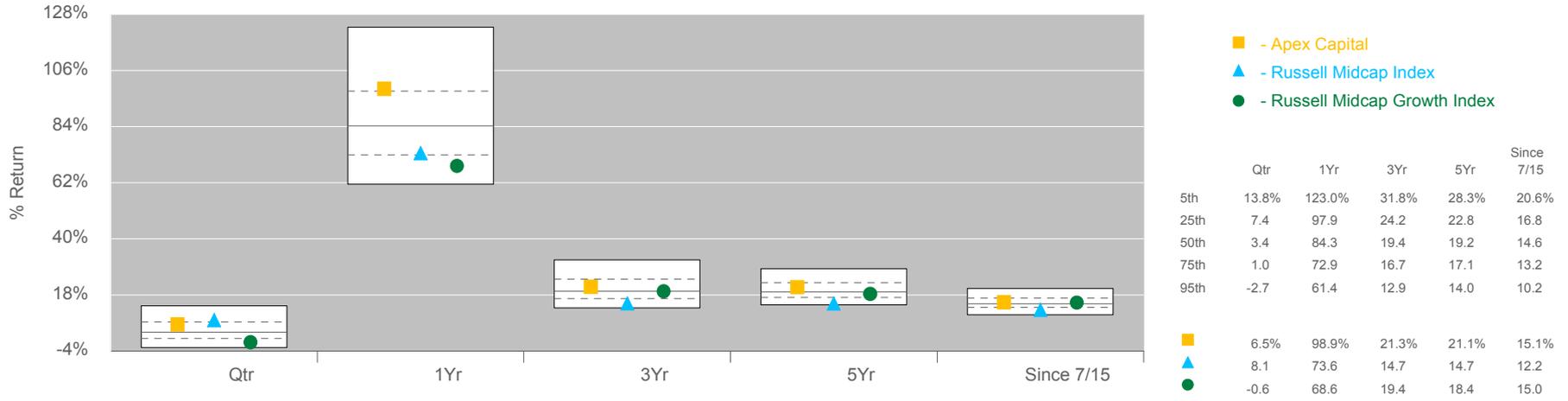
\* Effective fourth quarter 2018, Telecommunication Services was replaced by Communication Services by the Global Industry Classification Standard (GICS). Some members of Consumer Discretionary, Technology, and Telecommunication Services were reclassified as Communication Services.

# City of Birmingham Employees Retirement Fund

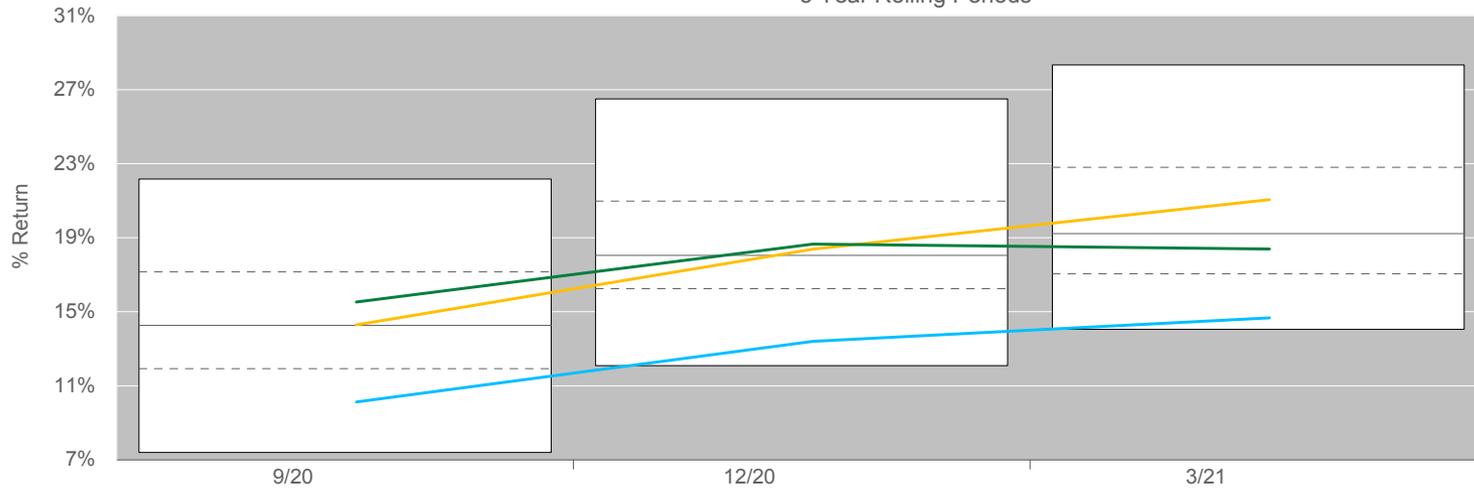
## Apex Capital

### Small-Mid Cap Growth Universe

For Report Periods Ending March 31, 2021



Report From September 30, 2015 to March 31, 2021  
5 Year Rolling Periods



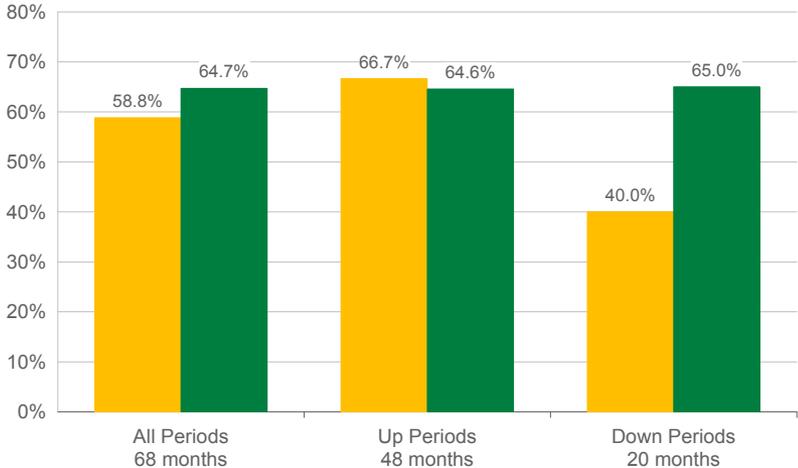
# City of Birmingham Employees Retirement Fund

## Apex Capital

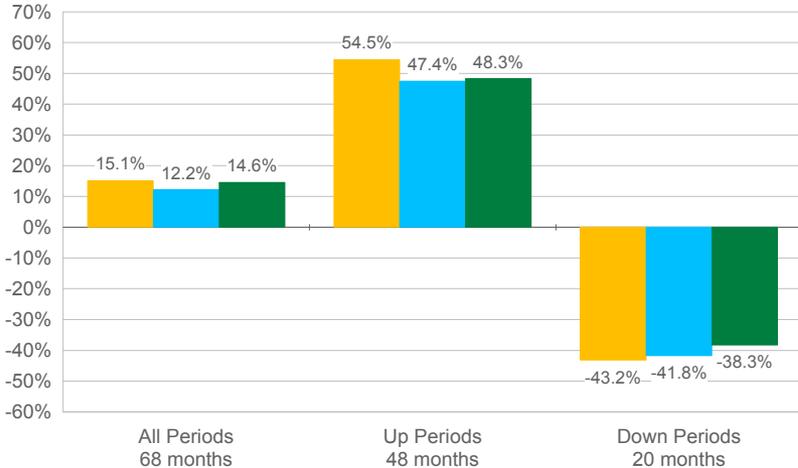
### Returns Analysis

From July 31, 2015 to March 31, 2021

Percent Of Periods Outperformed Russell Midcap Index



Annualized Returns for Up and Down Periods



- Apex Capital
- Russell Midcap Index
- Median Small-Mid Cap Growth Manager

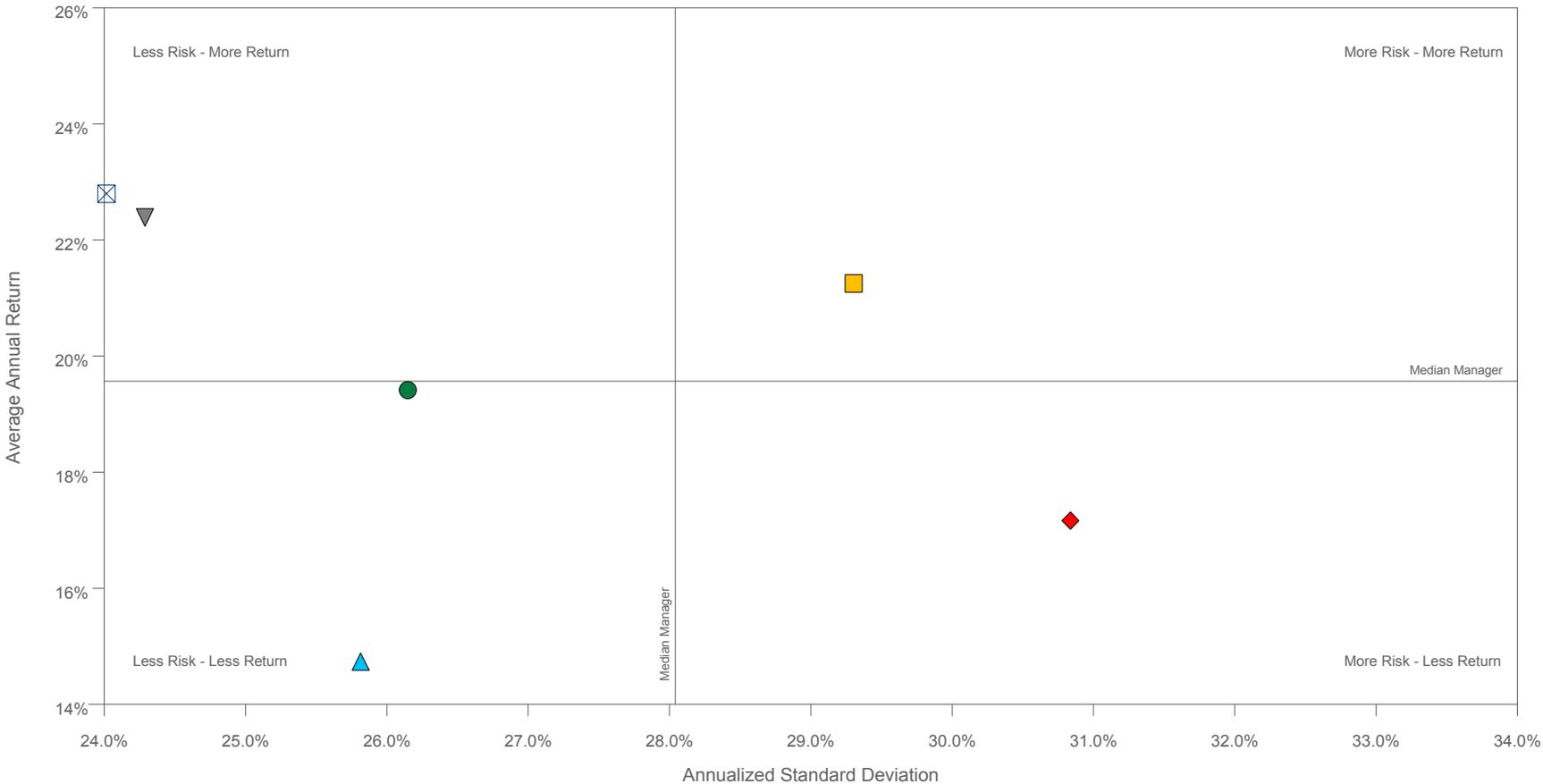
Up periods are defined as months in which the Russell Midcap Index's return is  $\geq 0$ .  
 Down periods are defined as months in which the Russell Midcap Index's return is  $< 0$ .

# City of Birmingham Employees Retirement Fund

## Apex Capital

### Risk vs. Return - Annualized Standard Deviation

3 Years Ending March 31, 2021



	<u>% ROR</u>	<u>S.D.</u>		<u>% ROR</u>	<u>S.D.</u>		<u>% ROR</u>	<u>S.D.</u>
■ Apex Capital	21.3	29.3	● Russell Midcap Growth Index	19.4	26.1	▼ Russell 3000 Growth Index	22.4	24.3
▲ Russell Midcap Index	14.7	25.8	◆ Russell 2000 Growth Index	17.2	30.8	⊠ Russell 1000 Growth Index	22.8	24.0

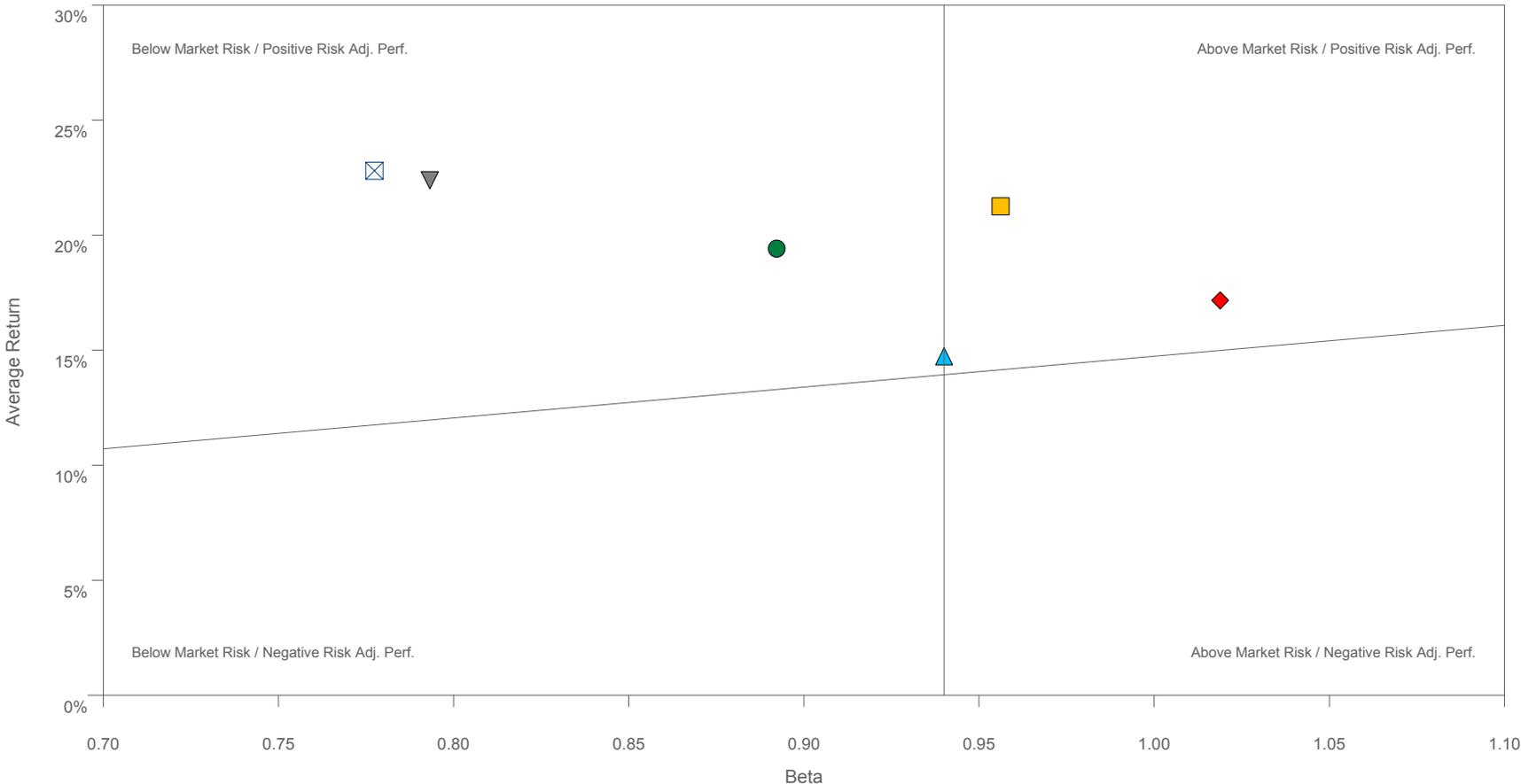
\* The Median Manager is from Fund Evaluation Group's Small-Mid Cap Growth Universe.

# City of Birmingham Employees Retirement Fund

## Apex Capital

### Risk vs. Return - Beta

3 Years Ending March 31, 2021



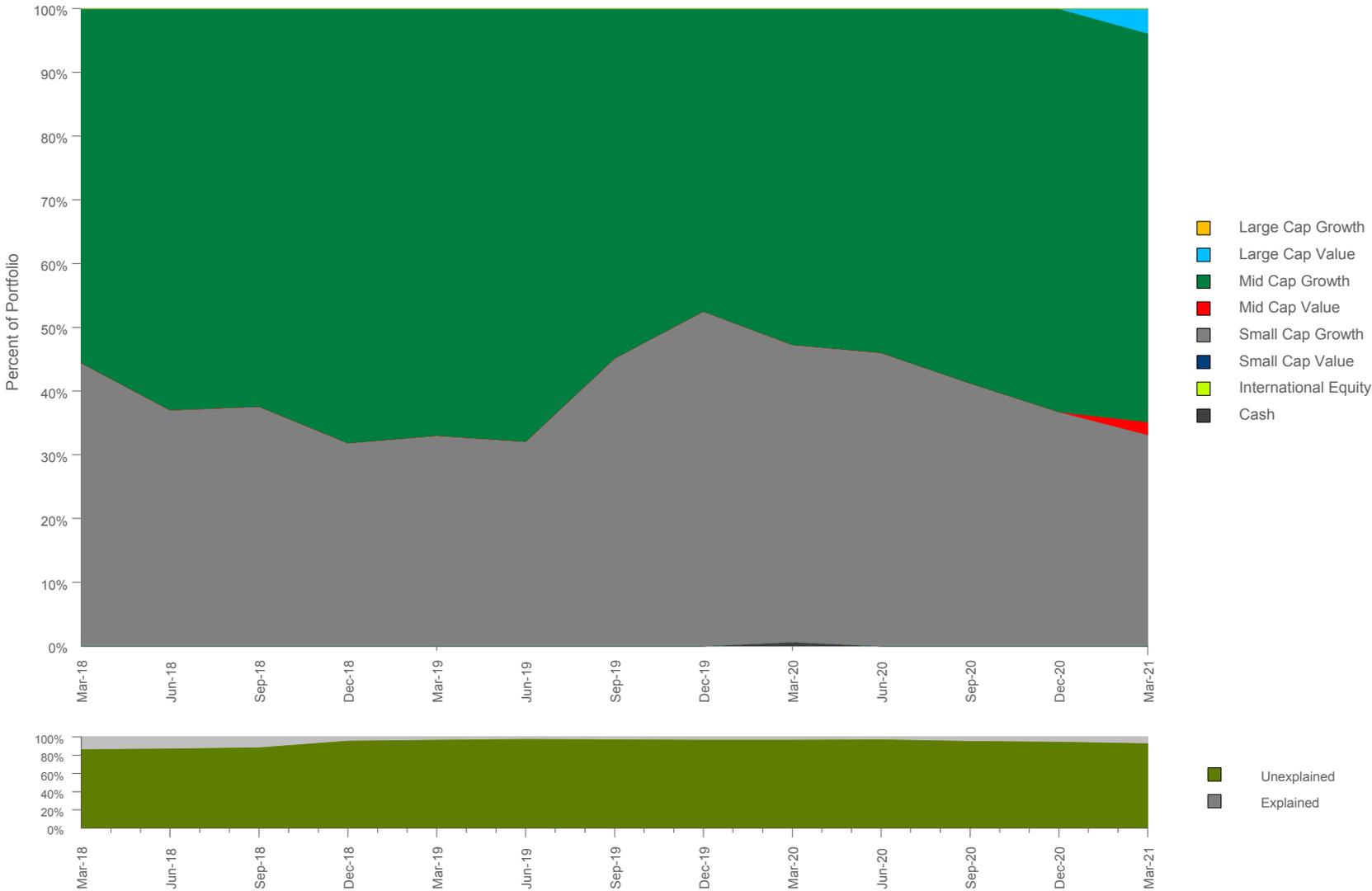
	<u>% ROR</u>	<u>Beta</u>		<u>% ROR</u>	<u>Beta</u>		<u>% ROR</u>	<u>Beta</u>
■ Apex Capital	21.3	1.0	● Russell Midcap Growth Index	19.4	0.9	▼ Russell 3000 Growth Index	22.4	0.8
▲ Russell Midcap Index	14.7	1.0	◆ Russell 2000 Growth Index	17.2	1.1	⊠ Russell 1000 Growth Index	22.8	0.8

# City of Birmingham Employees Retirement Fund

## Apex Capital

Style Analysis 2 Year Trailing Periods

From March 31, 2016 to March 31, 2021

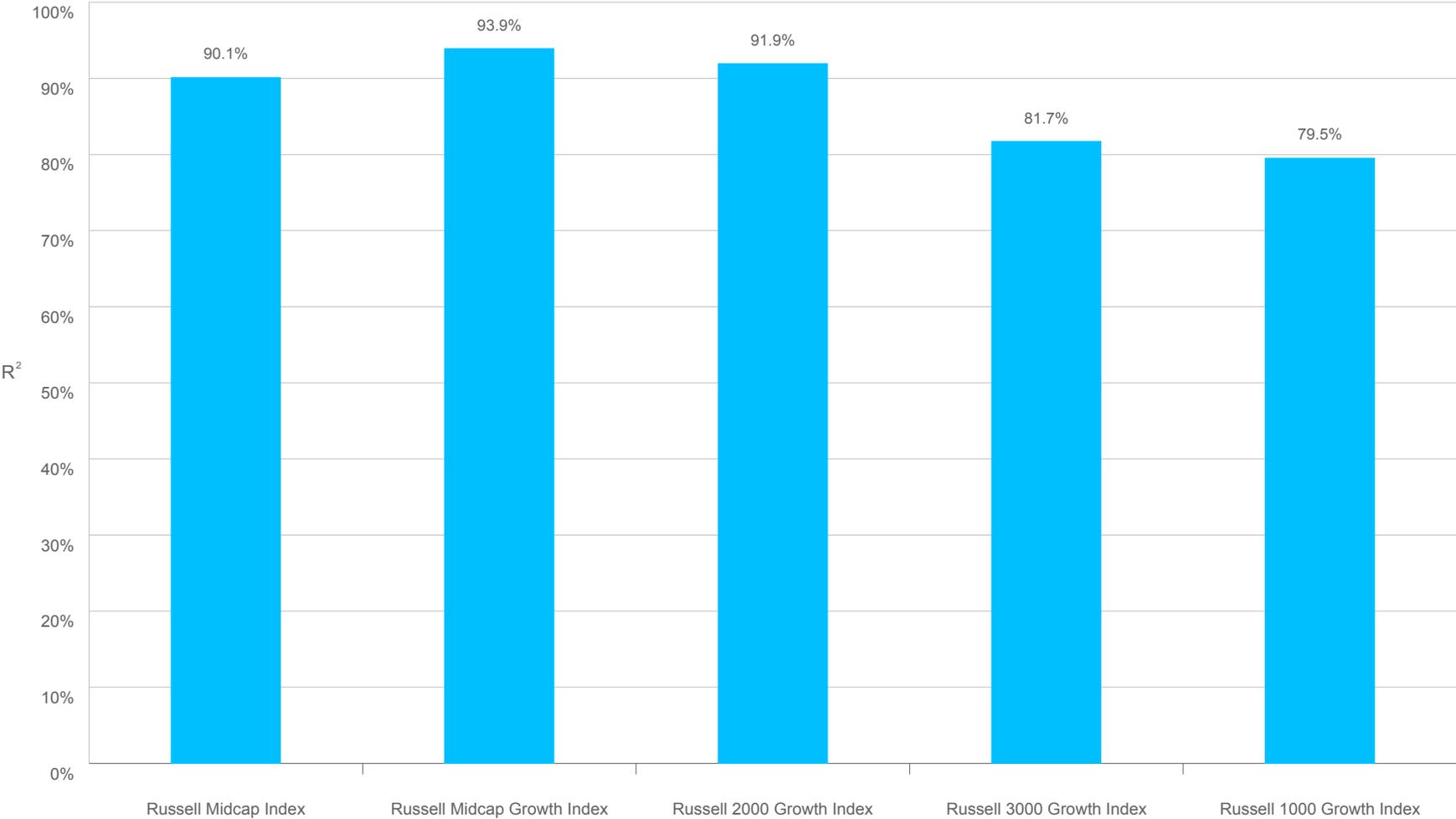


# City of Birmingham Employees Retirement Fund

## Apex Capital

### Correlation Analysis

3 Years Ending March 31, 2021



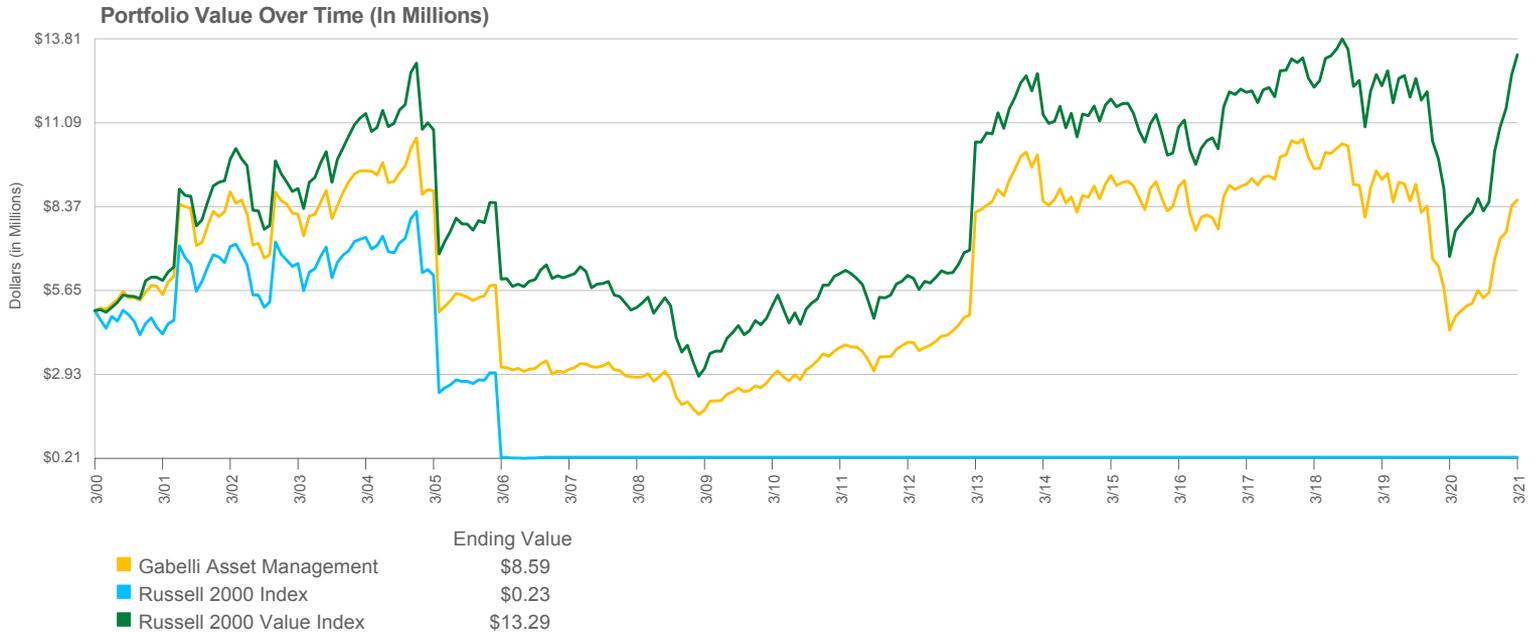
\* R<sup>2</sup> represents the percentage of the Apex Capital's returns which are explained by each of the stated benchmarks.

# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

### Cumulative Value Added and Portfolio Value Over Time

Report for Periods Ending March 31, 2021



# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

### Summary of Performance and Statistics

Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr	Since Inception	Inception Date
<b>Gabelli Asset Management</b>	<b>17.2%</b>	<b>96.8%</b>	<b>8.7%</b>	<b>11.8%</b>	<b>9.1%</b>	<b>11.5%</b>	<b>10.6%</b>	3/00
Russell 2000 Index	12.7	94.8	14.8	16.4	11.0	11.7	8.4	
Russell 2000 Value Index	21.2	97.1	11.6	13.6	8.9	10.1	10.0	

Risk Statistics (3 years)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
<b>Gabelli Asset Management</b>	<b>1.05</b>	<b>-6.8%</b>	<b>0.95</b>	<b>31.7%</b>	<b>6.8%</b>	<b>-0.9</b>
Russell 2000 Index	1.00	0.0	1.00	30.5	0.0	--
Russell 2000 Value Index	1.03	-3.6	0.96	31.3	5.3	-0.5

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 7,330	\$ 4,363
Net Contributions/(Distributions)	\$ 0	\$ 0
<b>Market Appreciation/(Depreciation)</b>	<b>\$ 1,257</b>	<b>\$ 4,224</b>
<b>Ending Market Value</b>	<b>\$ 8,587</b>	<b>\$ 8,587</b>

\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

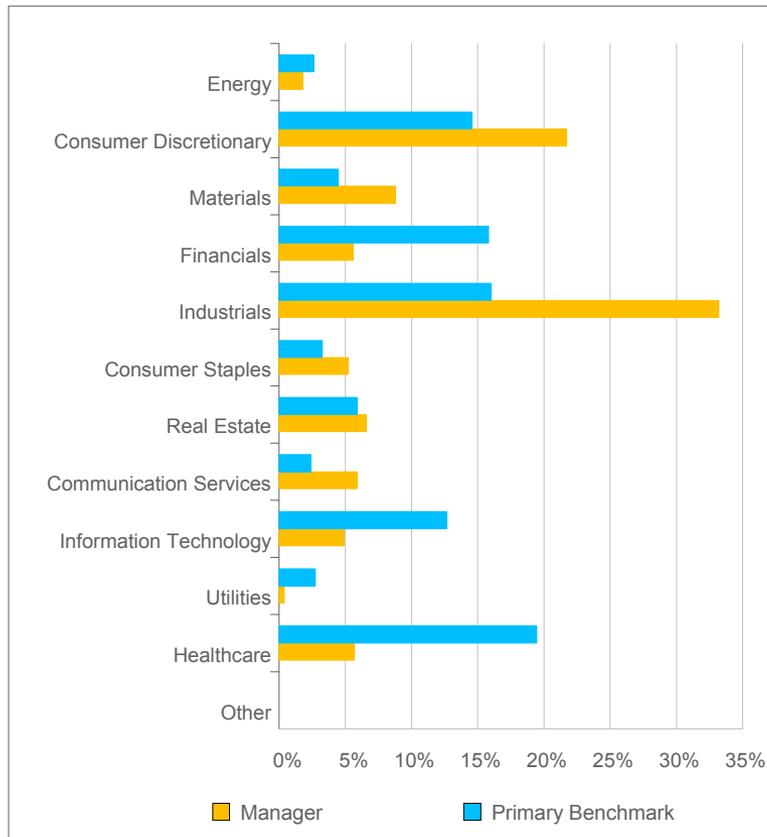
# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

### Equity Sector

Report For Periods Ending March 31, 2021

#### Sector Allocation



Sector	Sector Weightings		Market Total Returns	
	Manager	Primary Benchmark	3 Months	12 Months
Energy	2%	3%	41.8%	138.1%
Consumer Discretionary	22	15	26.6	200.9
Materials	9	4	20.0	130.6
Financials	6	16	18.3	72.7
Industrials	33	16	16.1	114.6
Consumer Staples	5	3	15.4	85.6
Real Estate	7	6	10.1	56.0
Communication Services	6	2	9.8	67.8
Information Technology	5	13	5.2	86.4
Utilities	0	3	3.4	16.5
Healthcare	6	19	0.4	82.0
Other	0	0	-	-

#### Top Five Holdings

	Weighting
Aerojet Rocketdyne Holdings, Inc.	3.9%
Herc Holdings, Inc.	3.6
Mueller Industries, Inc.	2.7
St. Joe Company	2.7
EnPro Industries, Inc.	2.6

Number of Holdings: 73

\* Sector weightings may not add up to 100% due to rounding.

\* Manager data represents the most current available at the time of report publication.

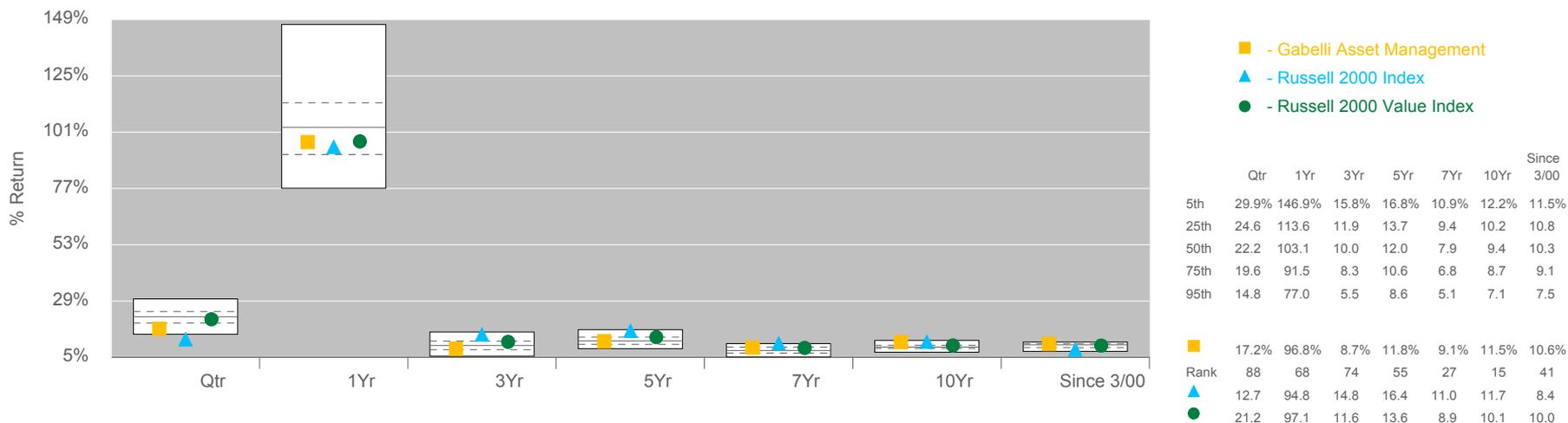
\* Effective fourth quarter 2018, Telecommunication Services was replaced by Communication Services by the Global Industry Classification Standard (GICS). Some members of Consumer Discretionary, Technology, and Telecommunication Services were reclassified as Communication Services.

# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

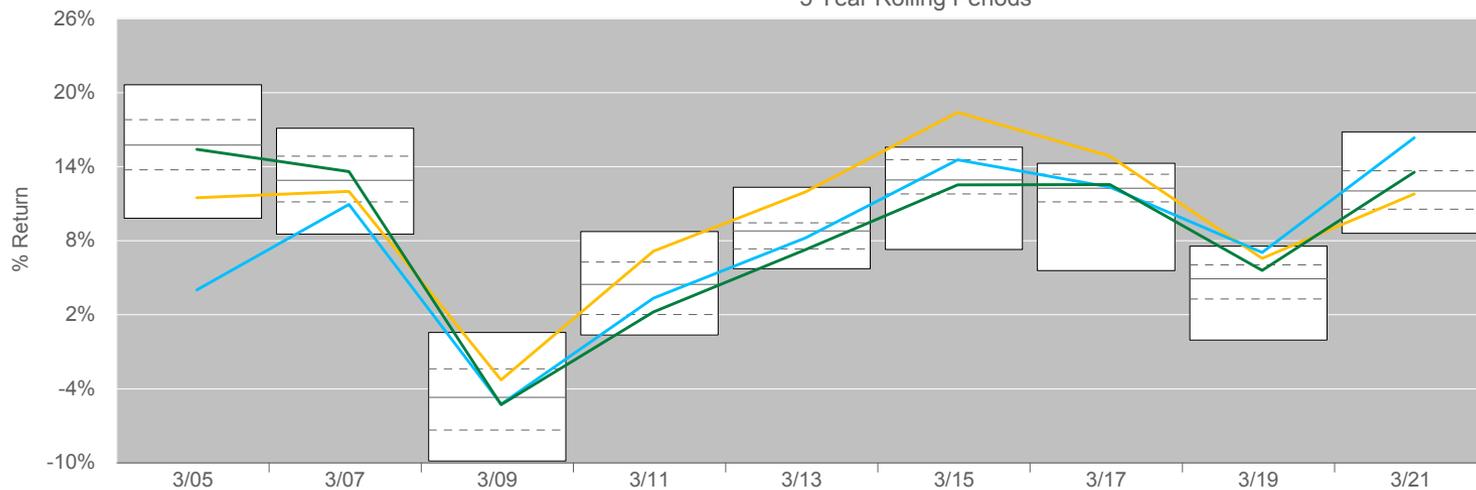
### Small Cap Value Universe

For Report Periods Ending March 31, 2021



Report From March 31, 2000 to March 31, 2021

5 Year Rolling Periods

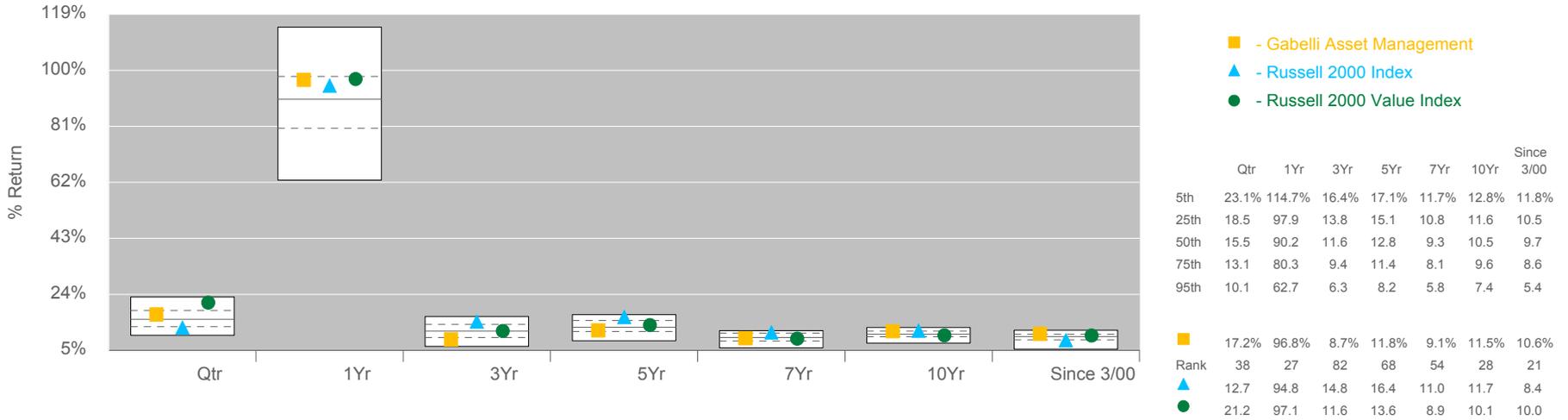


# City of Birmingham Employees Retirement Fund

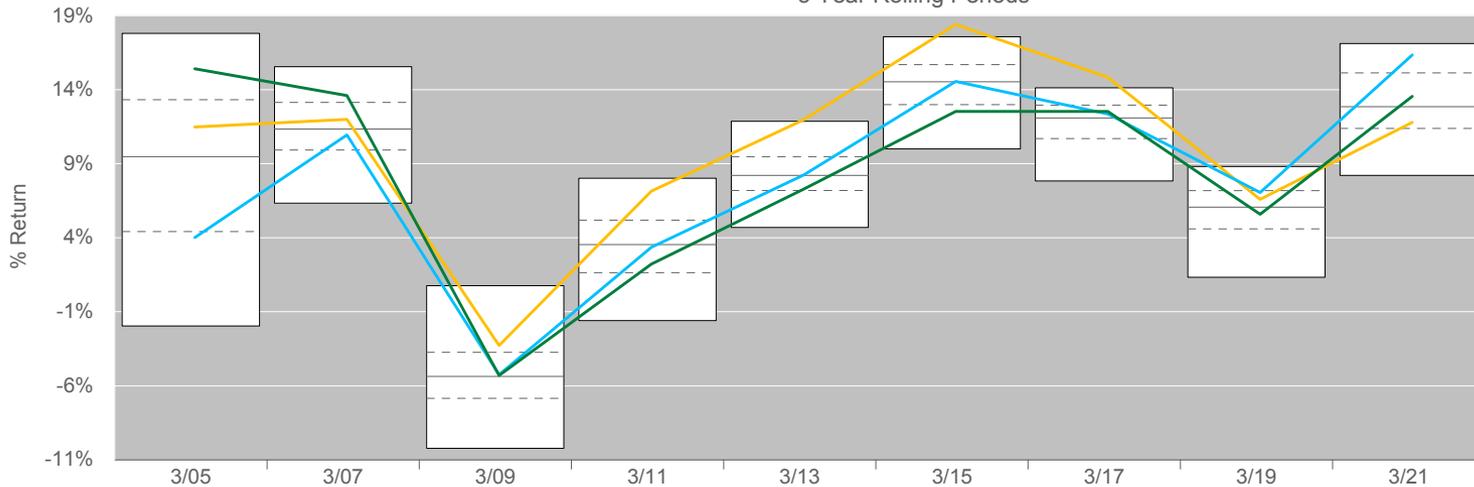
## Gabelli Asset Management

### Small Cap Core Universe

For Report Periods Ending March 31, 2021



Report From March 31, 2000 to March 31, 2021  
5 Year Rolling Periods



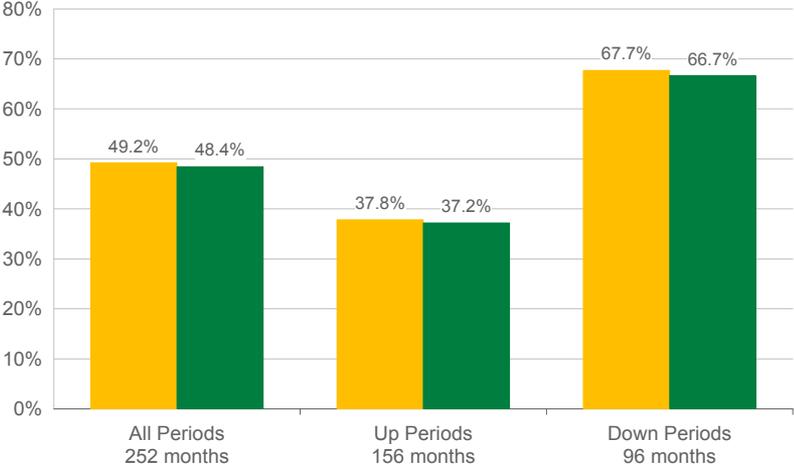
# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

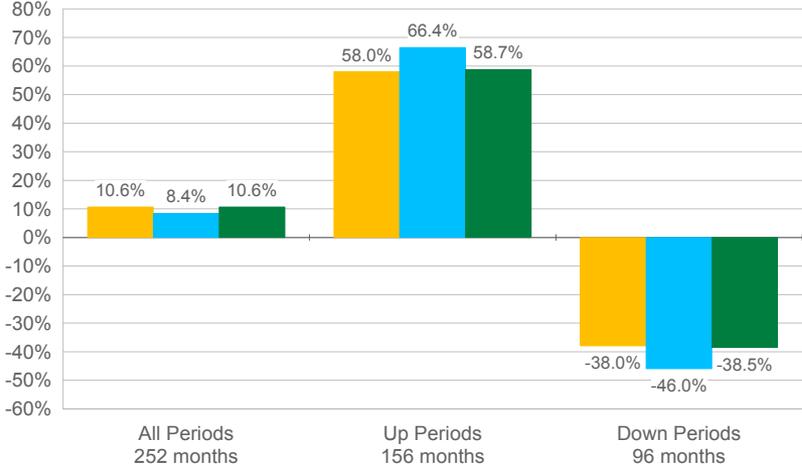
### Returns Analysis

From March 31, 2000 to March 31, 2021

Percent Of Periods Outperformed Russell 2000 Index



Annualized Returns for Up and Down Periods



- Gabelli Asset Management
- Russell 2000 Index
- Median Small Cap Value Manager

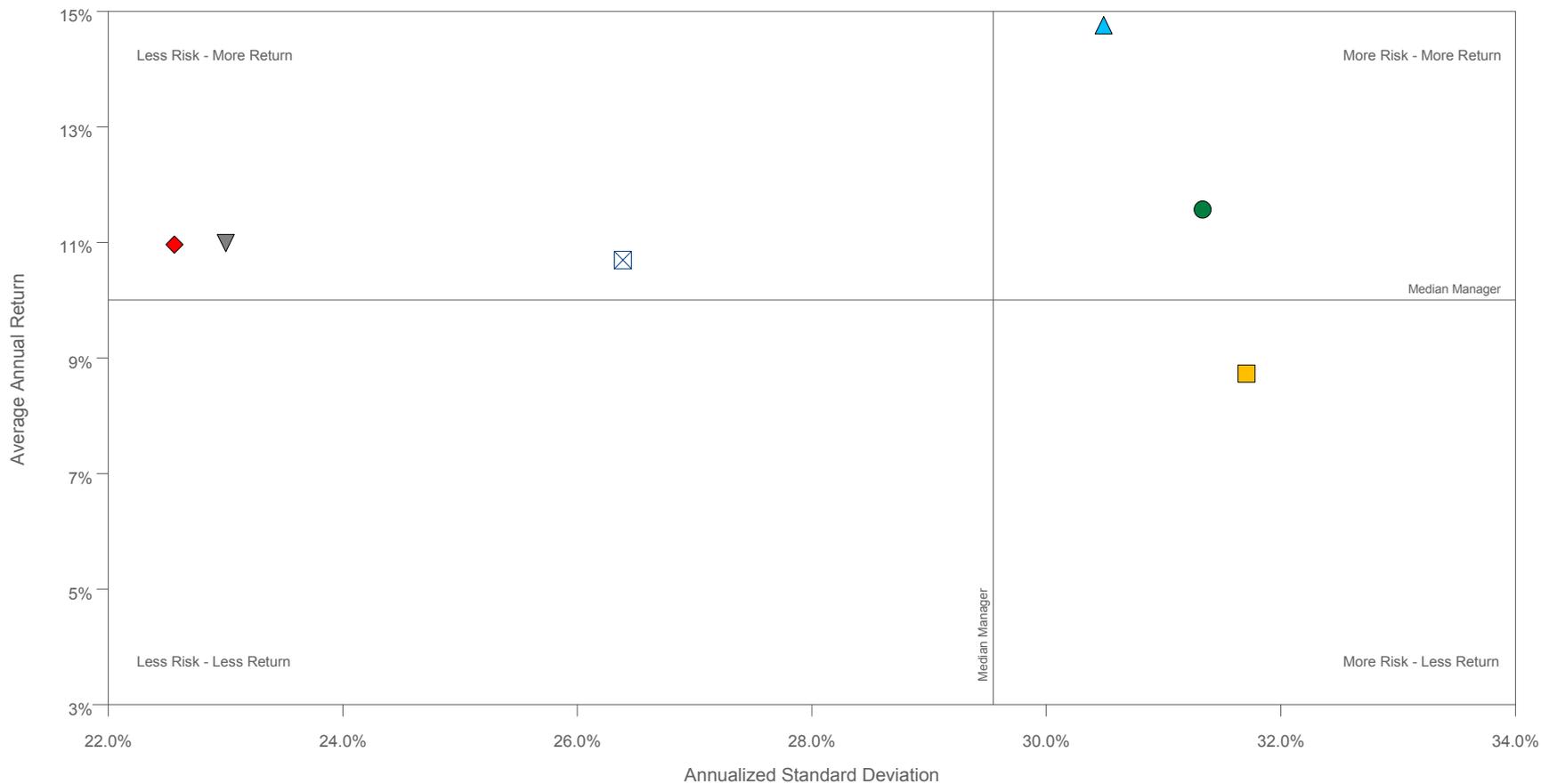
Up periods are defined as months in which the Russell 2000 Index's return is  $\geq 0$ .  
 Down periods are defined as months in which the Russell 2000 Index's return is  $< 0$ .

# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

### Risk vs. Return - Annualized Standard Deviation

3 Years Ending March 31, 2021



	% ROR	S.D.		% ROR	S.D.		% ROR	S.D.
Gabelli Asset Management	8.7	31.7	Russell 2000 Value Index	11.6	31.3	Russell 3000 Value Index	11.0	23.0
Russell 2000 Index	14.8	30.5	Russell 1000 Value Index	11.0	22.6	Russell Midcap Value Index	10.7	26.4

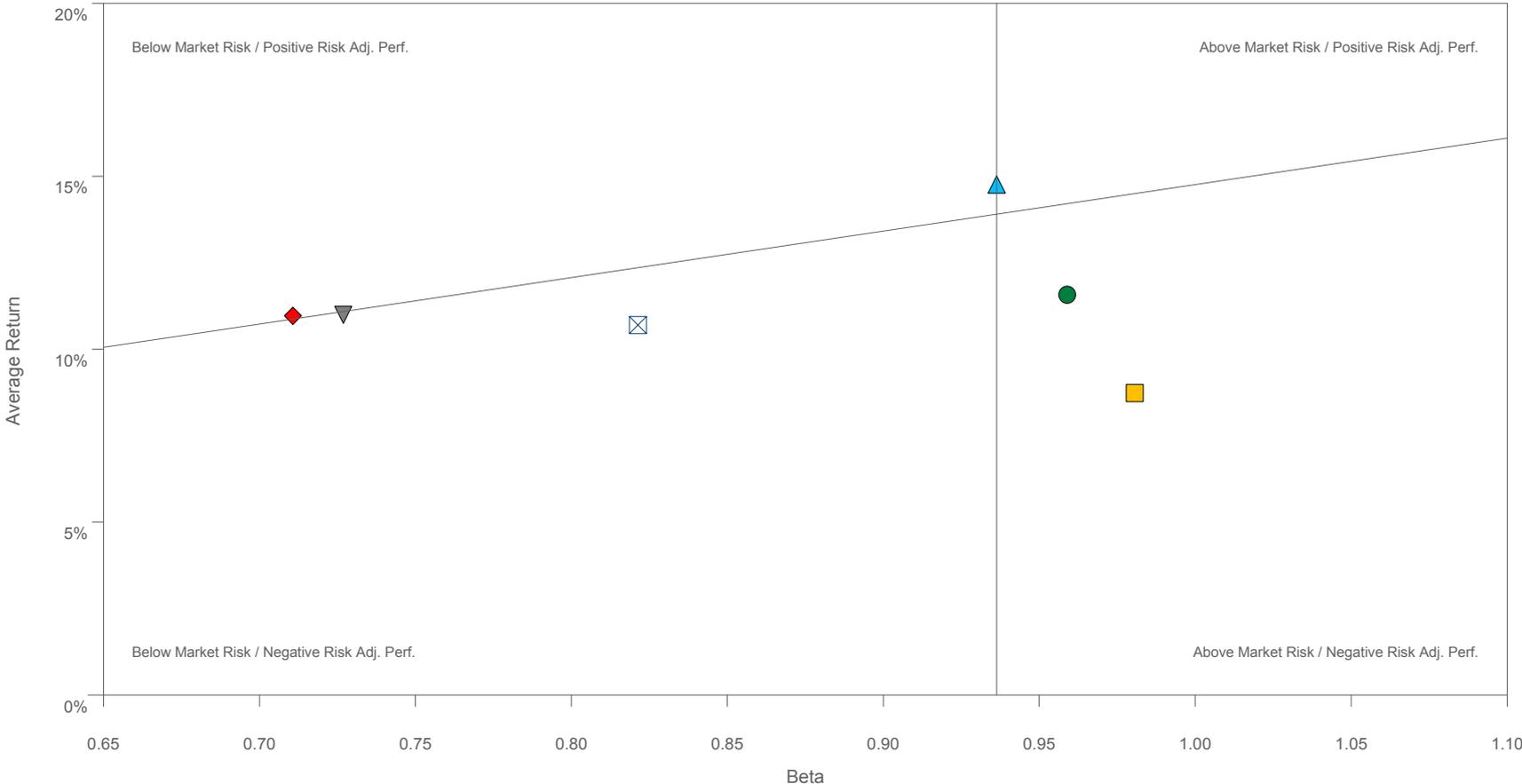
\* The Median Manager is from Fund Evaluation Group's Small Cap Value Universe.

# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

### Risk vs. Return - Beta

3 Years Ending March 31, 2021



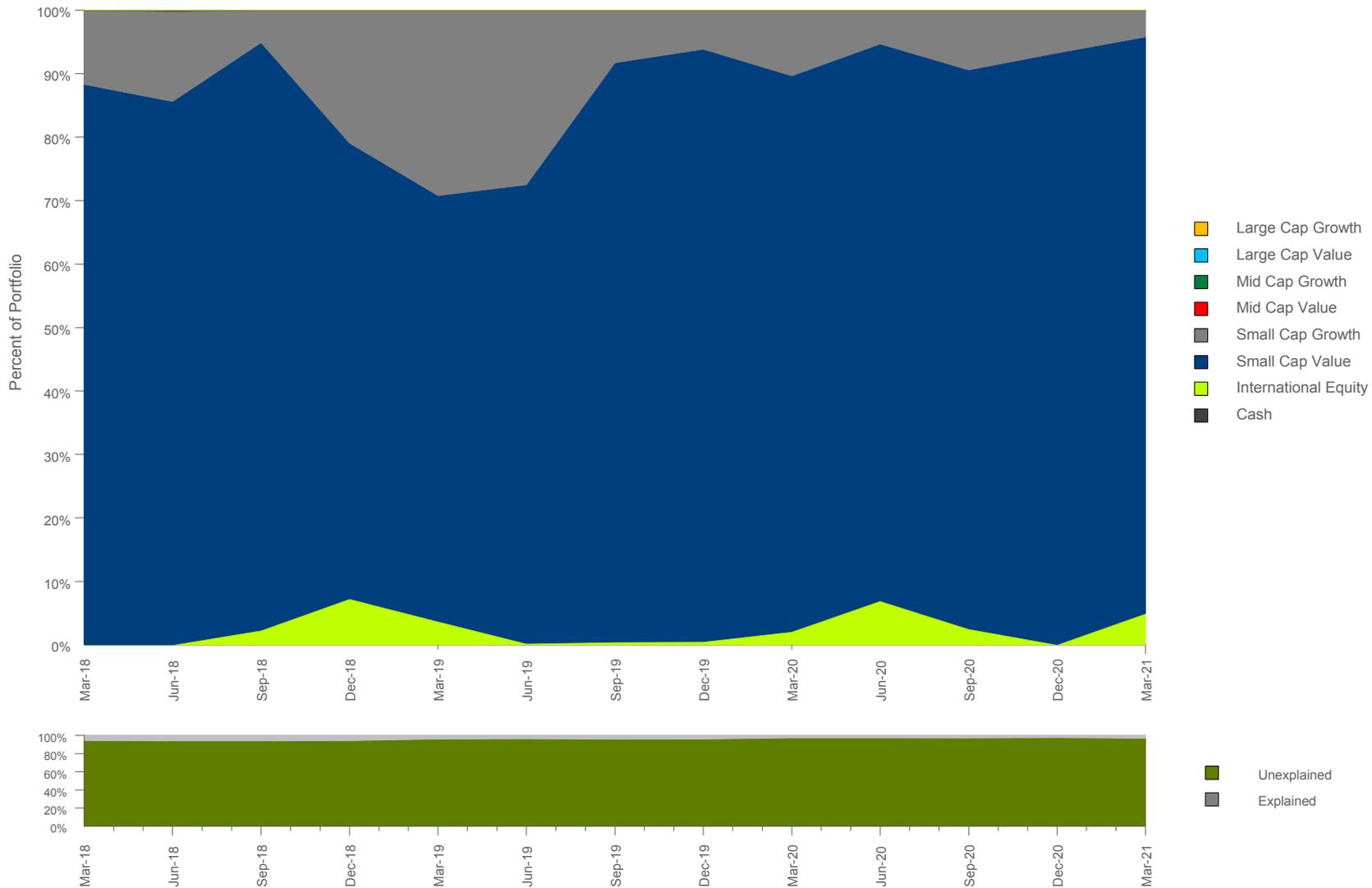
	<u>% ROR</u>	<u>Beta</u>		<u>% ROR</u>	<u>Beta</u>		<u>% ROR</u>	<u>Beta</u>
Gabelli Asset Management	8.7	1.1	Russell 2000 Value Index	11.6	1.0	Russell 3000 Value Index	11.0	0.7
Russell 2000 Index	14.8	1.0	Russell 1000 Value Index	11.0	0.7	Russell Midcap Value Index	10.7	0.9

# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

### Style Analysis 2 Year Trailing Periods

From March 31, 2016 to March 31, 2021

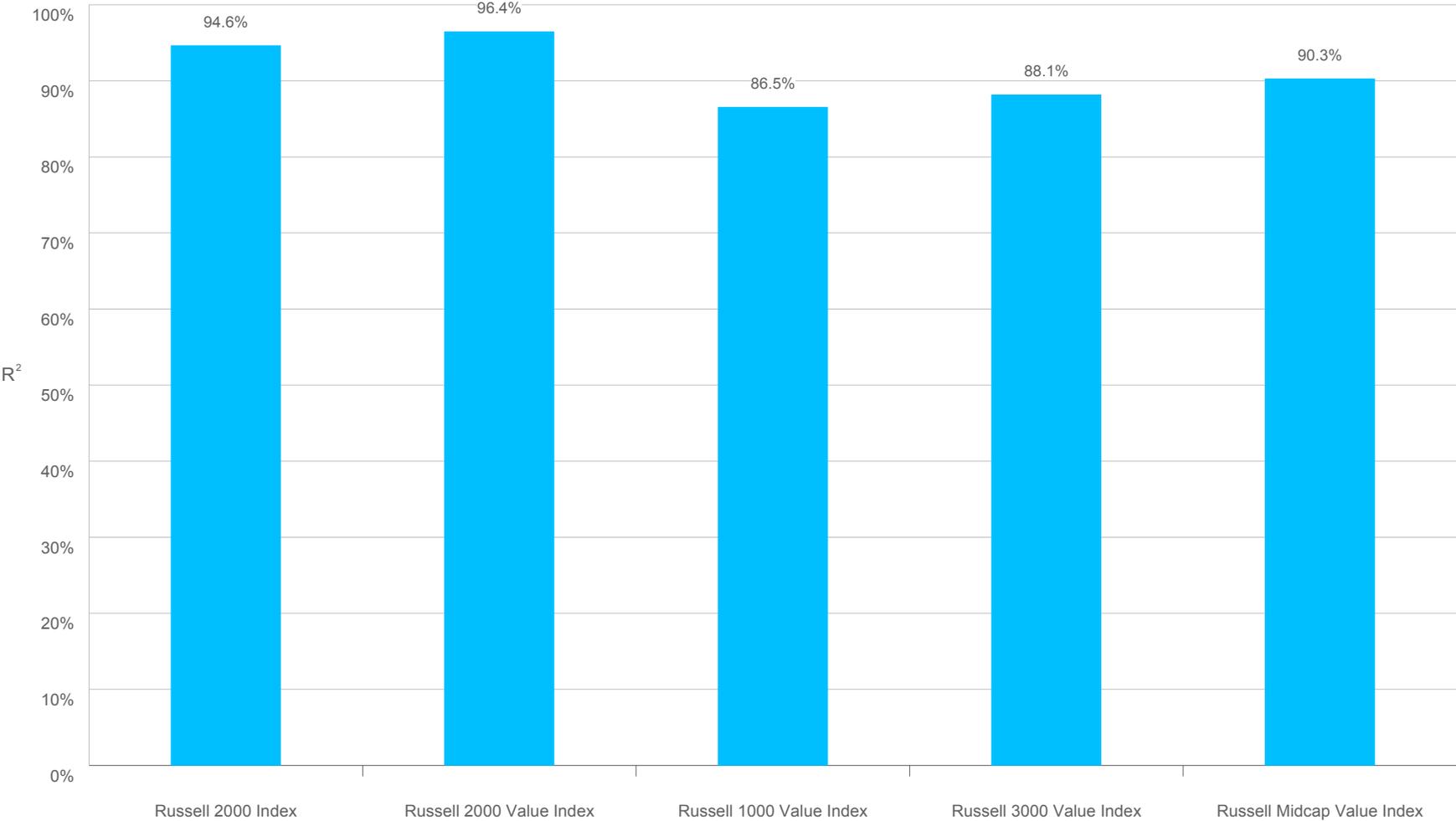


# City of Birmingham Employees Retirement Fund

## Gabelli Asset Management

### Correlation Analysis

3 Years Ending March 31, 2021



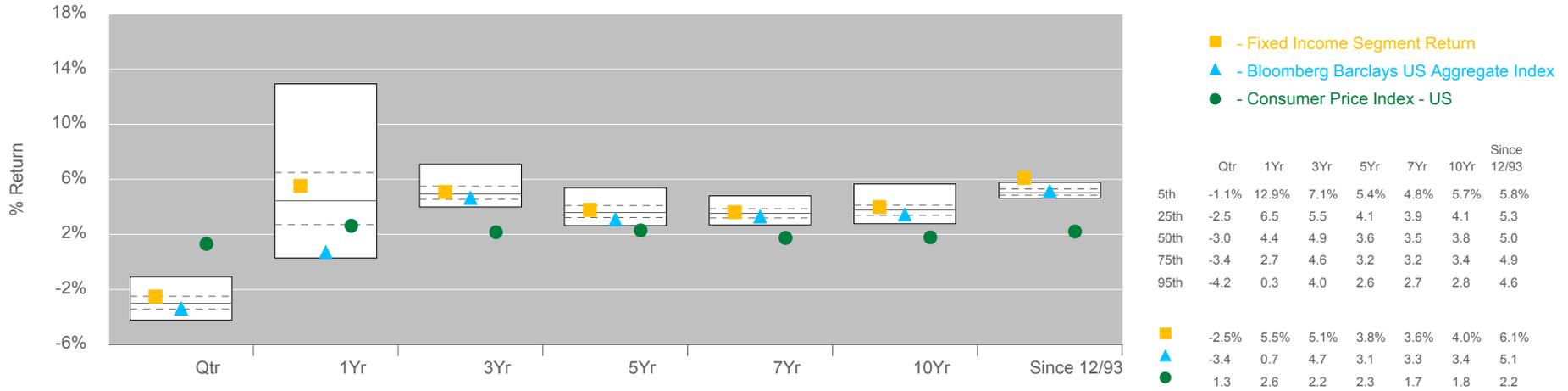
\* R<sup>2</sup> represents the percentage of the Gabelli Asset Management's returns which are explained by each of the stated benchmarks.

# City of Birmingham Employees Retirement Fund

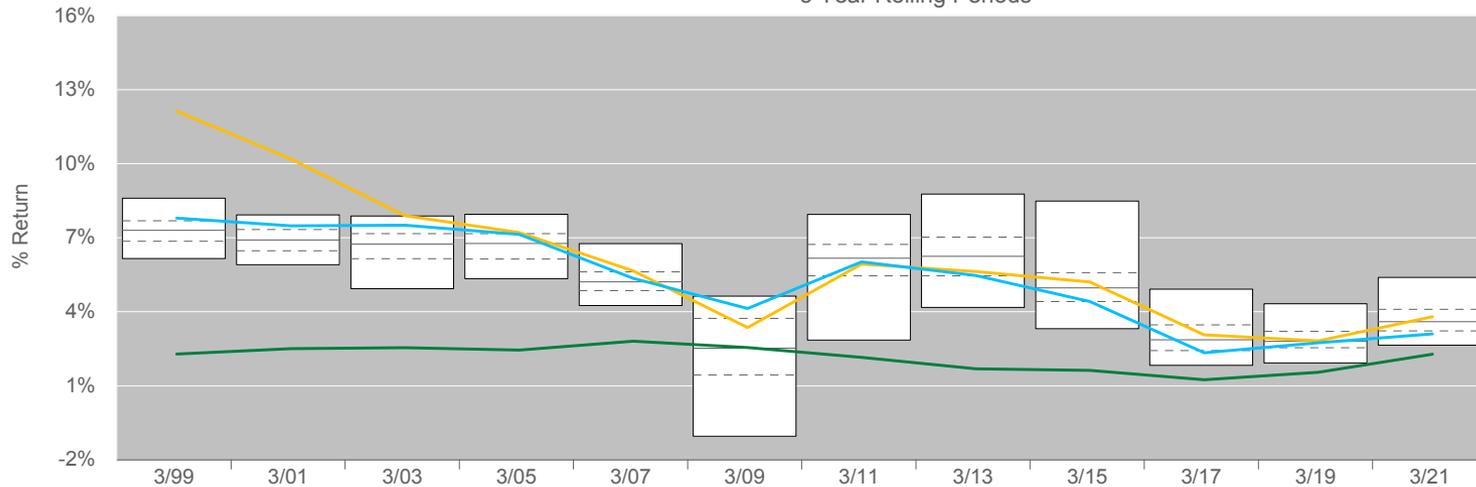
## Fixed Income Segment Return

### Core Fixed Income Universe

For Report Periods Ending March 31, 2021



Report From March 31, 1994 to March 31, 2021  
5 Year Rolling Periods



# City of Birmingham Employees Retirement Fund

## C.S. McKee Investment Managers

### Summary of Performance and Statistics

Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr	Since Inception	Inception Date
<b>C.S. McKee Investment Managers</b>	<b>-3.5%</b>	<b>2.4%</b>	<b>4.7%</b>	<b>3.2%</b>	<b>3.5%</b>	<b>3.8%</b>	<b>3.8%</b>	<i>8/09</i>
Bloomberg Barclays US Aggregate Index	-3.4	0.7	4.7	3.1	3.3	3.4	3.7	

Risk Statistics (3 years)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
<b>C.S. McKee Investment Managers</b>	<b>1.06</b>	<b>-0.1%</b>	<b>0.92</b>	<b>4.1%</b>	<b>1.1%</b>	<b>0.0</b>
Bloomberg Barclays US Aggregate Index	1.00	0.0	1.00	3.7	0.0	--

### Asset Growth Summary (in thousands)

	Qtr	1Yr
Beginning Market Value	\$ 1,733	\$ 4,068
Net Contributions/(Distributions)	\$ (907)	\$ (3,456)
<b>Market Appreciation/(Depreciation)</b>	<b>\$ (42)</b>	<b>\$ 172</b>
<b>Ending Market Value</b>	<b>\$ 784</b>	<b>\$ 784</b>

\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

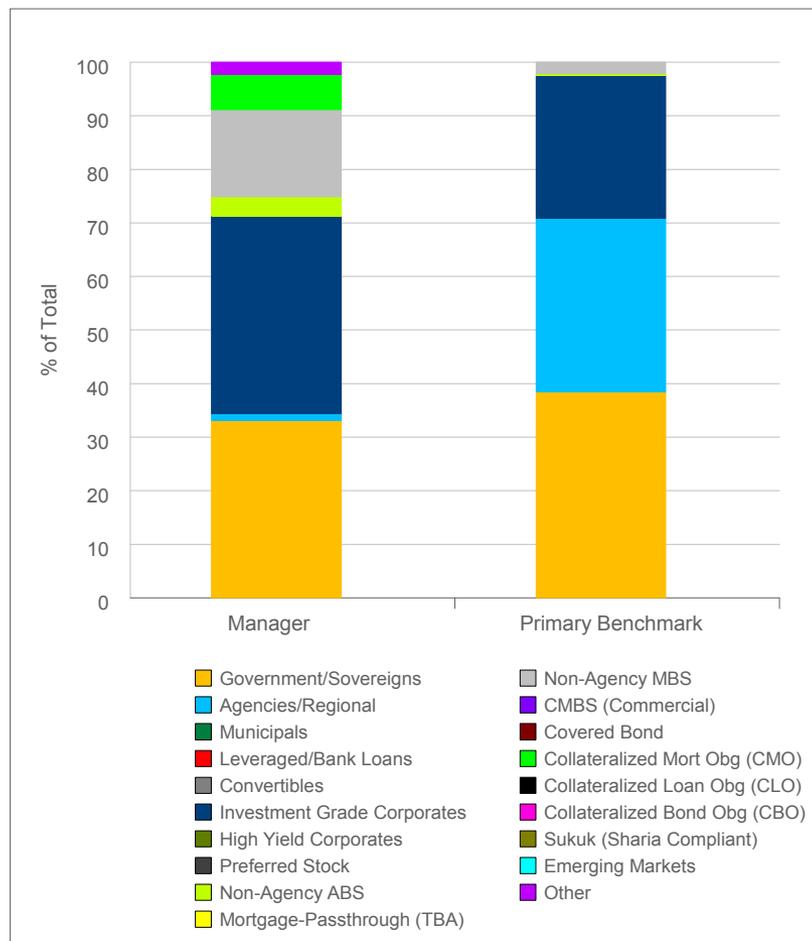
# City of Birmingham Employees Retirement Fund

## C.S. McKee Investment Managers

### Fixed Income Sector

Report For Periods Ending March 31, 2021

#### Sector Allocation



Sector	Sector Weightings		Market Total Returns	
	Manager	Primary Benchmark	3 Months	12 Months
Total Weighting	100%	100%	-3.4%	0.7%
Government/Sovereigns	33	38	-4.1	-4.3
Agencies/Regional	1	32	-1.6	-0.3
Municipals	0	0	-0.4	5.5
Leveraged/Bank Loans	0	0	2.0	20.6
Convertibles	0	0	2.9	74.1
Investment Grade Corporates	37	27	-4.7	8.7
High Yield Corporates	0	0	0.9	23.7
Preferred Stock	0	0	0.8	27.9
Non-Agency ABS	4	0	-0.2	4.6
Mortgage-Passthrough (TBA)	0	0	-4.3	11.7
Non-Agency MBS	16	2	-1.1	-0.1
CMBS (Commercial)	0	0	-2.1	4.9
Covered Bond	0	0	0.0	1.1
Collateralized Mort Obg (CMO)	7	0	-1.1	-0.1
Collateralized Loan Obg (CLO)	0	0	2.0	20.6
Collateralized Bond Obg (CBO)	0	0	0.0	0.0
Sukuk (Sharia Compliant)	0	0	0.0	0.0
Emerging Markets	0	0	-4.5	16.0
Other	2	0	0.0	0.0

\*Sector weightings may not add up to 100% due to rounding.

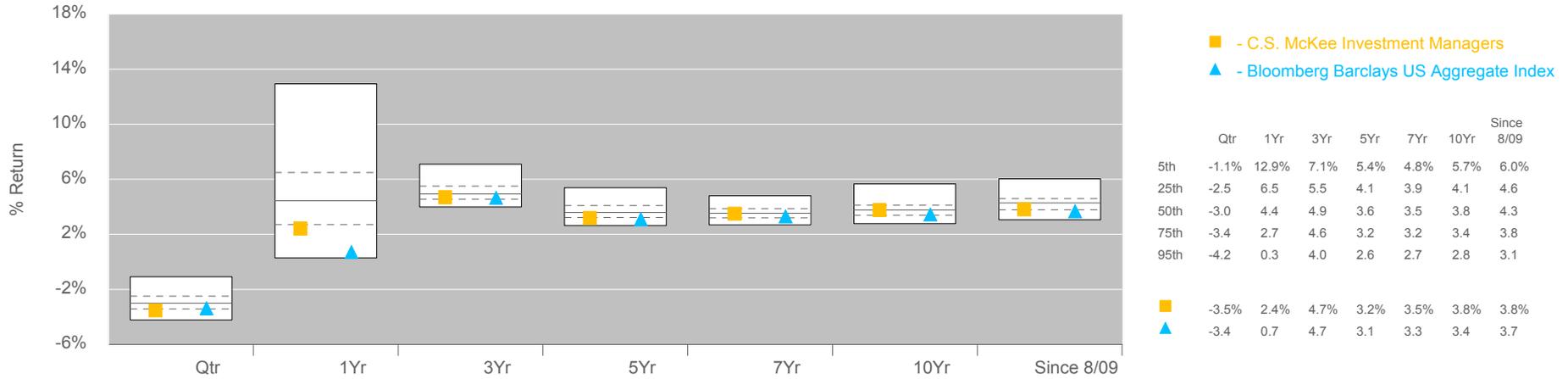
\* Manager data represents the most current available at the time of report publication.

# City of Birmingham Employees Retirement Fund

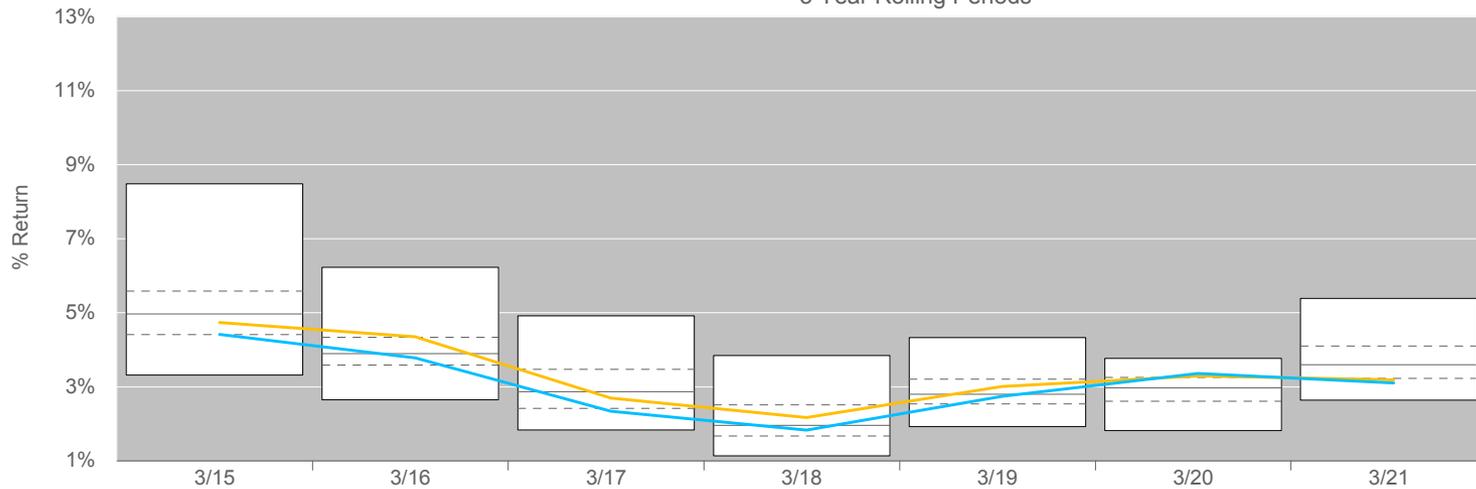
## C.S. McKee Investment Managers

### Core Fixed Income Universe

For Report Periods Ending March 31, 2021



Report From March 31, 2010 to March 31, 2021  
5 Year Rolling Periods



# City of Birmingham Employees Retirement Fund

## Ducenta Squared Asset Management

Summary of Performance and Statistics  
Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	3Yr	5Yr	7Yr	10Yr	Since Inception	Inception Date
Ducenta Squared Asset Management	-3.2%	3.0%	5.4%	4.1%	4.1%	4.4%	4.9%	9/09
Bloomberg Barclays US Aggregate Index	-3.4	0.7	4.7	3.1	3.3	3.4	3.6	

Risk Statistics (3 years)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
Ducenta Squared Asset Management	0.95	0.9%	0.94	3.7%	0.9%	0.8
Bloomberg Barclays US Aggregate Index	1.00	0.0	1.00	3.7	0.0	--

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 14,083	\$ 14,303
Net Contributions/(Distributions)	\$ (643)	\$ (1,730)
<b>Market Appreciation/(Depreciation)</b>	<b>\$ (435)</b>	<b>\$ 432</b>
<b>Ending Market Value</b>	<b>\$ 13,005</b>	<b>\$ 13,005</b>

\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

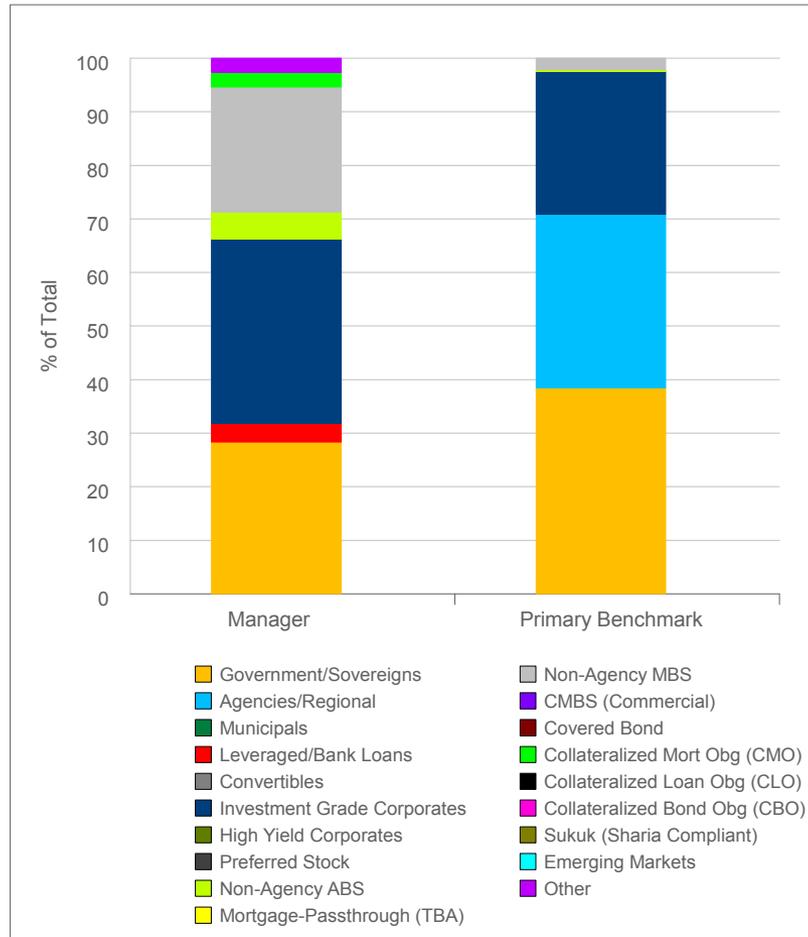
# City of Birmingham Employees Retirement Fund

## Ducenta Squared Asset Management

### Fixed Income Sector

Report For Periods Ending March 31, 2021

#### Sector Allocation



Sector	Sector Weightings		Market Total Returns	
	Manager	Primary Benchmark	3 Months	12 Months
Total Weighting	100%	100%	-3.4%	0.7%
Government/Sovereigns	28	38	-4.1	-4.3
Agencies/Regional	0	32	-1.6	-0.3
Municipals	0	0	-0.4	5.5
Leveraged/Bank Loans	4	0	2.0	20.6
Convertibles	0	0	2.9	74.1
Investment Grade Corporates	34	27	-4.7	8.7
High Yield Corporates	0	0	0.9	23.7
Preferred Stock	0	0	0.8	27.9
Non-Agency ABS	5	0	-0.2	4.6
Mortgage-Passthrough (TBA)	0	0	-4.3	11.7
Non-Agency MBS	23	2	-1.1	-0.1
CMBS (Commercial)	0	0	-2.1	4.9
Covered Bond	0	0	0.0	1.1
Collateralized Mort Obg (CMO)	3	0	-1.1	-0.1
Collateralized Loan Obg (CLO)	0	0	2.0	20.6
Collateralized Bond Obg (CBO)	0	0	0.0	0.0
Sukuk (Sharia Compliant)	0	0	0.0	0.0
Emerging Markets	0	0	-4.5	16.0
Other	3	0	0.0	0.0

\*Sector weightings may not add up to 100% due to rounding.

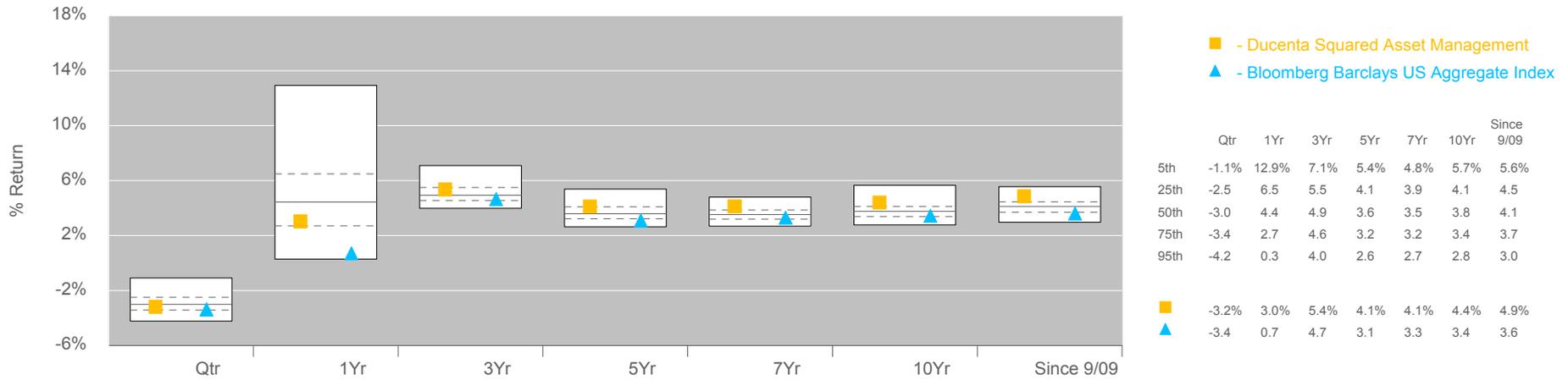
\* Manager data represents the most current available at the time of report publication.

# City of Birmingham Employees Retirement Fund

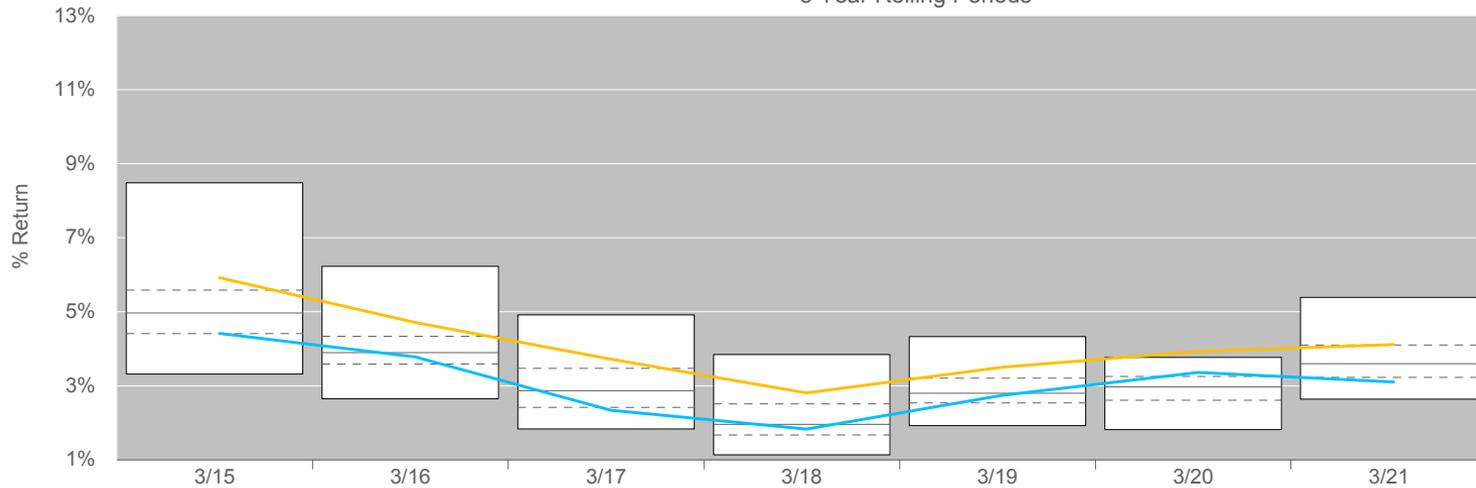
## Ducenta Squared Asset Management

### Core Fixed Income Universe

For Report Periods Ending March 31, 2021



Report From March 31, 2010 to March 31, 2021  
5 Year Rolling Periods



# City of Birmingham Employees Retirement Fund

## Bramshill Income Performance Fund

### Summary of Performance and Statistics

Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	Since Inception	Inception Date
<b>Bramshill Income Performance Fund</b>	<b>-0.3%</b>	<b>16.4%</b>	<b>5.3%</b>	<b>3/19</b>
Bloomberg Barclays US Aggregate Index	-3.4	0.7	4.7	

Risk Statistics (Since 3/19)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Tracking Error	Information Ratio
<b>Bramshill Income Performance Fund</b>	<b>0.54</b>	<b>2.4%</b>	<b>0.06</b>	<b>8.6%</b>	<b>8.1%</b>	<b>0.1</b>
Bloomberg Barclays US Aggregate Index	1.00	0.0	1.00	4.0	0.0	--

Portfolio Statistics	Effective Duration	Wtd Avg Maturity	Wtd Avg Credit	Yield to Worst	FI Annl Turnover
<b>Bramshill Income Performance Fund</b>	<b>3.2yrs</b>	<b>5.0yrs</b>	<b>BBB</b>	<b>3.3%</b>	<b>--%</b>
Bloomberg Barclays US Aggregate Index	6.4	8.4	AA	1.6	--

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 4,138	\$ 3,549
Net Contributions/(Distributions)	\$ 0	\$ 0
<b>Market Appreciation/(Depreciation)</b>	<b>\$ (5)</b>	<b>\$ 584</b>
<b>Ending Market Value</b>	<b>\$ 4,133</b>	<b>\$ 4,133</b>

\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

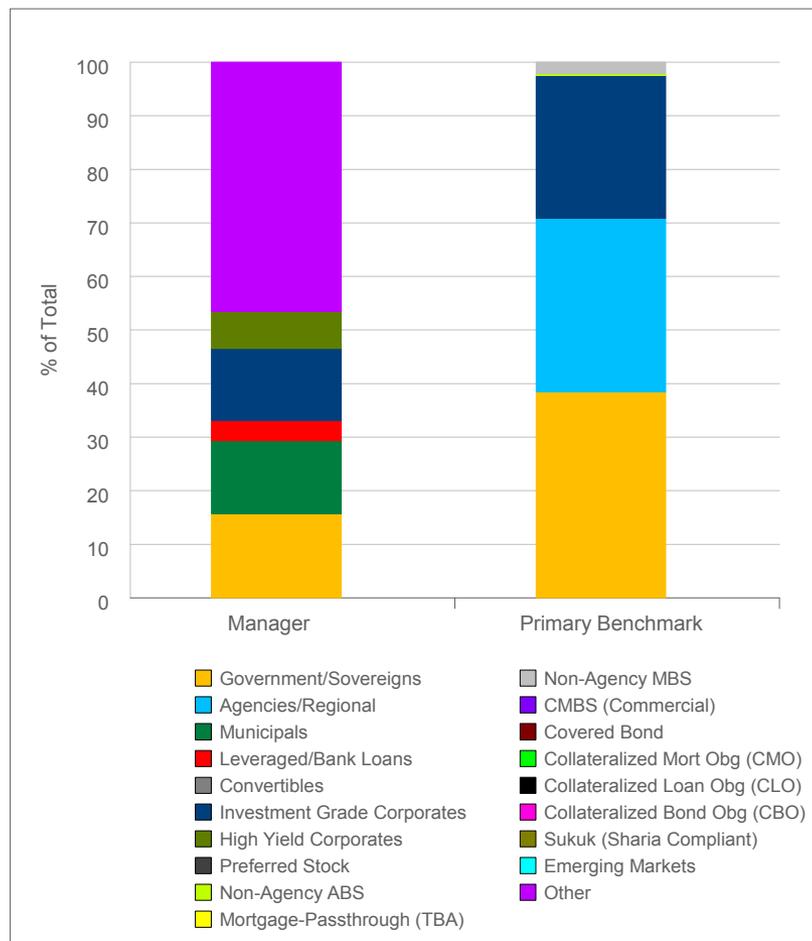
# City of Birmingham Employees Retirement Fund

## Bramshill Income Performance Fund

### Fixed Income Sector

Report For Periods Ending March 31, 2021

#### Sector Allocation



Sector	Sector Weightings		Market Total Returns	
	Manager	Primary Benchmark	3 Months	12 Months
Total Weighting	100%	100%	-3.4%	0.7%
Government/Sovereigns	16	38	-4.1	-4.3
Agencies/Regional	0	32	-1.6	-0.3
Municipals	14	0	-0.4	5.5
Leveraged/Bank Loans	4	0	2.0	20.6
Convertibles	0	0	2.9	74.1
Investment Grade Corporates	13	27	-4.7	8.7
High Yield Corporates	7	0	0.9	23.7
Preferred Stock	0	0	0.8	27.9
Non-Agency ABS	0	0	-0.2	4.6
Mortgage-Passthrough (TBA)	0	0	-4.3	11.7
Non-Agency MBS	0	2	-1.1	-0.1
CMBS (Commercial)	0	0	-2.1	4.9
Covered Bond	0	0	0.0	1.1
Collateralized Mort Obg (CMO)	0	0	-1.1	-0.1
Collateralized Loan Obg (CLO)	0	0	2.0	20.6
Collateralized Bond Obg (CBO)	0	0	0.0	0.0
Sukuk (Sharia Compliant)	0	0	0.0	0.0
Emerging Markets	0	0	-4.5	16.0
Other	47	0	0.0	0.0

\*Sector weightings may not add up to 100% due to rounding.

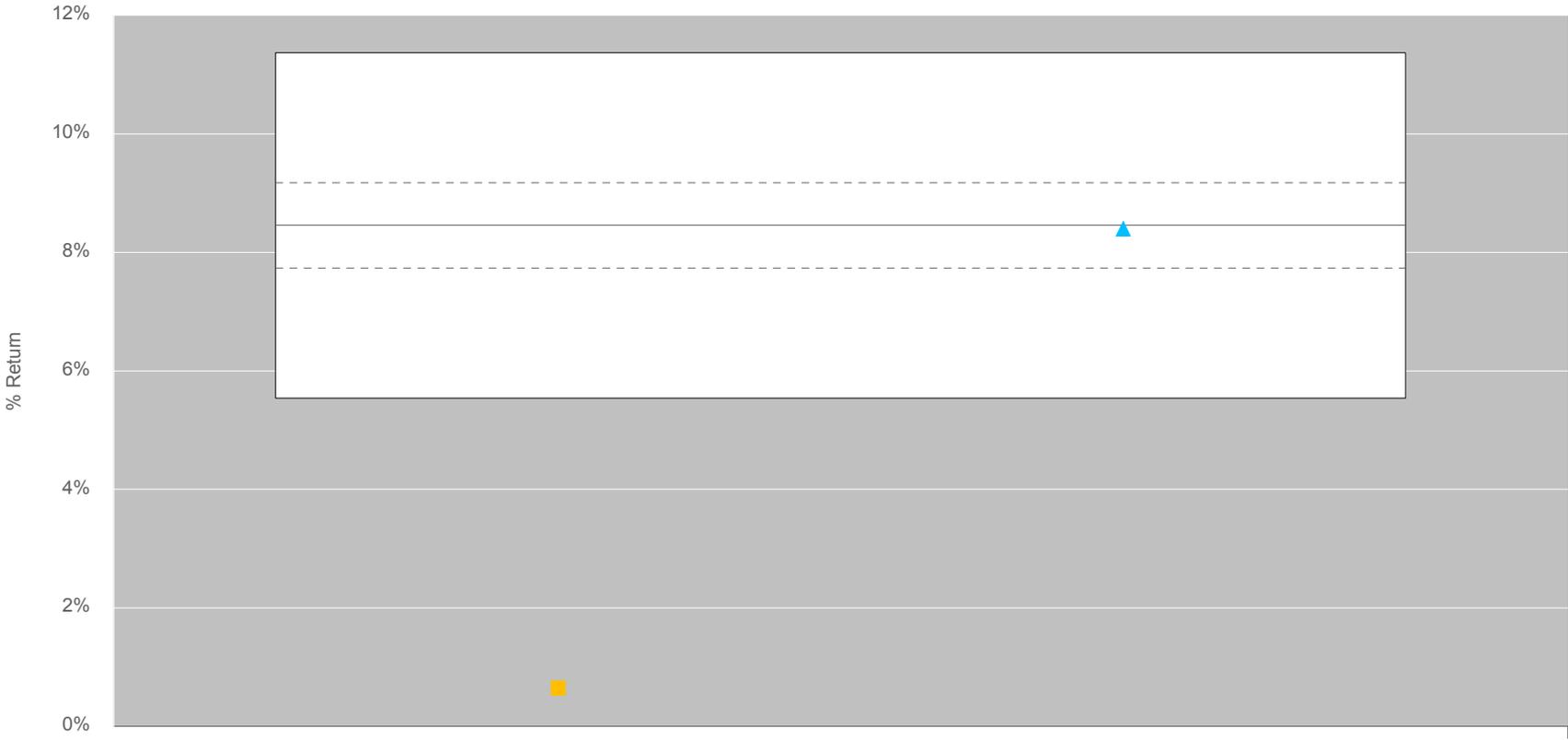
\* Manager data represents the most current available at the time of report publication.

# City of Birmingham Employees Retirement Fund

## Starwood

### REIT Manager Universe

For Report Periods Ending March 31, 2021



	Since 1/21
5th Percentile	11.4%
25th Percentile	9.2
50th Percentile	8.5
75th Percentile	7.7
95th Percentile	5.5
■ - Starwood	0.6%
▲ - FTSE NAREIT All Equity Index	8.4

# City of Birmingham Employees Retirement Fund

## Graham Absolute Return

### Summary of Performance and Statistics

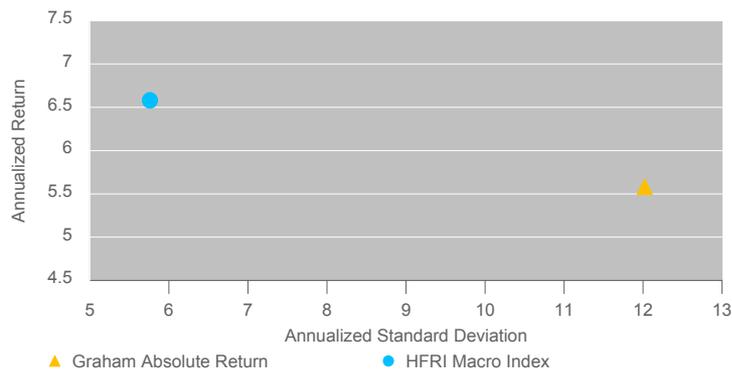
Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	Since Inception	Inception Date
Graham Absolute Return	6.6%	26.2%	5.6%	4/19
HFRI Macro Index	4.1	11.5	6.6	

Risk Statistics (Since 4/19)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Sharpe Ratio	Maximum Drawdown
Graham Absolute Return	1.01	-1.0%	0.2	12.0%	0.39	-15.2%
HFRI Macro Index	1.00	0.0	1.0	5.8	0.99	-3.6

### Asset Growth Summary (in thousands)

	Qtr	1Yr
Beginning Market Value	\$ 3,564	\$ 3,012
Net Contributions/(Distributions)	\$ 0	\$ 0
Market Appreciation/(Depreciation)	\$ 237	\$ 789
Ending Market Value	<u>\$ 3,801</u>	<u>\$ 3,801</u>



### Strategy Allocation



\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

# City of Birmingham Employees Retirement Fund

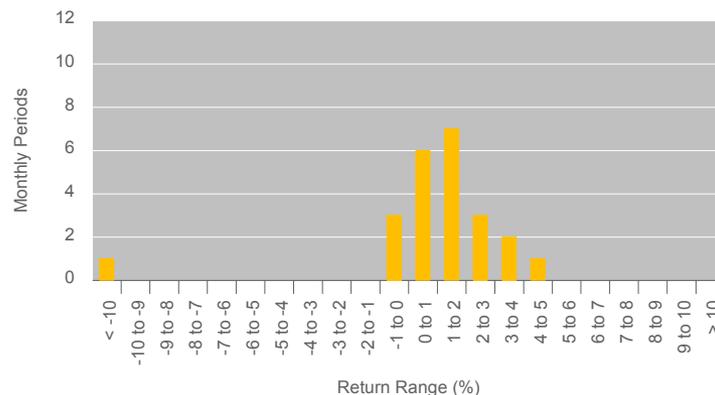
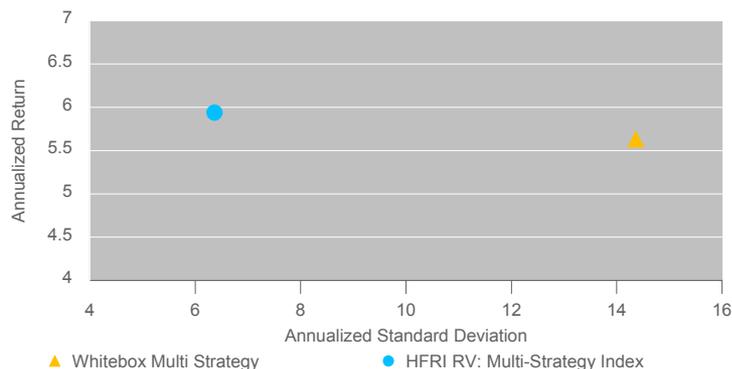
## Whitebox Multi Strategy

Summary of Performance and Statistics  
Report For Periods Ending March 31, 2021

Performance Results	Qtr	1Yr	Since Inception	Inception Date
<b>Whitebox Multi Strategy</b>	<b>5.8%</b>	<b>30.6%</b>	<b>5.6%</b>	<b>4/19</b>
HFRI RV: Multi-Strategy Index	3.3	17.2	5.9	

Risk Statistics (Since 4/19)	Beta	Alpha	R <sup>2</sup>	Standard Deviation	Sharpe Ratio	Maximum Drawdown
<b>Whitebox Multi Strategy</b>	<b>2.08</b>	<b>-5.8%</b>	<b>0.9</b>	<b>14.4%</b>	<b>0.33</b>	<b>-16.8%</b>
HFRI RV: Multi-Strategy Index	1.00	0.0	1.0	6.4	0.80	-6.6

Asset Growth Summary (in thousands)	Qtr	1Yr
Beginning Market Value	\$ 3,548	\$ 2,873
Net Contributions/(Distributions)	\$ 0	\$ 0
<b>Market Appreciation/(Depreciation)</b>	<b>\$ 205</b>	<b>\$ 880</b>
<b>Ending Market Value</b>	<b>\$ 3,753</b>	<b>\$ 3,753</b>



\* Risk Statistics are based on monthly data.

\* Manager data represents the most current available at the time of report publication.

## Index Summary Sheet for Periods Ending March 31, 2021

	Qtr	YTD	1 Yr	Annualized		
				3 Yr	5 Yr	10 Yr
<b>Global Equity</b>						
MSCI AC World Index	4.6%	4.6%	54.6%	12.1%	13.2%	9.1%
MSCI World Index	4.9	4.9	54.0	12.8	13.4	9.9
S&P 500 Index	6.2	6.2	56.3	16.8	16.3	13.9
Russell 3000 Index	6.3	6.3	62.5	17.1	16.6	13.8
Russell 1000 Index	5.9	5.9	60.6	17.3	16.7	14.0
Russell 1000 Growth Index	0.9	0.9	62.7	22.8	21.0	16.6
Russell 1000 Value Index	11.3	11.3	56.1	11.0	11.7	11.0
Russell Midcap Index	8.1	8.1	73.6	14.7	14.7	12.5
Russell Midcap Growth Index	-0.6	-0.6	68.6	19.4	18.4	14.1
Russell Midcap Value Index	13.1	13.1	73.8	10.7	11.6	11.1
Russell 2000 Index	12.7	12.7	94.8	14.8	16.4	11.7
Russell 2000 Growth Index	4.9	4.9	90.2	17.2	18.6	13.0
Russell 2000 Value Index	21.2	21.2	97.1	11.6	13.6	10.1
Russell Microcap Index	23.9	23.9	120.3	16.6	18.1	12.2
MSCI AC World Index ex-U.S.	3.5	3.5	49.4	6.6	9.8	4.9
MSCI EAFE Index	3.5	3.5	44.6	6.1	8.8	5.5
MSCI EAFE Growth Index	-0.6	-0.6	42.6	9.9	10.8	7.2
MSCI EAFE Value Index	7.4	7.4	45.7	1.9	6.6	3.7
MSCI Small Cap EAFE Index	4.5	4.5	62.0	6.4	10.5	8.0
MSCI Emerging Markets Index	2.3	2.3	58.4	6.5	12.1	3.7
MSCI Emerging Markets Small Cap Index	7.7	7.7	87.1	5.3	9.6	3.3
MSCI Frontier Markets Index	0.8	0.8	39.3	-1.3	6.6	3.9
HFRI Equity Hedge Index	7.1	7.1	47.8	9.9	10.1	5.9
HFRI Emerging Markets	2.9	2.9	36.9	4.6	8.2	3.3
HFRI FOF: Strategic Index	0.8	0.8	31.2	5.9	6.7	3.9
Thomson One All Private Capital Index	0.0	0.0	17.8	9.0	11.1	10.8
Thomson One Buyout Index	0.0	0.0	41.0	17.8	18.2	15.2
Thomson One Fund of Funds Index	0.0	0.0	19.3	11.5	11.5	10.8
Thomson One Venture Capital Index	0.0	0.0	58.6	28.4	21.4	18.3
<b>Global Fixed Income</b>						
Bloomberg Barclays US Aggregate Index	-3.4	-3.4	0.7	4.7	3.1	3.4
Bloomberg Barclays U.S. TIPS Index	-1.5	-1.5	7.5	5.7	3.9	3.4
Bloomberg Barclays Government Bond Index	-4.1	-4.1	-4.3	4.1	2.3	2.8
Bloomberg Barclays Municipals Index	-0.4	-0.4	5.5	4.9	3.5	4.5
Bloomberg Barclays Asset Backed Index	-0.2	-0.2	4.6	3.7	2.6	2.5

## Index Summary Sheet for Periods Ending March 31, 2021

	Qtr	YTD	1 Yr	Annualized		
				3 Yr	5 Yr	10 Yr
<b>Global Fixed Income (continued)</b>						
Bloomberg Barclays US MBS Index	-1.1%	-1.1%	-0.1%	3.7%	2.4%	2.8%
Bloomberg Barclays IG CMBS Index	-2.1	-2.1	4.9	5.3	3.6	4.1
Bloomberg Barclays U.S. Credit Index	-4.5	-4.5	7.9	5.9	4.7	4.8
Bloomberg Barclays US Corporate HY Index	0.8	0.8	23.7	6.8	8.1	6.5
Bloomberg Barclays Interm. US G/C Index	-1.9	-1.9	2.0	4.4	2.8	2.9
ICE BofA 1-3 Yr. Govt. Bond Index	0.0	0.0	0.2	2.8	1.7	1.3
U.S. 91-Day Treasury Bills	0.0	0.0	0.1	1.3	1.1	0.6
CS Leveraged Loan Index	1.9	1.9	20.6	4.1	5.3	4.4
JPMorgan Non-U.S. GBI Hedged Index	-2.4	-2.4	0.4	3.6	2.9	4.2
JPMorgan Non-U.S. GBI Index	-6.4	-6.4	4.7	0.8	1.9	1.1
JPMorgan EMBI Plus Index	-7.2	-7.2	8.8	2.6	3.5	4.8
JPMorgan EMBI Global Index	-4.7	-4.7	14.3	3.9	4.7	5.4
HFRI RV: Fixed Income - Corporate Index	4.0	4.0	26.0	6.3	7.4	5.0
HFRI ED: Distressed/Restructuring Index	8.3	8.3	37.1	6.9	8.8	5.0
Thomson One Distressed Index	0.0	0.0	21.0	3.8	6.7	7.1
<b>Real Assets</b>						
FTSE NAREIT All Equity Index	8.3	8.3	34.2	10.8	7.2	9.4
S&P Developed BMI Property Index	5.4	5.4	34.8	5.2	4.3	6.1
S&P Developed ex-U.S. Property Index	2.2	2.2	33.8	3.2	5.4	6.0
NCREIF Property Index	0.0	0.0	0.9	4.3	5.4	8.6
Bloomberg Commodity Index	6.9	6.9	35.0	-0.2	2.3	-6.3
Alerian MLP Index	22.0	22.0	103.1	-3.0	-1.3	-0.9
NCREIF Timberland Index	0.0	0.0	0.7	1.5	2.4	4.5
Thomson One Private Real Estate Index	0.0	0.0	8.1	5.2	7.2	9.1
S&P Real Assets Equity Total Return Index	7.2	7.2	38.5	5.6	5.9	5.7
<b>Diversifying Strategies</b>						
HFRI Fund of Funds Index	1.9	1.9	23.8	5.4	5.6	3.4
HFRI Fund Weighted Composite Index	6.0	6.0	34.0	7.6	7.5	4.6
HFRI FOF: Conservative Index	3.6	3.6	18.9	5.0	4.7	3.2
HFRI Event Driven	8.2	8.2	38.9	7.5	8.3	5.1
HFRI Relative Value Total Index	3.7	3.7	19.5	4.5	5.4	4.5
HFRI Macro Index	4.1	4.1	11.5	4.4	2.6	1.5
<b>Other</b>						
Consumer Price Index - U.S.	1.3	1.3	2.6	2.2	2.3	1.8
U.S. Dollar Index	3.7	3.7	-5.9	1.1	-0.4	2.0

\* For indices that report returns on a lag, 0.0% is utilized for the most recent time period until the actual return data are reported.

# City of Birmingham Employees Retirement Fund

## Benchmark Composition Summary

### Target Index

<u>Since Inception</u>	<u>Weight</u>
S&P 500 Index	65.00%
Bloomberg Barclays GV/CR Bond Index	35.00%

<u>April 30, 2008</u>	<u>Weight</u>
S&P 500 Index	50.00%
MSCI EAFE Index	15.00%
Bloomberg Barclays Interm. US G/C Index	35.00%

<u>November 30, 2011</u>	<u>Weight</u>
S&P 500 Index	25.00%
Russell Midcap Index	15.00%
Russell 2000 Index	5.00%
MSCI EAFE Index	10.00%
MSCI Emerging Markets Index	5.00%
Bloomberg Barclays US Aggregate Index	35.00%
HFRI Macro: Systematic Diversified Index	5.00%

Index performance results do not represent any managed portfolio returns. An investor cannot invest directly in a presented index, as an investment vehicle replicating an index would be required. An index does not charge management fees or brokerage expenses, and no such fees or expenses were deducted from the performance shown.

Past performance is not indicative of future results.

Performance results are calculated using information provided by the custodian and/or independent pricing sources. It is the responsibility of the trustee, custodian and/or manager to ensure the accuracy of market value and transactional data. Performance analysis is calculated using monthly and/or quarterly market values. Performance analysis and asset valuations may or may not include accrued interest and dividend income and are net of management fees.

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# Birmingham Employees Retirement System

03/31/2021

Quarterly Review

Total Options: 10



Detailed Portfolio Analysis  
For Institutional Investors

Prepared For:  
City of Birmingham

Prepared By:  
Flagship Financial Partners

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This report provides detailed analytics regarding one or more of your Plan's investment strategy portfolios that you have discussed with your UBS Consultant. As you work with your UBS Consultant to evaluate your Plan's current or contemplated investment strategy, please note that there are many investment combinations that can help your Plan meet its goals and objectives. This analysis is for your general information and discussion purposes only and does not constitute an offer or solicitation to purchase or sell any security or to engage an investment manager. It is your responsibility to determine whether the Plan should implement a specific investment strategy, and how such implementation would be accomplished. Neither UBS Financial Services nor any of its employees provide tax or legal advice. You should evaluate any contemplated transactions with the Plan's legal and tax advisors.

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**See the *Important Information About This Report* section at the end of this report for important information regarding this report, including performance calculation for each investment type presented (e.g. mutual funds, exchange traded funds, investment managers, etc.), as well a Glossary of the terms used and an explanation of indexes shown. Past performance does not guarantee or indicate future results.**

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## Trailing Performance Summary

	Ticker	Annualized Returns						Since Inception*		Expense Ratio** (Net)	Expense Ratio** (Gross)
		YTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr	Return	Date		
<b>Fixed Income</b>											
<b>Intermediate Core Bond - SMA</b>											
Tortoise Core (IG) Composite	SAUSA004CT	-3.24	2.50	5.36	3.96	4.08	4.29	8.03	06-01-1984	0.30	
CS McKee Aggregate Fixed Income	FOUSA05YNH	-3.44	2.69	4.95	3.36	3.62	3.84		01-02-1992	0.35	
BBgBarc US Aggregate Bond Index		-3.37	0.71	4.65	3.10	3.31	3.44				
Intermediate Core Bond Median		-2.95	3.13	4.87	3.39	3.47	3.67			0.30	0.23
Number of Funds in Peer Group		520	501	453	403	373	324			719	254
<b>Nontraditional Bond</b>											
Bramshill Income Performance Instl	BRMSX	-0.27	16.40	5.60				4.13	04/11/2016	1.38	1.38
BBgBarc US Aggregate Bond Index		-3.37	0.71	4.65	3.10	3.31	3.44				
Nontraditional Bond Median		0.26	12.01	3.71	4.19	3.05	3.15			1.01	1.29
Number of Funds in Peer Group		82	81	70	67	49	29			141	141
<b>Equity</b>											
<b>Large Value - SMA</b>											
Westwood LargeCap Value Trust	F00000OZQ	7.38	44.04	10.18	11.69	9.77		12.29	03-30-2012	0.50	
Russell 1000 Value Index		11.26	56.09	10.96	11.74	9.40	10.99				
Large Value Median		11.23	56.54	11.58	12.36	9.88	11.33			0.65	0.45
Number of Funds in Peer Group		561	545	504	458	422	349			947	186
<b>Large Blend - ETF</b>											
Vanguard S&P 500 ETF	VOO	6.17	56.33	16.75	16.26	13.56	13.87	15.32	09/07/2010	0.03	0.03
S&P 500 Index		6.17	56.35	16.78	16.29	13.59	13.91				
Large Blend Median		5.98	56.33	15.52	15.45	13.25	13.78			0.49	0.53
Number of Funds in Peer Group		225	147	103	68	48	37			303	303
<b>Large Growth - SMA</b>											
Polen Focus Growth	SAUSA000OE	1.81	57.62	26.10	21.87	20.31	18.36	15.58	01-03-1989	0.75	
Russell 1000 Growth Index		0.94	62.74	22.80	21.05	17.50	16.63				
Large Growth Median		2.03	60.26	20.75	19.32	15.86	15.20			0.70	0.46
Number of Funds in Peer Group		658	629	560	488	449	380			1033	252
<b>Mid-Cap Blend - ETF</b>											
Vanguard Mid-Cap ETF	VO	7.19	70.63	14.65	14.60	11.73	12.29	10.56	01/26/2004	0.04	0.04
CRSP US Mid Cap TR USD		7.18	70.66	14.67	14.62	11.76	12.48				
Mid-Cap Blend Median		10.41	73.38	12.89	14.09	10.89	11.69			0.40	0.41
Number of Funds in Peer Group		49	41	34	25	17	17			73	73
<b>Mid-Cap Growth - SMA</b>											
Fiera SMID Growth	SAUSA04AK1	12.16	110.56	23.47	22.33	15.51	15.75	11.48	04-03-2000	1.00	
Russell Mid-Cap Growth Index		-0.57	68.61	19.41	18.39	14.37	14.11				
Mid-Cap Growth Median		3.49	73.60	18.98	18.94	14.45	14.18			0.85	0.65
Number of Funds in Peer Group		312	299	264	239	218	178			493	119

\*Results shown for periods of time prior to "Inception Date" include Pre-Inception Returns. Note however that "Since Inception Returns" always reflect results for the actual share class and thus do not include Pre-Inception Returns. Please see "Important Information" section for details.

\*\*Please see the "Expense Review" section for more information.

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## Trailing Performance Summary

	Ticker	Annualized Returns						Since Inception*		Expense Ratio** (Net)	Expense Ratio** (Gross)
		YTD	1 Yr	3 Yr	5 Yr	7 Yr	10 Yr	Return	Date		
<b>Small Value - SMA</b>											
<b>Gabelli Asset Mgt Sm-Cap Val</b>	<b>SAUSA000GQ</b>	<b>12.91</b>	<b>79.98</b>	<b>10.62</b>	<b>13.24</b>	<b>9.50</b>	<b>11.24</b>	<b>12.91</b>	<b>12-30-1988</b>	<b>1.00</b>	
Russell 2000 Value Index		21.17	97.05	11.57	13.56	8.93	10.06				
<i>Small Value Median</i>		20.93	97.01	10.70	12.96	9.08	10.82			1.00	0.55
Number of Funds in Peer Group		184	176	148	135	130	115			277	66
<b>International</b>											
<b>Foreign Large Blend</b>											
<b>MFS Intl Diversification R6</b>	<b>MDIZX</b>	<b>1.84</b>	<b>46.47</b>	<b>9.76</b>	<b>11.94</b>	<b>7.88</b>	<b>7.65</b>	<b>10.05</b>	<b>10/02/2017</b>	<b>0.75</b>	<b>0.77</b>
MSCIEAFE		3.60	45.15	6.54	9.37	5.30	6.02				
<i>Foreign Large Blend Median</i>		3.63	49.20	6.14	9.03	5.19	5.56			0.95	1.09
Number of Funds in Peer Group		219	210	184	166	141	128			418	418

\*Results shown for periods of time prior to "Inception Date" include Pre-Inception Returns. Note however that "Since Inception Returns" always reflect results for the actual share class and thus do not include Pre-Inception Returns. Please see "Important Information" section for details.

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# Calendar Year Performance

03/31/2021

## Fund Calendar Year Performance

Ticker	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	
<b>Fixed Income</b>											
<b>Intermediate Core Bond - SMA</b>											
Tortoise Core (IG) Composite	SAUSA004CT	9.07	9.18	0.41	3.90	4.18	1.08	6.68	-1.33	7.85	7.24
CS McKee Aggregate Fixed Income	FOUSA05YNH	8.10	9.02	0.33	3.63	2.91	1.55	5.78	-1.68	5.07	8.62
BBgBarc US Aggregate Bond Index		7.51	8.72	0.01	3.54	2.65	0.55	5.97	-2.02	4.22	7.84
Intermediate Core Bond Median		7.63	8.69	0.02	3.61	2.84	0.73	5.69	-1.26	5.41	7.12
Number of Funds in Peer Group		595	617	625	641	640	634	642	664	657	639
<b>Nontraditional Bond</b>											
Bramshill Income Performance Instl	BRMSX	7.49	8.87	0.68	1.27						
BBgBarc US Aggregate Bond Index		7.51	8.72	0.01	3.54	2.65	0.55	5.97	-2.02	4.22	7.84
Nontraditional Bond Median		4.71	6.52	-0.56	4.03	5.09	-0.86	1.85	0.38	8.15	0.30
Number of Funds in Peer Group		81	83	87	92	93	95	74	59	53	39
<b>Equity</b>											
<b>Large Value - SMA</b>											
Westwood LargeCap Value Trust	F00000OZQ	2.44	27.68	-6.12	20.53	11.05	-0.42	11.95	29.94		
Russell 1000 Value Index		2.80	26.54	-8.27	13.66	17.34	-3.83	13.45	32.53	17.51	0.39
Large Value Median		4.05	26.30	-7.94	16.85	15.13	-2.52	12.10	32.53	14.75	1.41
Number of Funds in Peer Group		637	686	701	709	707	726	723	713	713	710
<b>Large Blend - ETF</b>											
Vanguard S&P 500 ETF	VOO	18.35	31.46	-4.42	21.78	11.93	1.35	13.63	32.33	15.98	2.09
S&P 500 Index		18.40	31.49	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11
Large Blend Median		16.83	30.47	-4.90	21.23	11.95	0.37	13.06	32.56	15.91	1.58
Number of Funds in Peer Group		140	124	113	90	78	63	56	51	51	44
<b>Large Growth - SMA</b>											
Polen Focus Growth	SAUSA000OE	34.65	38.79	8.98	27.72	1.75	15.89	17.60	23.77	12.43	9.04
Russell 1000 Growth Index		38.49	36.39	-1.51	30.21	7.08	5.67	13.05	33.48	15.26	2.64
Large Growth Median		32.76	33.31	-1.52	27.39	5.24	4.08	11.13	34.35	15.59	-0.42
Number of Funds in Peer Group		720	747	748	740	759	780	784	782	766	786
<b>Mid-Cap Blend - ETF</b>											
Vanguard Mid-Cap ETF	VO	18.22	31.04	-9.21	19.25	11.23	-1.34	13.76	35.15	15.98	-1.96
CRSP US Mid Cap TR USD		18.24	31.09	-9.22	19.30	11.25	-1.28	13.83	35.27	16.69	-1.79
Mid-Cap Blend Median		12.54	26.65	-9.50	17.62	15.54	-3.40	9.49	35.15	17.26	-1.89
Number of Funds in Peer Group		40	38	38	31	30	23	21	23	24	21
<b>Mid-Cap Growth - SMA</b>											
Fiera SMID Growth	SAUSA04AK1	45.01	32.55	-8.64	27.81	3.65	-1.26	9.19	39.88	22.45	-1.48
Russell Mid-Cap Growth Index		35.59	35.47	-4.75	25.27	7.33	-0.20	11.90	35.74	15.81	-1.65
Mid-Cap Growth Median		32.87	32.89	-4.99	24.05	8.43	0.09	7.78	37.62	14.95	-2.30
Number of Funds in Peer Group		336	332	333	335	345	355	350	355	362	363
<b>Small Value - SMA</b>											
Gabelli Asset Mgt Sm-Cap Val	SAUSA000GQ	10.68	24.51	-15.05	17.13	24.71	-4.91	4.16	40.24	19.27	-2.50
Russell 2000 Value Index		4.63	22.39	-12.86	7.84	31.74	-7.47	4.22	34.52	18.05	-5.50
Small Value Median		4.05	23.16	-14.32	9.37	27.82	-5.08	5.78	37.49	17.59	-3.87
Number of Funds in Peer Group		192	196	195	197	199	207	210	198	199	211

## International

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## Fund Calendar Year Performance

	Ticker	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
<b>Foreign Large Blend</b>											
MFS Intl Diversification R6	MDIZX	15.43	26.09	-10.92	30.25	2.47	0.11	-3.86	17.26	18.39	-9.17
MSCIEAFE		8.28	22.66	-13.36	25.62	1.51	-0.39	-4.48	23.29	17.90	-11.73
Foreign Large Blend Median		9.25	21.71	-14.81	25.38	1.04	-0.88	-5.45	20.46	18.15	-13.21
Number of Funds in Peer Group		215	216	215	220	214	209	209	214	216	221

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**Asset Class:** Fixed Income

The Style Box section is designed to identify diversification among the investment options within a plan. Although it's not necessary to have exposure to every square in the style box grid, it is important to have multiple styles represented in a well diversified portfolio. The entire style box section is based on MPI's analysis of the characteristics of the general investment categories and not on the actual investment options and their holdings, which may change frequently. Investment options are assigned to individual style squares based on Morningstar categories as of the most recent calendar month. Morningstar categories are based on a fund's style as measured by its underlying portfolio holdings over the past three years and may change at any time.

	Short	Intermediate	Long
<b>Government</b>			
<b>Corporate</b>		Tortoise Core (IG) Composite CS McKee Aggregate Fixed Income	
	Multi-Sector	High Yield	Convertibles
	Bramshill Income Performance Instl		
	Cash/Stable Value	Global Bonds	Inflation Protected Bonds

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Asset Class: Balanced

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Conservative	Moderate & Aggressive	World

Target Date	Specialty	Other

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Asset Class: Equity

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	Value	Blend	Growth
Large	Westwood LargeCap Value Trust	Vanguard S&P 500 ETF	Polen Focus Growth
Mid		Vanguard Mid-Cap ETF	Fiera SMID Growth
Small	Gabelli Asset Mgt Sm-Cap Val		

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Asset Class: International

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	Value	Blend	Growth
Large		MFS Intl Diversification R6	
Small/Mid			

World	Emerging

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## Investment Options

Criteria	Threshold
Manager Tenure	Portfolio manager or management team must have managed this product for at least 3 years.
Excess Performance (3Yr)	The fund must outperform its benchmark over the trailing 3-year period.
Excess Performance (5Yr)	The fund must outperform its benchmark over the trailing 5-year period.
Peer Return Rank (3Yr)	The fund's Return Rank must be in the top 51% of it's peer group over the trailing 3-year period.
Peer Return Rank (5Yr)	The fund's Return Rank must be in the top 51% of it's peer group over the trailing 5-year period.
Expense Ratio Rank	The fund's Expense Ratio must be in the top 51% of it's peer group.
Sharpe Ratio Rank (3Yr)	The fund's Sharpe Rt Rank must be in the top 51 of it's peer group over the trailing 3-year period.
Sharpe Ratio Rank (5Yr)	The fund's Sharpe Rt Rank must be in the top 51 of it's peer group over the trailing 5-year period.
R-Squared (3Yr)	The fund's Benchmark R-Squared must be greater than 95% over the trailing 3-year period.
R-Squared (5Yr)	The fund's Benchmark R-Squared must be greater than 95% over the trailing 5-year period.
Sortino Ratio Rank (3Yr)	The fund's Sortino Ratio Rank must be in the top 51 of it's peer group over the trailing 3-year period.
Sortino Ratio Rank (5Yr)	The fund's Sortino Ratio Rank must be in the top 51 of it's peer group over the trailing 5-year period.
Tracking Error Rank (3Yr)	The fund's Tracking Error Rank must be in the top 11 of it's peer group over the trailing 3-year period.
Tracking Error Rank (5Yr)	The fund's Tracking Error Rank must be in the top 11 of it's peer group over the trailing 5-year period.

## Tortoise Core (IG) Composite

Manager Tenure	 Acceptable	This manager/team has been managing this product for 28.02 years.
Excess Performance (3Yr)	 Acceptable	The fund outperformed it's benchmark by 0.7%.
Excess Performance (5Yr)	 Acceptable	The fund outperformed it's benchmark by 0.85%.
Peer Return Rank (3Yr)	 Acceptable	The fund's Return Rank is 20 within it's Peer Group.
Peer Return Rank (5Yr)	 Acceptable	The fund's Return Rank is 20 within it's Peer Group.
Expense Ratio Rank	 Acceptable	The fund's Expense Ratio percentile rank is 34 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	 Acceptable	The fund's Sharpe Ratio Rank is 26 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	 Acceptable	The fund's Sharpe Ratio Rank is 21 within it's Peer Group.
R-Squared (3Yr)	 Acceptable	This fund's R-Squared is 97.42% as calculated against it's Benchmark.
R-Squared (5Yr)	 Acceptable	This fund's R-Squared is 97.65% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	 Acceptable	The fund's Sortino Ratio Rank is 22 within it's Peer Group.
Sortino Ratio Rank (5Yr)	 Acceptable	The fund's Sortino Ratio Rank is 23 within it's Peer Group.
Tracking Error Rank (3Yr)	 Review	The fund's Tracking Error Rank is 19 within it's Peer Group.
Tracking Error Rank (5Yr)	 Review	The fund's Tracking Error Rank is 17 within it's Peer Group.

## CS McKee Aggregate Fixed Income

Manager Tenure	 Acceptable	This manager/team has been managing this product for 29.26 years.
Excess Performance (3Yr)	 Acceptable	The fund outperformed it's benchmark by 0.3%.
Excess Performance (5Yr)	 Acceptable	The fund outperformed it's benchmark by 0.26%.
Peer Return Rank (3Yr)	 Acceptable	The fund's Return Rank is 45 within it's Peer Group.
Peer Return Rank (5Yr)	 Review	The fund's Return Rank is 52 within it's Peer Group.
Expense Ratio Rank	 Review	The fund's Expense Ratio percentile rank is 55 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	 Acceptable	The fund's Sharpe Ratio Rank is 50 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	 Review	The fund's Sharpe Ratio Rank is 61 within it's Peer Group.
R-Squared (3Yr)	 Review	This fund's R-Squared is 93.76% as calculated against it's Benchmark.
R-Squared (5Yr)	 Review	This fund's R-Squared is 94.68% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	 Review	The fund's Sortino Ratio Rank is 57 within it's Peer Group.
Sortino Ratio Rank (5Yr)	 Review	The fund's Sortino Ratio Rank is 54 within it's Peer Group.
Tracking Error Rank (3Yr)	 Review	The fund's Tracking Error Rank is 32 within it's Peer Group.
Tracking Error Rank (5Yr)	 Review	The fund's Tracking Error Rank is 31 within it's Peer Group.

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## Investment Options

## Bramshill Income Performance Instl

Manager Tenure	Acceptable	This manager/team has been managing this product for 4.97 years.
Excess Performance (3Yr)	Acceptable	The fund outperformed it's benchmark by 0.95%.
Excess Performance (5Yr)		Information Not Available
Peer Return Rank (3Yr)	Acceptable	The fund's Return Rank is 12 within it's Peer Group.
Peer Return Rank (5Yr)		Information Not Available
Expense Ratio Rank	Review	The fund's Expense Ratio percentile rank is 71 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Acceptable	The fund's Sharpe Ratio Rank is 29 within it's Peer Group.
Sharpe Ratio Rank (5Yr)		Information Not Available
R-Squared (3Yr)	Review	This fund's R-Squared is 4.94% as calculated against it's Benchmark.
R-Squared (5Yr)		Information Not Available
Sortino Ratio Rank (3Yr)	Acceptable	The fund's Sortino Ratio Rank is 36 within it's Peer Group.
Sortino Ratio Rank (5Yr)		Information Not Available
Tracking Error Rank (3Yr)	Review	The fund's Tracking Error Rank is 68 within it's Peer Group.
Tracking Error Rank (5Yr)		Information Not Available

## Westwood LargeCap Value Trust

Manager Tenure	Acceptable	This manager/team has been managing this product for 9.01 years.
Excess Performance (3Yr)	Review	The fund underperformed it's benchmark by 0.78%.
Excess Performance (5Yr)	Review	The fund underperformed it's benchmark by 0.05%.
Peer Return Rank (3Yr)	Review	The fund's Return Rank is 76 within it's Peer Group.
Peer Return Rank (5Yr)	Review	The fund's Return Rank is 73 within it's Peer Group.
Expense Ratio Rank	Acceptable	The fund's Expense Ratio percentile rank is 24 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Review	The fund's Sharpe Ratio Rank is 62 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	Acceptable	The fund's Sharpe Ratio Rank is 46 within it's Peer Group.
R-Squared (3Yr)	Acceptable	This fund's R-Squared is 96.87% as calculated against it's Benchmark.
R-Squared (5Yr)	Acceptable	This fund's R-Squared is 96.14% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	Review	The fund's Sortino Ratio Rank is 61 within it's Peer Group.
Sortino Ratio Rank (5Yr)	Review	The fund's Sortino Ratio Rank is 51 within it's Peer Group.
Tracking Error Rank (3Yr)	Review	The fund's Tracking Error Rank is 43 within it's Peer Group.
Tracking Error Rank (5Yr)	Review	The fund's Tracking Error Rank is 34 within it's Peer Group.

## Vanguard S&amp;P 500 ETF

Manager Tenure	Acceptable	This manager/team has been managing this product for 4.93 years.
Excess Performance (3Yr)	Review	The fund underperformed it's benchmark by 0.03%.
Excess Performance (5Yr)	Review	The fund underperformed it's benchmark by 0.04%.
Peer Return Rank (3Yr)	Acceptable	The fund's Return Rank is 32 within it's Peer Group.
Peer Return Rank (5Yr)	Acceptable	The fund's Return Rank is 39 within it's Peer Group.
Expense Ratio Rank	Acceptable	The fund's Expense Ratio percentile rank is 1 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Acceptable	The fund's Sharpe Ratio Rank is 29 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	Acceptable	The fund's Sharpe Ratio Rank is 24 within it's Peer Group.
R-Squared (3Yr)	Acceptable	This fund's R-Squared is 100.00% as calculated against it's Benchmark.
R-Squared (5Yr)	Acceptable	This fund's R-Squared is 100.00% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	Acceptable	The fund's Sortino Ratio Rank is 30 within it's Peer Group.
Sortino Ratio Rank (5Yr)	Acceptable	The fund's Sortino Ratio Rank is 28 within it's Peer Group.
Tracking Error Rank (3Yr)	Acceptable	The fund's Tracking Error Rank is 1 within it's Peer Group.
Tracking Error Rank (5Yr)	Acceptable	The fund's Tracking Error Rank is 1 within it's Peer Group.

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## Investment Options

## Polen Focus Growth

Manager Tenure	Acceptable	This manager/team has been managing this product for 15.39 years.
Excess Performance (3Yr)	Acceptable	The fund outperformed it's benchmark by 3.3%.
Excess Performance (5Yr)	Acceptable	The fund outperformed it's benchmark by 0.83%.
Peer Return Rank (3Yr)	Acceptable	The fund's Return Rank is 7 within it's Peer Group.
Peer Return Rank (5Yr)	Acceptable	The fund's Return Rank is 22 within it's Peer Group.
Expense Ratio Rank	Review	The fund's Expense Ratio percentile rank is 55 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Acceptable	The fund's Sharpe Ratio Rank is 2 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	Acceptable	The fund's Sharpe Ratio Rank is 14 within it's Peer Group.
R-Squared (3Yr)	Acceptable	This fund's R-Squared is 95.60% as calculated against it's Benchmark.
R-Squared (5Yr)	Review	This fund's R-Squared is 93.88% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	Acceptable	The fund's Sortino Ratio Rank is 4 within it's Peer Group.
Sortino Ratio Rank (5Yr)	Acceptable	The fund's Sortino Ratio Rank is 14 within it's Peer Group.
Tracking Error Rank (3Yr)	Review	The fund's Tracking Error Rank is 36 within it's Peer Group.
Tracking Error Rank (5Yr)	Review	The fund's Tracking Error Rank is 31 within it's Peer Group.

## Vanguard Mid-Cap ETF

Manager Tenure	Acceptable	This manager/team has been managing this product for 22.88 years.
Excess Performance (3Yr)	Review	The fund underperformed it's benchmark by 0.01%.
Excess Performance (5Yr)	Review	The fund underperformed it's benchmark by 0.02%.
Peer Return Rank (3Yr)	Acceptable	The fund's Return Rank is 9 within it's Peer Group.
Peer Return Rank (5Yr)	Acceptable	The fund's Return Rank is 21 within it's Peer Group.
Expense Ratio Rank	Acceptable	The fund's Expense Ratio percentile rank is 1 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Acceptable	The fund's Sharpe Ratio Rank is 12 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	Acceptable	The fund's Sharpe Ratio Rank is 8 within it's Peer Group.
R-Squared (3Yr)	Acceptable	This fund's R-Squared is 100.00% as calculated against it's Benchmark.
R-Squared (5Yr)	Acceptable	This fund's R-Squared is 100.00% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	Acceptable	The fund's Sortino Ratio Rank is 12 within it's Peer Group.
Sortino Ratio Rank (5Yr)	Acceptable	The fund's Sortino Ratio Rank is 8 within it's Peer Group.
Tracking Error Rank (3Yr)	Acceptable	The fund's Tracking Error Rank is 0 within it's Peer Group.
Tracking Error Rank (5Yr)	Acceptable	The fund's Tracking Error Rank is 0 within it's Peer Group.

## Fiera SMID Growth

Manager Tenure	Acceptable	This manager/team has been managing this product for 21.01 years.
Excess Performance (3Yr)	Acceptable	The fund outperformed it's benchmark by 4.06%.
Excess Performance (5Yr)	Acceptable	The fund outperformed it's benchmark by 3.94%.
Peer Return Rank (3Yr)	Acceptable	The fund's Return Rank is 23 within it's Peer Group.
Peer Return Rank (5Yr)	Acceptable	The fund's Return Rank is 23 within it's Peer Group.
Expense Ratio Rank	Review	The fund's Expense Ratio percentile rank is 66 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Acceptable	The fund's Sharpe Ratio Rank is 34 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	Acceptable	The fund's Sharpe Ratio Rank is 36 within it's Peer Group.
R-Squared (3Yr)	Review	This fund's R-Squared is 91.67% as calculated against it's Benchmark.
R-Squared (5Yr)	Review	This fund's R-Squared is 90.55% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	Acceptable	The fund's Sortino Ratio Rank is 34 within it's Peer Group.
Sortino Ratio Rank (5Yr)	Acceptable	The fund's Sortino Ratio Rank is 35 within it's Peer Group.
Tracking Error Rank (3Yr)	Review	The fund's Tracking Error Rank is 57 within it's Peer Group.
Tracking Error Rank (5Yr)	Review	The fund's Tracking Error Rank is 55 within it's Peer Group.

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## Investment Options

## Gabelli Asset Mgt Sm-Cap Val

Manager Tenure	Acceptable	This manager/team has been managing this product for 32.27 years.
Excess Performance (3Yr)	Review	The fund underperformed it's benchmark by 0.95%.
Excess Performance (5Yr)	Review	The fund underperformed it's benchmark by 0.33%.
Peer Return Rank (3Yr)	Review	The fund's Return Rank is 51 within it's Peer Group.
Peer Return Rank (5Yr)	Acceptable	The fund's Return Rank is 42 within it's Peer Group.
Expense Ratio Rank	Acceptable	The fund's Expense Ratio percentile rank is 50 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Acceptable	The fund's Sharpe Ratio Rank is 37 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	Acceptable	The fund's Sharpe Ratio Rank is 17 within it's Peer Group.
R-Squared (3Yr)	Acceptable	This fund's R-Squared is 95.31% as calculated against it's Benchmark.
R-Squared (5Yr)	Review	This fund's R-Squared is 94.71% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	Acceptable	The fund's Sortino Ratio Rank is 30 within it's Peer Group.
Sortino Ratio Rank (5Yr)	Acceptable	The fund's Sortino Ratio Rank is 19 within it's Peer Group.
Tracking Error Rank (3Yr)	Review	The fund's Tracking Error Rank is 67 within it's Peer Group.
Tracking Error Rank (5Yr)	Review	The fund's Tracking Error Rank is 62 within it's Peer Group.

## MFS Intl Diversification R6

Manager Tenure	Review	This manager/team has been managing this product for 2.58 years.
Excess Performance (3Yr)	Acceptable	The fund outperformed it's benchmark by 3.22%.
Excess Performance (5Yr)	Acceptable	The fund outperformed it's benchmark by 2.56%.
Peer Return Rank (3Yr)	Acceptable	The fund's Return Rank is 6 within it's Peer Group.
Peer Return Rank (5Yr)	Acceptable	The fund's Return Rank is 5 within it's Peer Group.
Expense Ratio Rank	Acceptable	The fund's Expense Ratio percentile rank is 33 within it's Peer Group.
Sharpe Ratio Rank (3Yr)	Acceptable	The fund's Sharpe Ratio Rank is 3 within it's Peer Group.
Sharpe Ratio Rank (5Yr)	Acceptable	The fund's Sharpe Ratio Rank is 1 within it's Peer Group.
R-Squared (3Yr)	Review	This fund's R-Squared is 94.49% as calculated against it's Benchmark.
R-Squared (5Yr)	Review	This fund's R-Squared is 92.32% as calculated against it's Benchmark.
Sortino Ratio Rank (3Yr)	Acceptable	The fund's Sortino Ratio Rank is 3 within it's Peer Group.
Sortino Ratio Rank (5Yr)	Acceptable	The fund's Sortino Ratio Rank is 1 within it's Peer Group.
Tracking Error Rank (3Yr)	Review	The fund's Tracking Error Rank is 58 within it's Peer Group.
Tracking Error Rank (5Yr)	Review	The fund's Tracking Error Rank is 65 within it's Peer Group.

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Current Investment Options

FUND CORRELATION MATRIX (3 Year)

	1									
Tortoise Core (IG) Composite	1									
CS McKee Aggregate Fixed Income	2	0.99								
Bramshill Income Performance Instl	3	0.28	0.39							
Gabelli Asset Mgt Sm-Cap Val	4	0.01	0.10	0.78						
Fiera SMID Growth	5	0.10	0.19	0.71	0.90					
Polen Focus Growth	6	0.20	0.30	0.77	0.84	0.86				
Vanguard S&P 500 ETF	7	0.09	0.19	0.80	0.93	0.89	0.95			
Westwood LargeCap Value Trust	8	0.06	0.15	0.78	0.93	0.85	0.87	0.96		
Vanguard Mid-Cap ETF	9	0.14	0.24	0.83	0.97	0.94	0.91	0.97	0.96	
MFS Intl Diversification R6	10	0.16	0.25	0.76	0.92	0.86	0.87	0.93	0.90	0.93

Correlation Scale

Negative	Uncorrelated	Slightly	Moderate	High	Very High
-1	-0.2	0.2	0.60	.85	0.95 1

The Correlation Matrix reveals the strength of return relationships between investments. A perfect linear relationship is represented by a correlation of 1, while a perfect negative relationship has a correlation of -1. A correlation of 0 indicates no relationship between the investments. Correlation is a critical component to asset allocation and can be a useful way to measure the diversity of a combined plan portfolio.

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## Quarterly Review

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This report is for general information and plan sponsor use only within the UBS Retirement Plan Consulting Services program and is not for distribution to plan participants or other third party sources. This report is intended to provide information to assist plan sponsors in monitoring the investments on their plan investment menus. Nothing contained in this document is intended to or should be considered or construed to be legal, tax, security, or investment advice, nor an opinion regarding the appropriateness of any investment, nor an offer or solicitation for the purchase or sale of any investment or security. **If this material is being presented in connection with an investment proposal:** the material is provided for discussion purposes only in order to evaluate the various services offered by UBS; does not create an investment advisory or fiduciary relationship; and presents sample information that may not accurately reflect your particular investment needs. You must make independent decisions with respect to any proposals contained within this report. This report should not be relied upon as the sole basis for investment decisions and should only be considered in conjunction with the actual recommendations and advice of your UBS Consultant; our standard account documents, agreements and disclosures; and the additional factors that warrant consideration for your particular Plan. When making investment decisions, you must review the terms of any Plan with respect to which you are a fiduciary and your obligations to any such Plan under ERISA.

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**Performance data quoted in this report represents past performance which is not indicative of, and does not guarantee, future results. Current performance may be lower or higher than the performance data quoted. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Unless explicitly stated otherwise, the performance data shown is for the plan's specific fund share class. Information in this report is not for use in brokerage accounts. Product and performance data, provided by Morningstar and MPI, is as of the date stated, unless otherwise specifically noted. You can obtain the most current performance data by contacting your financial advisor or the fund company at the website shown in the "Fund Facts Sheets" section of this document or by visiting <http://advisor.morningstar.com/familyinfo.asp>.**

**UBS Retirement Plan Consulting Services** ("RPCS Program") and **UBS Institutional Consulting** ("IC Program") are investment advisory programs. Details regarding the programs, including fees, services, features and suitability are provided in the Form ADV Disclosure, which can be obtained from your Financial Advisor.

**Mutual funds are sold by prospectus. You should consider the fund's investment objectives, risks, charges and expenses carefully before you invest. This and other information about the fund can be found in the prospectus. Please read it carefully before investing. The fund's prospectus can be obtained by contacting your financial advisor or the fund company at the website found in the "Fund Fact Sheets" section of this report. If there is any discrepancy between the fund prospectus and the information in this document, you should rely upon the prospectus. There is no guarantee that the fund will be able to successfully implement its investment strategy or realize its investment objective.**

**Fund Eligibility:** UBS only provides advisory services within the RPCS Program and IC Program on certain managed investments ("Eligible Investments") and only recommends Eligible Investments that have been reviewed by UBS and which are available on your plan's recordkeeper platform ("Program Investments").

Please contact your UBS Consultant for information on Eligible Investments and Program Investments in the program.

If plan sponsor elects to include investment options within the plan investment menu that are not Eligible Investments within the program (e.g., individual securities (unmanaged investments), employer securities, self-directed brokerage windows, certain insurance accounts, etc.), UBS's services do not include a review of the investment performance or recommendations regarding whether a plan should offer or continue to offer any such investments as an investment option under the plan and UBS does not include any such investments' performance information in this report or include the value of any such investments when calculating its fees. For fee-based programs, fees are charged on the market value of Eligible Investments in the plan and assessed quarterly. Neither UBS nor your UBS Consultant will act as your investment adviser with respect to assets that are not Eligible Investments.

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**Non-Program Investments Displayed Within this Plan Report:** Investment options that are not Program Investments, as well as investment options recently removed from the UBS list of Program Investments are specifically noted in the "Investments within this Plan Report" section of this report. These investments are included at your request and such inclusion does not constitute an endorsement that the Plan continue to hold those funds.

**Investment Performance Results:** The performance displayed in this report assumes the reinvestment of dividends and capital gains and the deduction of manager fees and other internal expenses associated with the investment. The performance does not reflect the deduction of consulting or advisory fee; the sales load that is typically applicable when mutual fund shares are purchased; other transaction-related fees; or the impact of taxes, where applicable. Had the consulting or advisory fee, sales load, transaction fees or taxes been included, the results used in this document would have been reduced. Information shown is current as of the most recent quarter-end.

**Impact of UBS Consulting Fees Over Time:** The performance displayed in this report does not account for the deduction of investment advisory or consulting fees for the UBS Retirement Plan Consulting Services Program or Institutional Consulting Program. The payment of these fees out of plan assets will reduce the plan's overall performance and will have a cumulative effect over time. The net effect of the deduction of advisory fees on annualized performance, and the compounded or cumulative effect over time, is determined by the amount of the fee and the plan's investment performance. For example, for a plan in the RPCS Program that experiences an annual gross performance of 10% but incurs a 2% annual fee that is deducted quarterly on a prorated basis, the plan will experience net annual performance of 7.98%, a reduction of 2.02% per year. Compounding will similarly affect the plan's overall performance on a cumulative basis. Actual performance may be lower or higher than the results shown.

**Pre-inception Returns:** The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the actual inception of a specific fund share class. In such instances, the fund's performance will include pre-inception returns based on historical returns for other fund share classes. While all of the share classes of a particular fund invest in the same securities, the fees and expenses of each share class differ. This causes each share class to reflect different performance.

Pre-inception performance is calculated in one of two ways:

- I. Where the new share class has higher fees: the historical monthly returns of the oldest share class are adjusted to reflect the increase in fees and expenses of the new share class.
- II. Where the new share class has lower fees: the historical monthly returns of the older share class reflect that share class' higher fees and expenses. As of the inception date of the new share class, that share class' lower fees and expenses are reflected.

While the inclusion of pre-inception data can provide insight into the potential long-term behavior of newer share classes of a fund, investors should be aware that adjusted historical returns are hypothetical and provided solely for informational purposes as an approximation of possible long term behavior.

For example, the fee structure and corresponding performance of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges which reduce overall performance. The operating expenses and sales charges of a fund, broken down by share class, are detailed in the fund's prospectus. Investors should understand that the adjusted historical returns are not actual returns. Calculation methodologies utilized by Morningstar and MPI software may differ from those applied by other entities, including the fund itself.

**Investment Monitoring:** Neither UBS nor any of its employees will track or monitor specific investments the Plan makes to determine whether they adhere to the Plan's Investment Policy, unless the Plan has engaged UBS for such services. For all eligible investments within the RPCS Program or IC Program, UBS monitors the investments to determine whether they are performing at a satisfactory level. As part of its ongoing monitoring, UBS may identify a potential aspect or development with a fund that merits further evaluation which could result in a fund being described as "On Watch". Funds "On Watch" will be monitored for a period of time depending on the length of time needed for UBS to conduct its evaluation and for the fund to address any concerns. The "On Watch" status will not affect the fund's standing on the plan investment menu. If any concerns associated with a fund rise to a level that UBS believes that the fund should be removed or replaced from the investment menu, UBS will recommend removal or replacement. A fund's status, as displayed in this report, will change to "to be replaced" only when the fund is scheduled to be removed from the investment menu. The views expressed by your Consultant or in this report may differ or be contrary to the opinions and views expressed by other business areas or divisions of UBS as a result of using different assumptions and/or criteria. At any time, the advice you receive may differ from or be contrary to the opinions expressed in other UBS research publications.

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## Quarterly Review

**Custody of Investments Within this Plan Report:** The investments in this report are held at other financial institutions. UBS does not custody the plan's assets and will not execute transactions for the Plan. Information in this report regarding the Plan's holdings and values are based on data provided by you or your Plan's custodian. UBS has not verified, and is not responsible for, the accuracy or completeness of information regarding assets held at other financial institutions. You should review the account statements and other documentation provided by other financial institutions for their record of holdings, balances, transactions, and security values of assets held in those accounts, as well as notices, disclosures and other information important to you. Those documents may also serve as a reference should questions arise regarding the accuracy of the information in this report. UBS Financial Services Inc. SIPC coverage does not apply to assets held at other institutions. You should contact your financial representative at any other financial institution where you hold an account to determine the availability of SIPC coverage, if any.

**Market Snapshot and Benchmark Selection:** Benchmark information is illustrative and relates to historical performance of market indexes and not the performance of actual investments. Indexes are not available for direct investment and reflect an unmanaged universe of securities. Index results reflect the reinvestment of income but do not take into account advisory or transaction fees, the deduction of which would reduce the results shown. A description of each index that may be included in this analysis is contained in the Definitions section. Past performance does not guarantee or indicate future results.

Morningstar assigns each fund to a particular asset category and assigns a benchmark index for each of those asset categories. Funds are benchmarked to the index that corresponds to the asset category that they belong to. The benchmark indexes included in this report are generally identified by MPI based upon the Morningstar category the fund belongs within, but may be customized by your financial advisor based on your individual circumstances and preferences. In such instances, funds will be benchmarked to the index that corresponds with the asset category customized by your financial advisor based on your individual circumstances and preferences. Secondary benchmarks may be displayed in addition to the default benchmarks based on your individual circumstances and preferences. For all actively managed investments in this report, alpha, beta, R-squared and all other risk and return metrics will be calculated based on the fund's asset category benchmark. For passively managed investments, alpha, beta, R-squared and tracking error metrics will be calculated based on a passive fund's prospectus benchmark rather than the asset category benchmark. Depending upon your investment objectives and other factors, the indexes used in this report may not be an appropriate measure for comparison purposes, and as such, are presented for illustration only. Your Plan holdings and performance may vary significantly from the index. Your financial advisor can provide additional information about how benchmarks within this report were selected.

UBS considers a variety of fund benchmarks when evaluating a fund's performance, which may include benchmarks identified by the fund, benchmarks identified by Morningstar for the fund's asset category or peer group, and/or benchmarks identified by UBS Financial Services for various asset categories, and may consider benchmarks in addition to or in place of the benchmarks displayed within this report.

**You should discuss the receipt of this individually customized report with your Financial Advisor.** We assign index benchmarks to our asset allocations, strategies in our separately managed accounts and discretionary programs based on our understanding of the allocation, strategy, the investment style and our research. The benchmarks included in this report can differ from those assigned through our research process. As a result, you may find that the performance comparisons may differ, sometimes significantly, from that presented in performance reports and other materials that are prepared and delivered centrally by the Firm. Depending upon the composition of your portfolio and your investment objectives, the indexes used in this report may not be an appropriate measure for comparison purposes, and as such, are represented for illustration only. Your portfolio holdings and performance may vary significantly from the index. Your financial advisor can provide additional information about how benchmarks within this report were selected.

**Fund Scorecard and Fund Scoring** –The fund scorecard illustrated in this report are based on the investment monitoring criteria selected by the Plan Sponsor. UBS does not set the criteria that creates the scoring provided and makes no representations regarding the scores presented. These scores are intended to assist Plan Sponsors and retirement plan fiduciaries in evaluating investment options and easily reviewing a fund's performance against the criteria set by the Plan Sponsor. These scores do not constitute fiduciary investment advice alone and should not be used in place of the retirement Plan fiduciaries' prudent review of the investment options or discussion of investment options with your UBS Consultant. The criteria set by the Plan Sponsor and used to generate the scores should not be the only factors considered when choosing to add, remove, or maintain an investment option in the plan. See the Definitions section for a description of the Morningstar Ratings contained in the Fund Fact Sheets section of this document.

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## Quarterly Review

### Risk Considerations

Some of the general risk considerations associated with the investment options included in this report are described below. The descriptions are not meant to be a complete list of all investment risks. For more complete information regarding fees, expenses, risks and restrictions associated with these investments please review the offering documents and marketing materials. Investors should consult their tax advisor about their specific tax situation before investing in any securities. In addition, clients should familiarize themselves with the particular market risks and the other risks associated with the specific investment. All investments contain risk and may lose value.

**Offshore Funds:** Offshore mutual funds are not registered with the Securities and Exchange Commission and may not be sold to any person who is a citizen or resident of the United States.

**Target Date Funds:** Target date funds are funds where the target date is the approximate date when investors plan to start withdrawing their money. Generally, the asset allocation of each fund will change on an annual basis, with the asset allocation becoming more conservative as the fund nears the target retirement date. The principal value of the fund(s) is not guaranteed at any time, including at the target date. Investors should consider factors in addition to age or retirement date, including risk tolerance, personal circumstances, and complete financial situation, prior to investing in a target date fund.

**Alternative Investments:** Non-traditional asset classes are alternative investments that include hedge funds, private equity, and private real estate (collectively, non-traditional or alternative investments). These investments can be subject to substantial risks (including the risks associated with limited liquidity, the use of leverage, short-sales and concentrated positions), may involve complex structures and strategies, and may not be easily valued. The risks of alternative investments should be carefully considered in light of an investor's investment objectives, risk tolerance and financial circumstances. Alternative investments are speculative and entail substantial risks, which may place investor capital at risk. Alternative investments may not have been registered with the Securities and Exchange Commission or under any state securities laws. The market for such investments may be highly illiquid and subjectively valued, and these reports provide values for informational purposes only. Accuracy is not guaranteed. These values may differ substantially from prices, if any, at which a unit may be bought or sold and do not necessarily represent the value you would receive from the issuer upon liquidation. Issuer estimated values, if any, are generally updated on a regular (annual or semi-annual) basis and are supplied to us by the issuer, but may be calculated based on different information from what is used by third parties to derive their estimated values.

**Money Market Funds:** An investment in a money market fund is not insured or guaranteed by the FDIC or any other government agency. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it is possible to lose money by investment in the fund.

**Stable Value Funds:** There is no guarantee a stable value portfolio will achieve its investment objectives. Stable value portfolios are not guaranteed by the US government, the Federal Deposit Insurance Corporation (FDIC), the fund company or any other entity. Unit price, yield, duration and return will vary. Although stable value investment contracts seek to reduce the risk of principal loss, investing in a stable value portfolio involves risk, including credit risk, management risk and loss of principal. These risks could result in a decline in the portfolio's value or cause a withdrawal or transfer from a portfolio to occur at less than a participant's invested value. Stable value investment contracts involve several unique risks, which include but are not limited to: a stable value investment contract issuer could default, become insolvent, file for bankruptcy protection, or otherwise be deemed by the Plan's auditor to no longer be financially responsible; an event or condition outside the normal operation of the Plan may occur (including but not limited to Plan changes, employer bankruptcy, significant layoffs, Plant closings, corporate spin-offs, divestitures, or restructurings); some portfolio securities could become impaired or default; certain communications from the Plan or the Plan's agents may cause an investment contract to not pay benefits at contract value; or there could be a change in tax law or accounting rules. Any of these risks, if realized, may cause a write-down in the value of a portfolio and a risk of loss of all or a part of a participant's invested value in a portfolio.

**Fixed Income:** Investing in the fixed income market is subject to risks including market, interest rate, issuer, credit, default and inflation risk. An investment in a portfolio may be worth more or less than its original cost when redeemed. Derivatives may involve certain costs and risks such as liquidity, interest rate, market, credit, management, default risk, and the risk that the position could not be closed when most advantageous. Investing in derivatives could lose more than the amount invested.

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**Variable Annuities:** A variable deferred annuity is a long-term financial product designed for retirement purposes. It is a contractual agreement in which payment(s) are made to an insurance company, which agrees to pay out an income or a lump sum amount at a later date. There are fees and charges associated with a variable annuity contract, which include, but are not limited to, operations charges, sales and surrender charges, administrative fees, and additional charges for optional benefits. **Variable annuities are sold by prospectus and you should carefully consider important information on the subaccounts' investment objectives, risk, charges and expenses. Please read the prospectus and offering documents carefully before you invest. Your UBS Consultant can provide a copy of the prospectus. For current month-end returns: <http://advisor.morningstar.com/familyinfo.asp>.**

Withdrawals from an annuity contract are taxable as ordinary income, not as capital gains and, if made prior to age 59 1/2, may be subject to an additional 10% federal income tax penalty. Withdrawals may also be subject to surrender charges. Withdrawals will reduce the death benefit, living benefits and cash surrender value. For tax purposes, withdrawals will come from any gain in the contract first. Please see the prospectus for complete details. Amounts in the annuity's variable investment portfolios are subject to fluctuation in value and market risk, including loss of principal.

Unregistered group variable annuities and registered group variable annuities that are solely available for use in qualified Plans are rated and ranked based on their position within the bell curve of the open end fund peer group (a.k.a. category), rather than the variable annuity subaccount peer group. These ratings and ranks are calculated by using an overlay of the open end fund peer group break points and therefore do not contribute to the category average or number of funds within the peer group.

For variable annuity subaccounts, standardized return is total return based on its inception date within the separate account and is adjusted to reflect recurring and non-recurring charges such as surrender fees, contract charges, maximum front-end load, maximum deferred load, maximum M&E risk charge, administration fees, and actual ongoing fund-level expenses. The benchmark used for each individual subaccount performance is an index that has been assigned to the particular manager or fund.

### Scope of our Services

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### Important information about advisory and brokerage services

As a firm providing wealth management services to clients, UBS Financial Services Inc. offers both investment advisory services and brokerage services. Investment advisory services and brokerage services are separate and distinct, differ in material ways and are governed by different laws and separate arrangements. It is important that clients understand the ways in which we conduct business and that they carefully read the agreements and disclosures that we provide to them about the products or services we offer. For more information visit our website at <http://www.ubs.com/workingwithus>.

Retirement Plan Consulting Services is an investment advisory program. Details regarding the program, including fees, services, features and suitability are provided in the ADV Disclosure.

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## Index Definitions

**Bloomberg Barclays Aggregate Bond Index** – Covers the USD-denominated, investment-grade, fixed rate, taxable bond market of SEC-registered securities. The index includes bonds from the Treasury, Government-Related, Corporate, MBS, ABS and CMBS sectors. Total return comprises price appreciation/ depreciation and income as a percentage of the original investment. Components of the index are rebalanced monthly.

**Bloomberg Barclays Global Aggregate Bond Index** – is an unmanaged index that provides a broad-based measure of the global investment-grade fixed-rate debt markets.

**Bloomberg Barclays Government/Credit Index** – Includes Treasuries, Government-Related issues (i.e., agency, sovereign and local authority debt) and USD Corporates. Total return comprises price appreciation/depreciation and income as a percentage of the original investment. Components of the index are rebalanced monthly

**Bloomberg Barclays Municipal Bond Index** – Covers the USD-denominated long term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds and prerefunded bonds. Total return comprises price appreciation/depreciation and income as a percentage of the original investment. Components of the index are rebalanced monthly.

**Bloomberg Barclays U.S. Corporate High-Yield Bond Index** – is an unmanaged index that covers the USD-denominated, non-investment grade, fixed-rate, taxable corporate bond market.

**Citigroup World Government Bond Index (WGBI)** – is an unmanaged index that includes the most significant and liquid government bond markets globally that carry at least an investment-grade rating.

**MSCI EAFE (Net) Index** – An arithmetic, market value-weighted average of the performance of over 900 securities listed on the stock exchanges of the following countries in Europe, Australia and the Far East: Australia, Hong Kong, Norway, Austria, Ireland, Singapore, Belgium, Italy, Spain, Denmark, Japan, Sweden, Finland, Malaysia, Switzerland, France, Netherlands, United Kingdom, Germany and New Zealand.

**MSCI All Country World Index (ACWI) ex USA** – is an unmanaged index that is designed to measure the equity market performance of developed and emerging markets, excluding the United States.

**MSCI Emerging Markets Index** – is an unmanaged index that is designed to measure the equity market performance of emerging markets.

**MSCI World Index** – is an unmanaged index that is designed to measure the equity market performance of developed markets.

**Russell 1000 Growth Index** – Contains those Russell 1000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than securities in the value universe.

**Russell 1000 Value Index** – Contains those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than securities in the growth universe.

**Russell 2000 Index** – Includes the smallest 2000 securities in the Russell 3000, offering investors access to the small cap segment of the U.S. equity universe. The Russell 2000 is constructed to provide a comprehensive and unbiased small-cap barometer and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small cap opportunity set.

**Russell 2000 Growth Index** – Contains those Russell 2000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than securities in the value universe.

**Russell 2000 Value Index** – Contains those Russell 2000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than securities in the growth universe.

**Russell 2500 Index** – Offers investors access to the small to mid cap segment of the U.S. equity universe, commonly referred to as “smid” cap. The Russell 2500 includes the smallest 2500 securities in the Russell 3000.

**Russell 3000 Index** – Measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

**Russell Mid Cap Growth Index** – Contains those Russell mid cap securities with a greater-than average growth orientation. Securities in this index tend to exhibit higher price-to-book and price earnings ratios, lower dividend yields and higher forecasted growth values than securities in the value universe.

**Russell Mid Cap Value Index** – Contains those Russell mid cap securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the growth universe.

**S&P 500 Index** – Covers 500 large cap industrial, utility, B transportation, and financial companies of the US markets. The index represents about 75% of NYSE market capitalization and 30% of NYSE issues. It is a capitalization weighted index calculated on a total return basis with dividends reinvested.

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**Calculation Definitions**

**12b-1 Fee** - is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount, which can be as high as 75 basis points for commissions and 25 basis points for service fees, is taken from a fund's returns.

**Alpha** - Alpha measures the difference between an investment's actual performance, and its expected performance as indicated by the returns of a selected market index. A positive Alpha indicates the risk-adjusted performance is above that index. In calculating Alpha, Standard Deviation (total risk) is used as risk measure. Alpha is often used to judge the value added or subtracted by a manager.

**Asset Composition** – Reflects the funds composition or weighting of the fund in various asset classes, including "Other," is shown in this graph and table. "Other" includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks.

**Batting Average** - Batting Average is sometimes known as the probability of success. This measures the frequency with which a manager performs better than a selected Market Index. It is computed by dividing the number of positive excess returns by the total number of excess returns during the period.

**Beta** - Beta is defined as a Manager's sensitivity to market movements and is used to evaluate market related, or systematic risk. Beta is a measure of the linear relationship, over time, of the Manager's returns and those of the Benchmark. Beta is computed by regressing the Manager's excess returns over the risk free rate (cash proxy) against the excess returns of the Benchmark over the risk free rate. An investment that is as equally volatile as the market will have a Beta of 1.0; an investment half as volatile as the market will have a Beta of 0.5; and so on. Thus, Betas higher than 1.0 indicate that the fund is more volatile than the market.

**Correlation (R)** - The Correlation represents the degree to which investments move in tandem with one another and is a critical component of diversified portfolio construction. The Correlation varies between a minimum of -1 (move in opposite direction) and a maximum of 1 (completely correlated). Lower Correlations enhance diversification and lead to better risk-adjusted returns within diversified portfolios. An R of less than 0.3 is often considered low Correlation.

**Deferred Load** - Also known as a back-end sales charge, this is imposed when investors redeem shares. The percentage charged generally declines the longer shares are held, and it is usually applied to the lower of the beginning price or ending price. This charge is often coupled with higher 12b-1 fees in B or C share classes as an alternative to a traditional front-end load fund. With a deferred fee, an investor has the advantage of getting the full financial power of their investment from the onset.

**Distribution of Excess Returns** - Distribution of Excess Returns displays an arrangement of statistical data that exhibits the frequency of occurrence of the investment's returns in excess of the selected Market Index.

**Down Market (Mkt) Capture Ratio** - Down Market Capture Ratio is a measure of an investment's performance in down markets relative to the market itself. A down market is one in which the market's return is less than zero. The lower the investment's Down Market Capture Ratio, the better the investment protected capital during a market decline. A negative Down Market Capture Ratio indicates that an investment's returns rose while the market declined.

**Downside Risk (Semi Standard Deviation, Semi StdDev, or Downside Deviation)** - Downside Risk only identifies volatility on the down side. Downside Risk measures the variability of returns below zero, whereas Standard Deviation attributes volatility in either direction to risk. The Downside Risk method calculates the deviations below zero for each observed return. Each time a return falls below zero, the sum is divided by the number of observations and the square root is taken. This result is then shown on an annualized basis.

**Excess** - Denotes that a statistic is being measured relative to the Market Index selected. The data set analyzed consists of the periodic differences between the investment's measure and the selected Market Index's definition.

**Expense Ratio** - Often referred to as the **Net Expense Ratio**, Morningstar pulls the net prospectus expense ratio from the fund's prospectus. Prospectus-report expense ratios reflect the actual fees charged during a particular fiscal year. The prospectus expense ratio for a fund of funds is the wrap or sponsor fee only.

The expense ratio expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as initial or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. If the fund's assets are small, its expense ratio can be quite high because the fund must meet its expenses from a restricted asset base. Conversely, as the net assets of the fund grow, the expense percentage should ideally diminish as expenses are spread across the wider base. Funds may also opt to waive all or a portion of the expenses that make up their overall expense ratio.

The **Gross Expense Ratio** represents the total gross expenses (net expenses with waivers added back in) divided by the fund's average net assets. If it is not equal to the net expense ratio, the gross expense ratio portrays the fund's expenses had the fund not waived a portion, or all, of its fees. Thus, to some degree, it is an indication of fee contracts. Some fee waivers have an expiration date; other waivers are in place indefinitely.

**Front Load** - The initial, or front-end, sales charge is a one-time deduction from an investment made into the fund. The amount is generally relative to the amount of the investment, so that larger investments incur smaller rates of charge. The sales charge serves as a commission for the broker who sold the fund. A fund's potential fees and sales charges are an important factor to consider before making an investment. The load fee compensates the broker or financial planner for the service of providing professional investment advice.

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**Calculation Definitions**

**Fund Summary** - This table shows the fund's fundamental characteristics.

**Growth of \$100** - The graph compares the growth of \$100 in a fund with that of an index. The total returns are not adjusted to reflect sales charges or the effects of taxation, but are adjusted to reflect actual ongoing fund expenses, and assume reinvestment of dividends and capital gains. If adjusted, sales charges would reduce the performance quoted. The index is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index.

**Information Ratio** - The Information Ratio is a measure of value added by an investment manager. It is the ratio of (annualized) excess return above the selected Market Index to (annualized) Tracking Error. Excess return is calculated by linking the difference of the manager's return for each period minus the selected Market Index return for each period, then annualizing the result.

**Loss Ratio** - The Loss Ratio is a downside risk-adjusted performance statistic. Similar to the Information Ratio, the Loss Ratio calculates return per unit of risk, except that in this case, risk is represented by downside risk.

**Investment Overview** - The investment strategy displayed in this report summarizes the fund's plan of investing assets among various investments/securities. These plans take into consideration such factors as goals, what kinds of companies they look for, what market cap range they invest in, where they are located and how much will they pay. Morningstar pulls this information directly from the fund's prospectus.

**Manager Capture Ratio** - The Manager Capture Ratio is manager return divided by the selected Market Index return. It shows what portion of the market performance was captured by the manager under certain market conditions: up market, down market, or both.

**Max Drawdown** - Is the maximum loss incurred by a portfolio during a specified time period. It is used to measure the 'worst case scenario' of investing in a portfolio at the worst possible time.

**Morningstar Ratings** - The Morningstar Rating™ is calculated for funds with at least a three year history. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a fund's monthly performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of funds in each category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars and the bottom 10% receive 1 star. The Overall Morningstar Rating for a mutual fund is derived from a weighted average of the performance figures associated with its three-, five- and 10-year (if applicable) Morningstar Rating metrics. For ETFs, Morningstar compares each ETF's risk-adjusted return to the open-end rating breakpoints for that category. The overall rating for an ETF is based on a weighted average of the time-period ratings. Unregistered group variable annuities and registered group variable annuities that are solely available for use in qualified plans are rated and ranked based on their position within the bell curve of the open end fund peer group (a.k.a. category), rather than the variable annuity subaccount peer group. These ratings and ranks are calculated by using an overlay of the open end fund peer group break points and therefore do not contribute to the category average or number of funds within the peer group.

**Peer Rank** - Peer ranks are all owned and calculated by MPI Stylus. It is based on a one, three and five year annualized period. The peer return rank is designed to provide a rank of performance returns for each fund among its peer group universe. The category for each fund is identified in the *Portfolio Holdings* section of this report and are Morningstar Categories.

MPI ranks each fund based on average annual total returns assuming reinvestment of dividends and capital gains, distributions, at net asset value and the deduction of all fund expenses. Each fund is ranked within a universe of funds similar in portfolio characteristics and capitalizations as defined by Morningstar Inc. Rankings do not include the effect of the fund's sales charges. Results would have been less favorable had sales charges been included. A high ranking does not necessarily imply that a fund achieved positive results for the period. Excess returns do not necessarily imply positive results. Past performance is no guarantee of future results.

MPI uses the Morningstar categories to calculate the rank, however MPI performs one additional filter on the Morningstar category universe. The filter is the 'distinct portfolios' field which does not count each share class of a fund, but will only count each fund one time using the primary share class. The number of funds in each category for each rank is provided with the associated funds.

The quartile rank graphs illustrate which quartile the fund is in relative to the assigned peer group. Beginning from the top the first band represents the 5-25th percentile, the second is the 25th-50th, the 3rd band is the 50th-75th, and the final is the 75th-95th. The top and bottom 5% of funds are removed from the peer bands for reporting purposes only (but not the calculation) as they are considered outliers. For performance, the highest performing funds would be in the top quartile. For both the expense ratio and risk ranks the funds with the lowest values would appear on the top quartile. If a fund has a rank of 95, it can be seen as if there are 95% other funds that are superior to it for the specified analytic.

**Returns-Based Style Analysis/Exposure Chart** - Returns-based style analysis which was developed by Nobel Laureate William F. Sharpe as an alternative method for determining a manager's style without any information about the individual securities held in the manager's portfolio. The underlying principle behind this analysis was that the style of a manager can be determined by analyzing the total return pattern of the manager's portfolio. For example, if a manager's return pattern were identical to the return pattern of a Small Cap growth benchmark, the manager could be viewed as a Small Cap growth manager. Based on a mathematical formula which considers the performance benchmarks that are most highly correlated with the total returns of the portfolio, returns-based style analysis may be used to assess a fund manager's true investment style.

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**Calculation Definitions**

Returns-based style analysis compares an investment's returns to the returns of certain indices. These comparisons imply which index each investment is most similar to, and which characteristics that investment is most likely to exhibit. The "Manager Style (36-Month Moving Windows, Computed Monthly)" chart includes points of varying sizes, where a smaller point represents an earlier moving window. The Russell Generic Corners include the following indices: Russell 1000 Value (rvalue), the Russell 1000 Growth (rgrowth), Russell 2000 Value (r2value), and Russell 2000 Value (r2growth).

The style analysis included in this report may assist in evaluating the actual style and performance of various fund choices for its plan. Although many plan sponsors use this type of analytical information to evaluate fund choices, you should make your own determination about how and whether such information should be used for your plan.

**Risk Rank** - The Risk Rank calculation is based on a three year annualized period. With 1 being the highest percentile and 100 being the lowest, compared to its peers. The risk rank uses standard deviation for an annualized 3-year period for each fund for the share class identified among its peer group universe. The quartile rank graphs contained at the right hand side of each table illustrate which quartile the fund is in relative to the assigned peer group. Beginning from the top the first band represents the 5-25th percentile, the second is the 25th-50th, the 3rd band is the 50th-75th, and the final is the 75th-95th. The top and bottom 5% of funds are removed from the peer bands for reporting purposes only (but not the calculation) as they are considered outliers. For performance, the highest performing funds would be in the top quartile. For both the expense ratio and risk ranks the funds with the lowest values would appear on the top quartile.

**R-Squared ( $R^2$ )** - The diversification measure  $R^2$  indicates the percentage of volatility in portfolio returns which can be "explained" by market volatility. This statistic indicates the degree to which the observed values of one variable, such as the returns of a managed portfolio, can be explained by, or are associated with the values of another variable, such as a Market Index. It is especially helpful in assessing how likely it is that Alpha and Beta are statistically significant. The  $R^2$  values generally range from 0.0 to 1.0. An investment with an  $R^2$  of 1.0 is perfectly correlated with the market whereas an investment with an  $R^2$  of 0.0 will behave independently of the market. An  $R^2$  of 0.95, for example, implies that 95% of the fluctuations in a portfolio are explained by fluctuations in the market.

**Predicted Style R-Squared** -The methodology used to calculate Predicted Style  $R^2$  is similar to that of Style  $R^2$ . The difference between the two is that, in each predicted style return estimation window, the point being estimated is excluded from the optimization. In optimizations performed to calculate style returns, the point being estimated is included. Excluding the estimation point itself from the optimization process results in a more fair assessment of how well the style analysis model is working (as represented by Predicted Style  $R^2$ ).

**Sector Weighting** - This chart/table shows the percentage of the portfolio's equity assets invested in each of the 11 major industry sub-classifications, grouped by three "super sectors." Three broad stock sector areas - **Cyclical, Sensitive and Defensive** are displayed. The broad sectors are broken down further as follows: Cyclical includes Basic Materials, Consumer Cyclical, Financial Services, and Real Estate; Sensitive includes Communication Services, Energy, Industrials, and Technology; and Defensive includes Healthcare, Consumer Defensive, and Utilities.

**Sharpe Ratio** - The Sharpe Ratio indicates the excess return per unit of total risk as measured by Standard Deviation. It is a ratio of the arithmetic average of excess returns over the risk free rate to the Standard Deviation. The Sharpe Ratio is a measure of the premium earned for the risk incurred by the portfolio.

**Significance Level** - The Significance Level of a test is the probability that the test statistic will reject the null hypothesis when the hypothesis is true. Significance is a property of the distribution of a test statistic, not of any particular draw of the statistic.

**Standard Deviation (StdDev)** - A measure of the extent to which observations in a series vary from the arithmetic mean of the series. The Standard Deviation of a series of asset returns is a measure of volatility or risk of the asset.

**Style Drift** - Style Drift measures the variability of style through time. A Style Drift of 0 indicates perfect style consistency and is equivalent to buying and rebalancing the indices that constitute the style basis each period. Style drift is designed to measure style inconsistency. A style drift of 100 indicates very little if any consistency in style.

**Style Map** - Plots the historical exposures of a fund's style across appropriate dimensions, such as growth vs. value for equity funds and credit quality for fixed income funds. By viewing this chart, an investor can determine a manager's style consistency over time.

**Target Date Asset Allocation** - The chart and associated tables show the asset breakdown of the Target Date Fund family based on a "look

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**Calculation Definitions**

through" of the underlying holdings which are classified by Morningstar and groups them into four general investment groups: Cash, Equities (US and Non-US Equities), Bonds (US and Non-US Bonds) and Other. Other includes preferred stocks (equity securities that pay dividends at a specific rate) as well as convertible bonds and convertible preferred, which are corporate securities that are exchangeable for a set amount of another form of security (usually common shares) at a pre-stated price. Other also denotes all those not-so-neatly categorized securities, such as warrants and options. The Target Asset Allocation breakdown is calculated using rescaled long-only holdings.

**Top Ten Holdings** - The investment manager's ten largest individual security holdings in the portfolio and their percent of the total fund's market value.

**Tracking Error (Excess Standard Deviation)** - Tracking Error is a measure of how closely an investment's returns track the returns of the selected Market Index. It is the annualized Standard Deviation of the differences between the investment's and the associated index's returns. If an investment tracks its associated index closely, then Tracking Error will be low. If an investment tracks its associated index perfectly, then Tracking Error will be zero.

**Treynor Ratio** - The Treynor Ratio is defined as the ratio of the manager's excess geometrically annualized return over the portfolio Beta. Excess returns are computed versus the cash index.

**Up Market (Mkt) Capture Ratio** - Up Market Capture Ratio is a measure of a product's performance in up markets relative to the market itself. An up market is one in which the market's return is greater than or equal to zero. The higher the investment's Up Market Capture Ratio, the better the investment capitalized on a rising market.

**YTD** - Year to Date.