

4/28/2020  
Item 7.c

Verus<sup>777</sup>



# **PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS**



**PERIOD ENDING: MARCH 31, 2020**

Investment Performance Review for

**Stanislaus County Employees' Retirement Association**



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Capital Markets Update

TAB I

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Investment Performance  
Review

TAB II



A decorative geometric overlay is present on the left side of the image. It features a pattern of overlapping triangles and lines in shades of blue and white, creating a complex, crystalline structure that partially obscures the background landscape.A white triangle icon is positioned to the left of the main title text, pointing upwards.

# **PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS**

MARCH 2020  
Capital Markets Update



# Market commentary

## U.S. ECONOMICS

- Roughly 17 million people, or around 10% of the U.S. labor force filed for unemployment in the final three weeks of March, indicating the historic impact the social distancing controls have had on the U.S. labor market. Claims are expected to remain high, and many analysts believe the recent claims data have been understated due to the sheer volume of claims perhaps overwhelming processing capacity.
- The broad U-3 unemployment rate rose from 3.5% to 4.4% in the March household survey. The number of unemployed people on temporary layoff more than doubled to 1.8 million, while the number of permanent job losers increased by 177,000 to reach 1.5 million.
- The NFIB Small Business Optimism Index registered its largest ever monthly decline in March, falling from 104.5 to 96.4. Surveys showed that most employers have been negatively impacted by COVID-19 and half can survive no longer than two months under current conditions.

## U.S. EQUITIES

- The S&P 500 Index declined 12.4% over the period, marking its 15<sup>th</sup> worst monthly return since 1871. Before making a partial recovery in late March, the S&P 500 Price Index hit intra-month lows of 2237 on March 23rd and was down 24.3% over the month-to-date.
- The VIX Index of implied volatility reached levels not seen since the Global Financial Crisis, and hit an intra-day closing high of 82.7 on March 16<sup>th</sup>. During the Global Financial Crisis, the VIX briefly eclipsed 100.0 intra-day but never closed at a higher level than 80.9.
- The month-end forward P/E ratio of the S&P 500 Index was 15.9x, below the 5-year average (16.7) and above the 10-year average (15.0).

## U.S. FIXED INCOME

- The Federal Reserve responded quickly and forcefully to ensure the flow of credit to U.S. households and businesses. Over the course of the month, the Fed cut the range for federal funds from 1.50-1.75% to 0.00-0.25% and reintroduced several crisis-era liquidity programs from its arsenal of monetary policy tools.
- On March 15<sup>th</sup>, the Fed announced it would be buying \$700B in Treasuries and agency mortgage-backed securities. Later in the month, the Fed expanded its guidance on purchases, and pledged to buy securities “in the amounts needed to support smooth market functioning and effective transmission of monetary policy.”
- U.S. Treasuries provided downside protection as yields pushed lower across the curve, and the 10-year Treasury yield fell from 1.15% to 0.67%. The Treasury curve steepened slightly as shorter-term yields fell further than yields on longer-dated Treasuries.

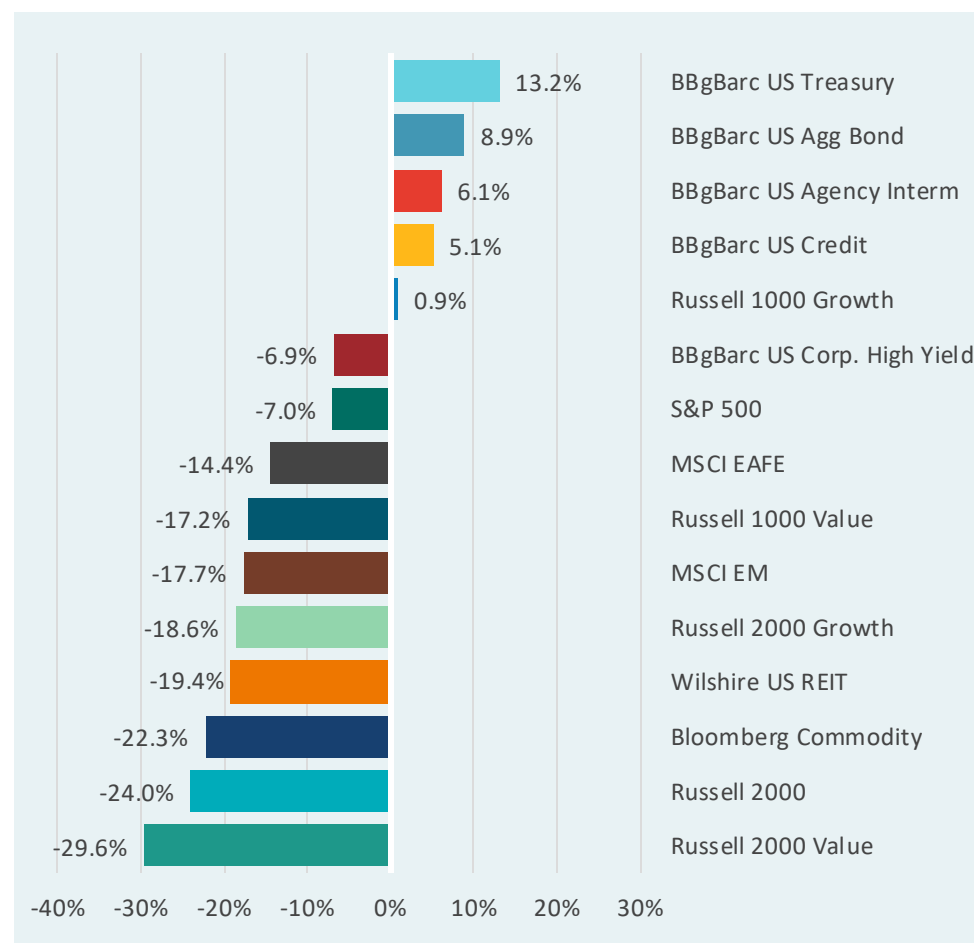
## INTERNATIONAL MARKETS

- COVID-19 news flow gripped global markets as the epicenter of the pandemic moved from Wuhan to Italy and Spain, and then to the Eastern seaboard of the United States. The confirmed global death toll swelled from just under 3,000 to 42,107.
- Global governments raced to provide fiscal support to cushion the economic impacts of COVID-19 related disruptions. Japanese officials pledged support equal to roughly 20% of GDP, and U.S. officials passed a \$2.2 trillion package worth about 10% of GDP.
- Services purchasing managers’ indices, which are less cyclical and normally stickier, plunged around the world. The J.P. Morgan Global Services PMI fell from 47.1 to 37.0 in March.



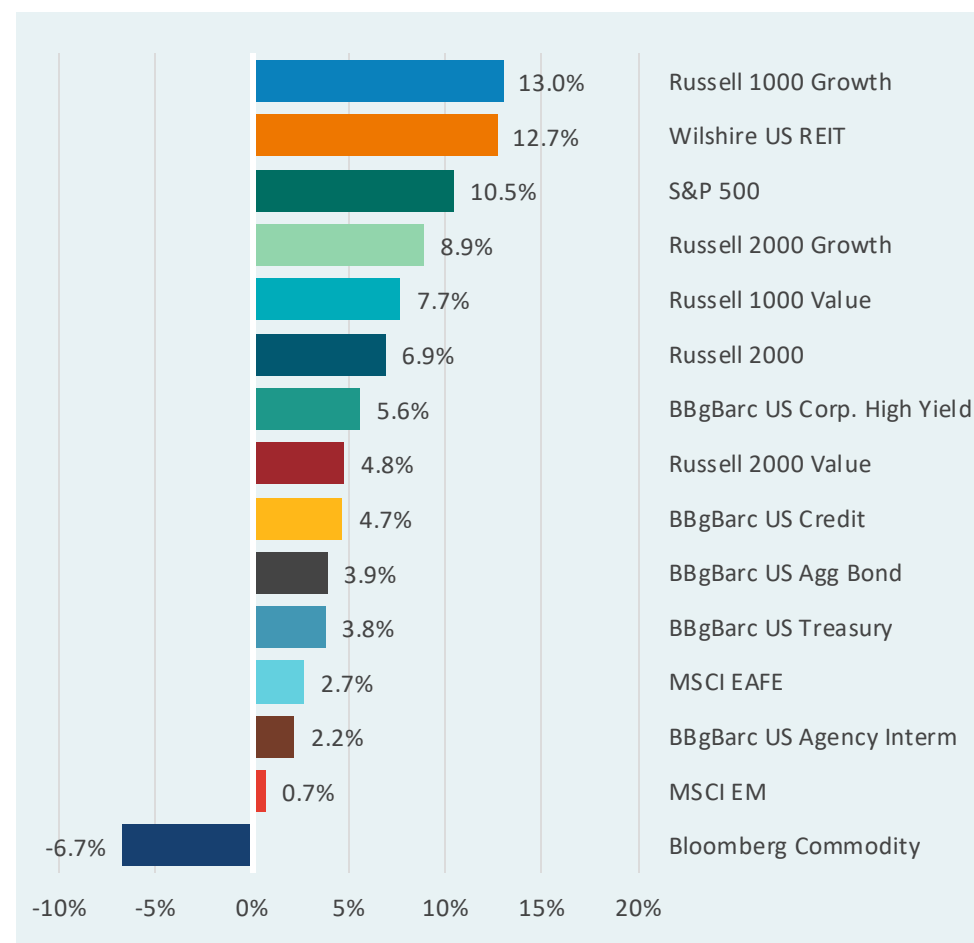
# Major asset class returns

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/20

TEN YEARS ENDING MARCH



Source: Morningstar, as of 3/31/20



# U.S. large cap equities

- The S&P 500 Index experienced a sharp decline in March and fell 12.4% over the month. Weakness was broad, and all eleven GICS sectors posted declines.
- Volatility reached historic levels over the month. The 10-day trailing annualized volatility of the S&P 500 Index rose from 27.8% to 73.5% and reached intra-month peaks of 127.3% on March 24<sup>th</sup>. Over 22 trading sessions, the average absolute value percentage move of the S&P 500 was 5.0%, and the index moved up or down by more than 7% on five separate occasions.
- The severe decline in the S&P 500 Index was exacerbated by the extraordinary demand and supply pressures faced by the Energy (-34.8%) sector. Poor performance from Financials (-21.3%) presented additional headwinds.
- According to FactSet, S&P 500 earnings are expected to decline -10.0% from the prior year in Q1 2020. Revenues are expected to grow +1.0% from the prior year, though revenue growth projections have fallen by 3.8% since the end of last year.

**S&P 500 PRICE INDEX**



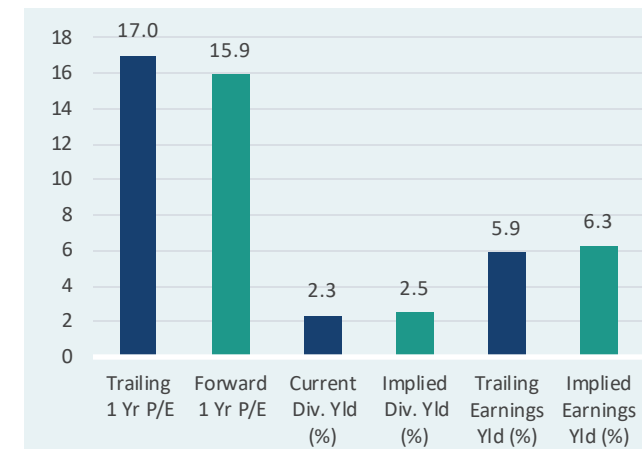
Source: Bloomberg, as of 3/31/20

**IMPLIED VOLATILITY (VIX INDEX)**



Source: CBOE, as of 3/31/20

**S&P 500 VALUATION SNAPSHOT**



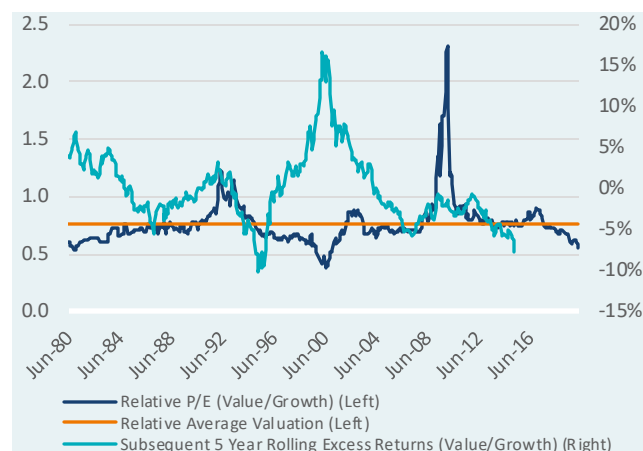
Source: Bloomberg, as of 3/31/20



# Domestic equity size and style

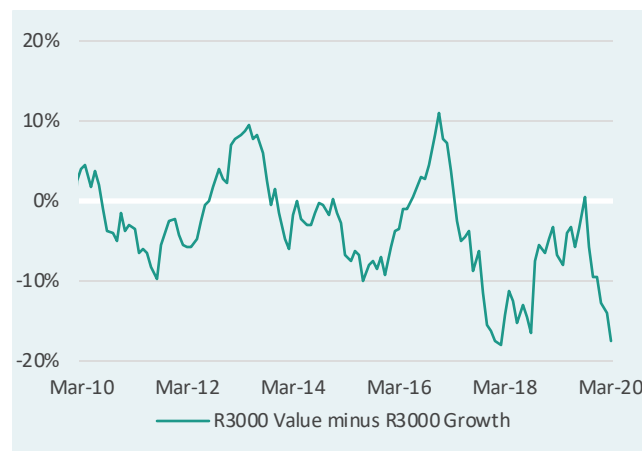
- The value factor dramatically underperformed the growth factor in March. The Russell 3000 Value Index (-17.6%) underperformed the Russell 3000 Growth Index (-10.4%) by 7.2%. Over the year-to-date, the Russell 3000 Value Index has underperformed its growth counterpart by 12.5%.
- Large-cap equities proved significantly more insulated (relative to small-cap equities) from the spike in economic uncertainty generated by the COVID-19 outbreak. The Russell 1000 Index declined only -13.2% while the Russell 2000 Index lost -21.7%.
- Much of the underperformance of the value factor relative to the growth factor in March was explained by differences in sector composition across indices. Energy stocks in the S&P 500 fell -34.8% and drove the underperformance of value. Information Technology stocks in the index declined only -8.6% and helped to buoy declines in growth factor indices.
- Exposure to the momentum factor paid investors in March. The Bloomberg U.S. Pure Momentum Factor Index registered a +1.2% return for the month.

**VALUE VS. GROWTH RELATIVE VALUATIONS**



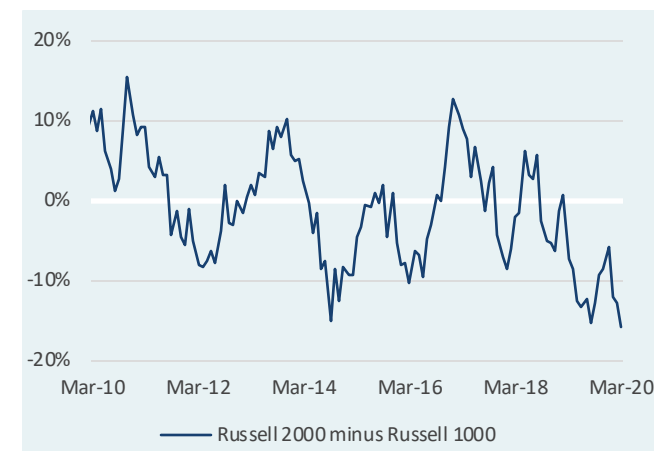
Source: Russell, Bloomberg, as of 3/31/20

**VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE**



Source: FTSE, Bloomberg, as of 3/31/20

**SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE**



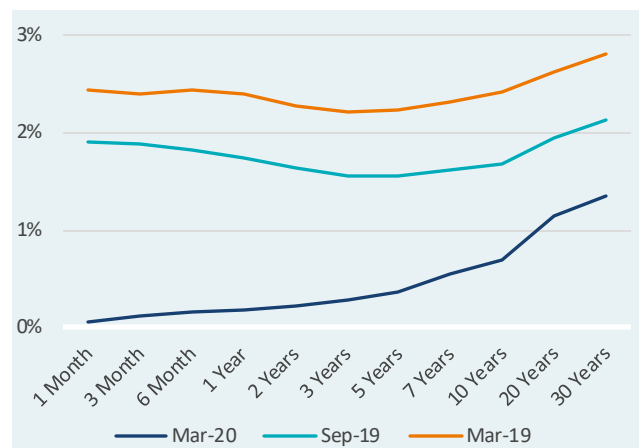
Source: FTSE, Bloomberg, as of 3/31/20



# Fixed income

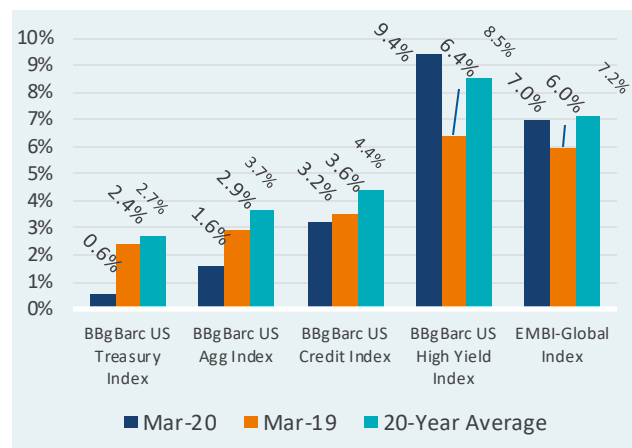
- To allay concerns over dollar liquidity in global dollar funding markets, the Federal Reserve opened dollar liquidity swap lines with foreign central banks, and rolled out a FIMA repo facility, allowing foreign central banks and monetary authorities to enter repurchase agreements with the Federal Reserve.
- Hard-currency denominated emerging market debt was the worst performer within fixed income (J.P. Morgan EMBI Global Diversified -13.8%). Several countries, including Mexico and South Africa, experienced sovereign debt rating downgrades.
- Breakeven inflation rates, which are calculated by subtracting TIPS yields from equivalent-maturity nominal Treasury yields, fell materially over the period. However, declines in breakeven inflation rates can also capture the effects of temporary liquidity imbalances. Treasury liquidity exceeded TIPS liquidity in March and drove some of the decline in breakeven inflation rates.
- U.S. investment grade credit spreads surged from 1.22% to 2.72% and reached intra-month highs of 3.73%. High-yield credit spreads spiked from 5.00% to as high as 11.00% and finished the month at 8.80%.

U.S. TREASURY YIELD CURVE



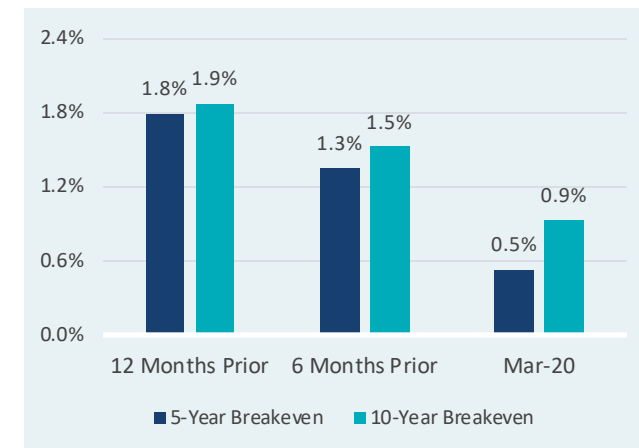
Source: Bloomberg, as of 3/31/20

NOMINAL YIELDS



Source: Morningstar, as of 3/31/20

BREAKEVEN INFLATION RATES



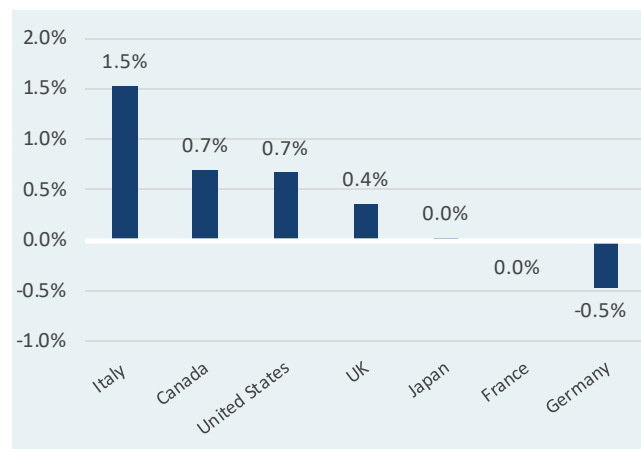
Source: Bloomberg, as of 3/31/20



# Global markets

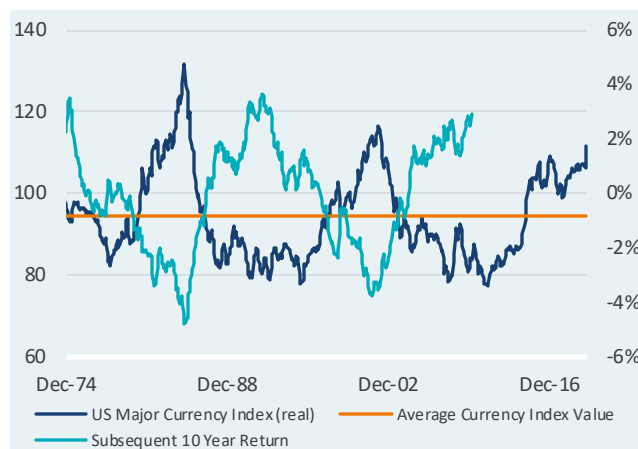
- Global equities (MSCI ACWI) fell -13.5% and emerging market equities (-15.4%) underperformed. Within emerging market equity, the Latin American segment (-34.5%) significantly underperformed the Asian component (-11.7%) in U.S. dollar terms. Weakness in Latin American currencies, specifically the Mexican peso, versus the U.S. dollar, exacerbated weakness.
- International developed equities (MSCI EAFE) returned -13.3%, in line with the global benchmark. Eurozone equities (-17.2%) lagged Japanese equities (-7.1%) in dollar terms, and currency impacts were negligible.
- The Bloomberg Dollar Spot Index, which measures the strength of the U.S. dollar relative to both developed and emerging market currency pairs, advanced 3.1%. Between March 9<sup>th</sup> and March 23<sup>rd</sup>, the index gained 8.9% as dollar liquidity became constrained. The index gave back some of those gains by month-end as Fed intervention in dollar funding markets eased strains.
- On March 31<sup>st</sup>, the blended forward 12-month P/E ratio of the MSCI ACWI Index was 14.3, below the 5-year monthly average (15.3). If expected earnings were to fall by 20%, the current forward P/E would be 17.8x.

GLOBAL SOVEREIGN 10-YEAR YIELDS



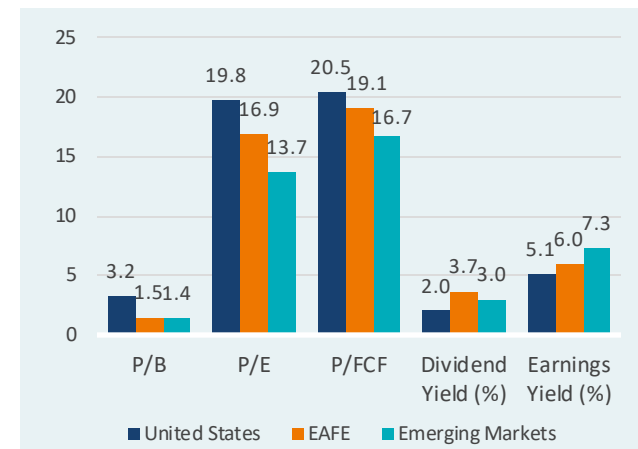
Source: Bloomberg, as of 3/31/20

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 3/31/20

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 3/31/20



# Commodities

- The Bloomberg Commodity Index declined -12.8% for the month, bringing year-to-date performance to -23.3%. While the entire commodity complex performed poorly, the decline in the overall index was driven primarily by a rout in the crude oil markets resulting in a -46.8% decline in the Petroleum component.
- A dearth in global oil demand driven by COVID-19 related economic disruptions and the concurrent emergence of a supply shock in the form of a price war between Saudi Arabia and Russia led the price of a barrel of West Texas Intermediate crude oil to fall from \$44.94 to \$20.48.

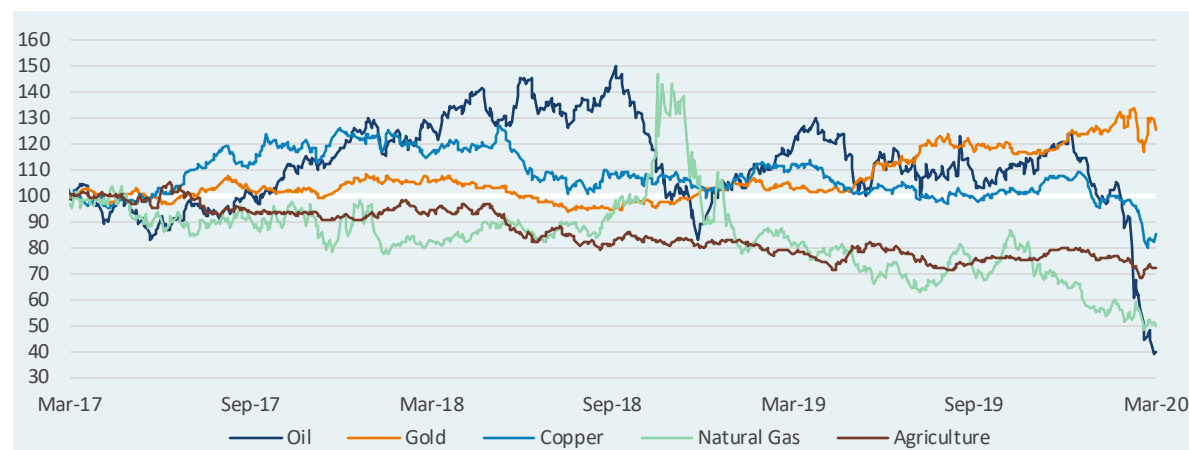
- At its March 6<sup>th</sup> meeting, OPEC elected not to extend the production cuts it had kept in place since December 2016. With the production cuts expiring at the end of March, the U.S. Energy Information Administration increased its forecast for OPEC liquid fuels production by 150,000 and 200,000 barrels per day in 2020 and 2021, respectively.
- The Bloomberg Precious Metals Sub-Index outperformed the overall index but still posted a return of -1.4%. Spot gold prices fell 0.5% to \$1,577 per ounce, faced with the dual pressures of rebalancing activity following strong relative performance, as well as a stronger U.S. dollar.

## INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(12.8)	(23.3)	(23.3)	(22.3)	(8.6)	(7.8)	(6.7)
Bloomberg Agriculture	(3.3)	(9.9)	(9.9)	(5.3)	(9.1)	(7.2)	(3.5)
Bloomberg Energy	(35.1)	(51.1)	(51.1)	(52.9)	(19.8)	(18.8)	(17.1)
Bloomberg Grains	(0.6)	(7.2)	(7.2)	(2.6)	(7.9)	(8.7)	(3.6)
Bloomberg Industrial Metals	(9.7)	(18.5)	(18.5)	(22.7)	(5.5)	(3.4)	(6.1)
Bloomberg Livestock	(13.5)	(28.1)	(28.1)	(35.5)	(11.0)	(9.7)	(5.6)
Bloomberg Petroleum	(46.8)	(60.1)	(60.1)	(57.6)	(19.6)	(18.2)	(14.5)
Bloomberg Precious Metals	(1.4)	(1.1)	(1.1)	15.7	3.7	3.2	1.7
Bloomberg Softs	(12.4)	(16.8)	(16.8)	(13.7)	(15.5)	(7.5)	(6.1)

Source: Morningstar, as of 3/31/20

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 3/31/20



# Appendix



# Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
US Bonds	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	3.1	10.4	13.0
Cash	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	0.4	7.5	10.4
Real Estate	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	0.0	6.2	10.1
Hedge Funds of Funds	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	-6.0	3.4	8.9
60/40 Global Portfolio	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	-13.3	3.0	7.7
Large Cap Growth	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	-14.1	1.9	6.9
Large Cap Equity	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	-20.2	1.7	4.8
International Equity	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	-22.8	1.1	4.7
Commodities	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	-23.3	0.6	3.9
Emerging Markets Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-23.6	-0.2	2.7
Small Cap Growth	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-25.8	-0.4	2.1
Large Cap Value	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-26.7	-0.6	0.7
Small Cap Equity	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-30.6	-2.4	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-35.7	-7.8	-6.7

Large Cap Equity

Large Cap Value

Large Cap Growth

Small Cap Equity

Small Cap Value

Small Cap Growth

International Equity

Emerging Markets Equity

US Bonds

Cash

Commodities

Real Estate

Hedge Funds of Funds

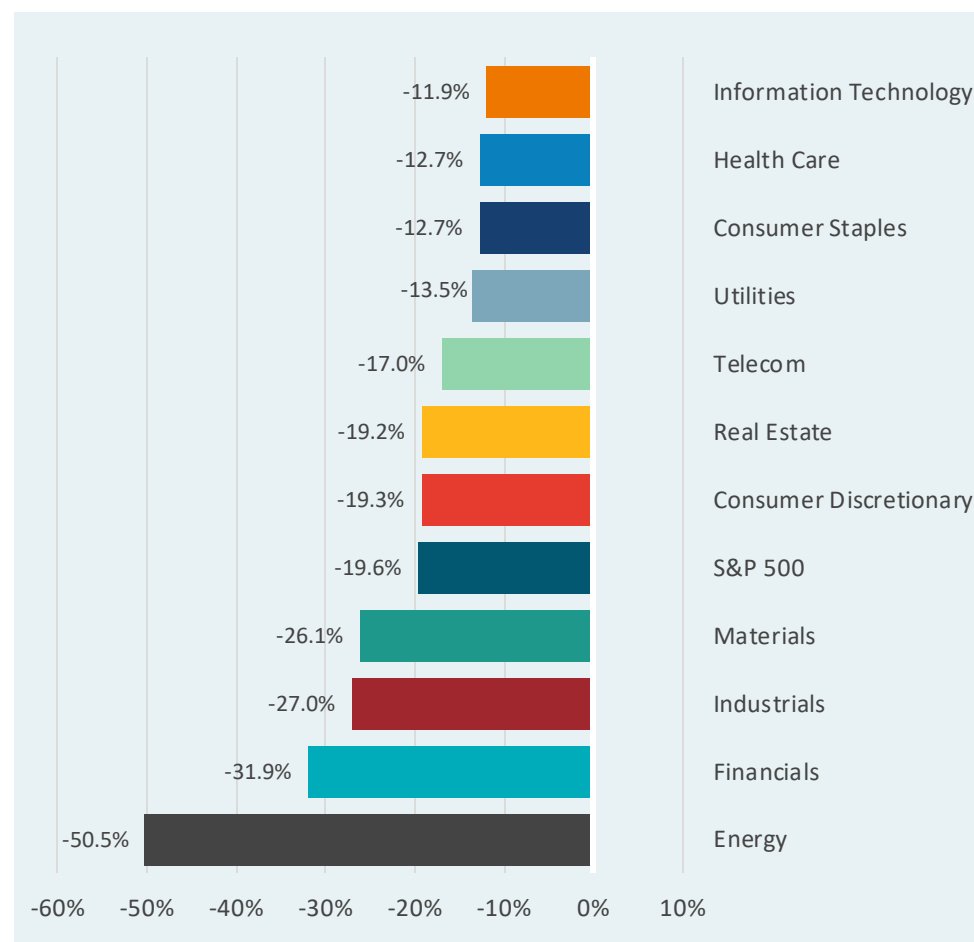
60 MSCI ACWI/40 BBGBarc Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBGBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBGBarc Global Bond. NCREIF Property Index performance data as of 12/31/19.



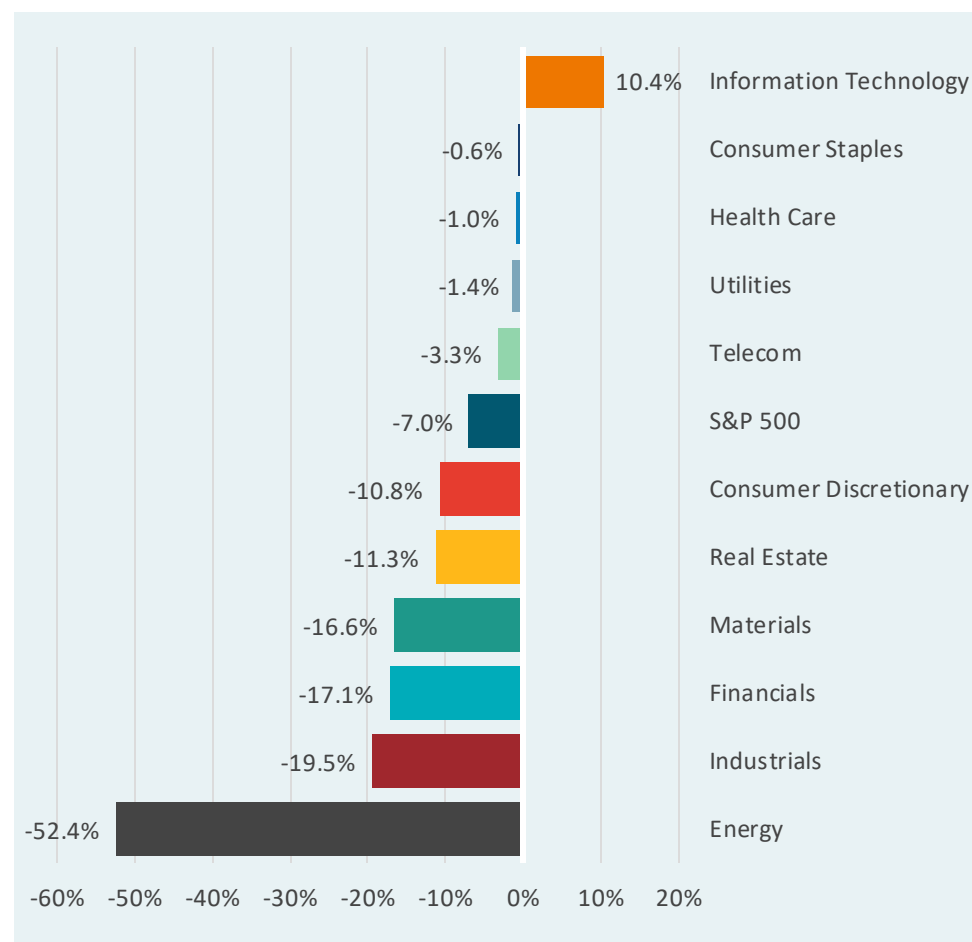
# S&P 500 sector returns

Q1 2020



Source: Morningstar, as of 3/31/20

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/20



# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	(12.4)	(19.6)	(19.6)	(7.0)	5.1	6.7	10.5
S&P 500 Equal Weighted	(18.0)	(26.7)	(26.7)	(17.6)	(0.4)	2.8	9.2
DJ Industrial Average	(13.6)	(22.7)	(22.7)	(13.4)	4.4	6.9	10.0
Russell Top 200	(11.0)	(17.7)	(17.7)	(4.1)	6.7	7.9	11.0
Russell 1000	(13.2)	(20.2)	(20.2)	(8.0)	4.6	6.2	10.4
Russell 2000	(21.7)	(30.6)	(30.6)	(24.0)	(4.6)	(0.2)	6.9
Russell 3000	(13.8)	(20.9)	(20.9)	(9.1)	4.0	5.8	10.1
Russell Mid Cap	(19.5)	(27.1)	(27.1)	(18.3)	(0.8)	1.8	8.8
<b>Style Index</b>							
Russell 1000 Growth	(9.8)	(14.1)	(14.1)	0.9	11.3	10.4	13.0
Russell 1000 Value	(17.1)	(26.7)	(26.7)	(17.2)	(2.2)	1.9	7.7
Russell 2000 Growth	(19.1)	(25.8)	(25.8)	(18.6)	0.1	1.7	8.9
Russell 2000 Value	(24.7)	(35.7)	(35.7)	(29.6)	(9.5)	(2.4)	4.8

## INTERNATIONAL EQUITY

<b>Broad Index</b>							
MSCI ACWI	(13.5)	(21.4)	(21.4)	(11.3)	1.5	2.8	5.9
MSCI ACWI ex US	(14.5)	(23.4)	(23.4)	(15.6)	(2.0)	(0.6)	2.1
MSCI EAFE	(13.3)	(22.8)	(22.8)	(14.4)	(1.8)	(0.6)	2.7
MSCI EM	(15.4)	(23.6)	(23.6)	(17.7)	(1.6)	(0.4)	0.7
MSCI EAFE Small Cap	(17.2)	(27.5)	(27.5)	(18.1)	(2.9)	1.0	4.8
<b>Style Index</b>							
MSCI EAFE Growth	(9.2)	(17.5)	(17.5)	(5.8)	3.0	2.5	4.7
MSCI EAFE Value	(17.7)	(28.2)	(28.2)	(22.8)	(6.7)	(3.8)	0.6
<b>Regional Index</b>							
MSCI UK	(16.0)	(28.8)	(28.8)	(23.0)	(4.9)	(3.3)	1.6
MSCI Japan	(7.1)	(16.8)	(16.8)	(6.7)	1.0	1.8	3.8
MSCI Euro	(17.2)	(27.0)	(27.0)	(18.3)	(4.4)	(2.3)	1.1
MSCI EM Asia	(11.7)	(18.1)	(18.1)	(12.1)	1.3	1.4	3.5
MSCI EM Latin American	(34.5)	(45.6)	(45.6)	(40.8)	(13.0)	(5.9)	(6.7)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US TIPS	(1.8)	1.7	1.7	6.8	3.5	2.7	3.5
BBgBarc US Treasury Bills	0.3	0.6	0.6	2.4	1.8	1.2	0.7
BBgBarc US Agg Bond	(0.6)	3.1	3.1	8.9	4.8	3.4	3.9
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	1.3	2.8	2.8	5.4	2.7	1.8	1.4
BBgBarc US Treasury Long	6.1	20.9	20.9	32.6	13.4	7.3	9.0
BBgBarc US Treasury	2.9	8.2	8.2	13.2	5.8	3.6	3.8
<b>Issuer</b>							
BBgBarc US MBS	1.1	2.8	2.8	7.0	4.0	2.9	3.3
BBgBarc US Corp. High Yield	(11.5)	(12.7)	(12.7)	(6.9)	0.8	2.8	5.6
BBgBarc US Agency Interm	0.9	2.9	2.9	6.1	3.2	2.3	2.2
BBgBarc US Credit	(6.6)	(3.1)	(3.1)	5.1	4.2	3.3	4.7

## OTHER

<b>Index</b>							
Bloomberg Commodity	(12.8)	(23.3)	(23.3)	(22.3)	(8.6)	(7.8)	(6.7)
Wilshire US REIT	(20.0)	(25.6)	(25.6)	(19.4)	(2.5)	5.7	12.7
CS Leveraged Loans	(12.5)	(13.2)	(13.2)	(9.5)	(0.7)	4.6	5.0
Alerian MLP	(48.1)	(58.1)	(58.1)	(61.9)	(29.9)	(21.1)	(4.7)
<b>Regional Index</b>							
JPM EMBI Global Div	(13.8)	(13.4)	(13.4)	(6.8)	0.4	2.8	4.9
JPM GBI-EM Global Div	(11.1)	(15.2)	(15.2)	(6.5)	(0.8)	0.3	0.5
<b>Hedge Funds</b>							
HFRI Composite	(5.9)	(8.3)	(8.3)	(4.0)	0.7	1.3	2.9
HFRI FOF Composite	(4.9)	(6.0)	(6.0)	(2.6)	1.0	0.6	2.1
<b>Currency (Spot)</b>							
Euro	(0.1)	(2.3)	(2.3)	(2.3)	0.9	0.4	(2.1)
Pound	(2.9)	(6.4)	(6.4)	(4.8)	(0.3)	(3.5)	(2.0)
Yen	(0.1)	0.7	0.7	2.5	1.1	2.1	(1.4)

Source: Morningstar, HFR, as of 3/31/20



# Notices & disclosures

**Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. (“Verus”) file a single form ADV under the United States Investment Advisors Act of 1940, as amended. Additional information about Verus Advisory, Inc. available on the SEC’s website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).

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# Stanislaus County Employees' Retirement Association

Investment Performance Review

Period Ending: March 31, 2020



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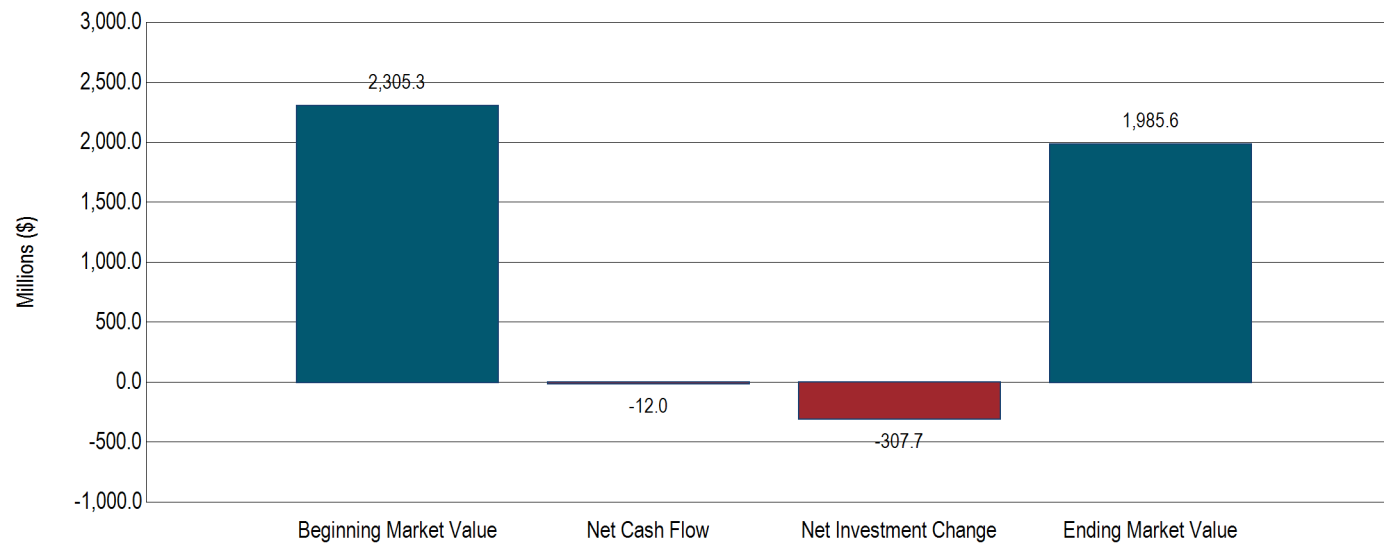
# Total Fund Portfolio Reconciliation

Period Ending: March 31, 2020

## Portfolio Reconciliation

	Last Three Months	Fiscal Year-To-Date	Year-To-Date
Beginning Market Value	\$2,305,291,730	\$2,190,456,401	\$2,305,291,730
Net Cash Flow	-\$12,017,454	-\$27,562,471	-\$12,017,454
Net Investment Change	-\$307,656,554	-\$177,276,208	-\$307,656,554
Ending Market Value	\$1,985,617,723	\$1,985,617,723	\$1,985,617,723

## Change in Market Value Last Three Months



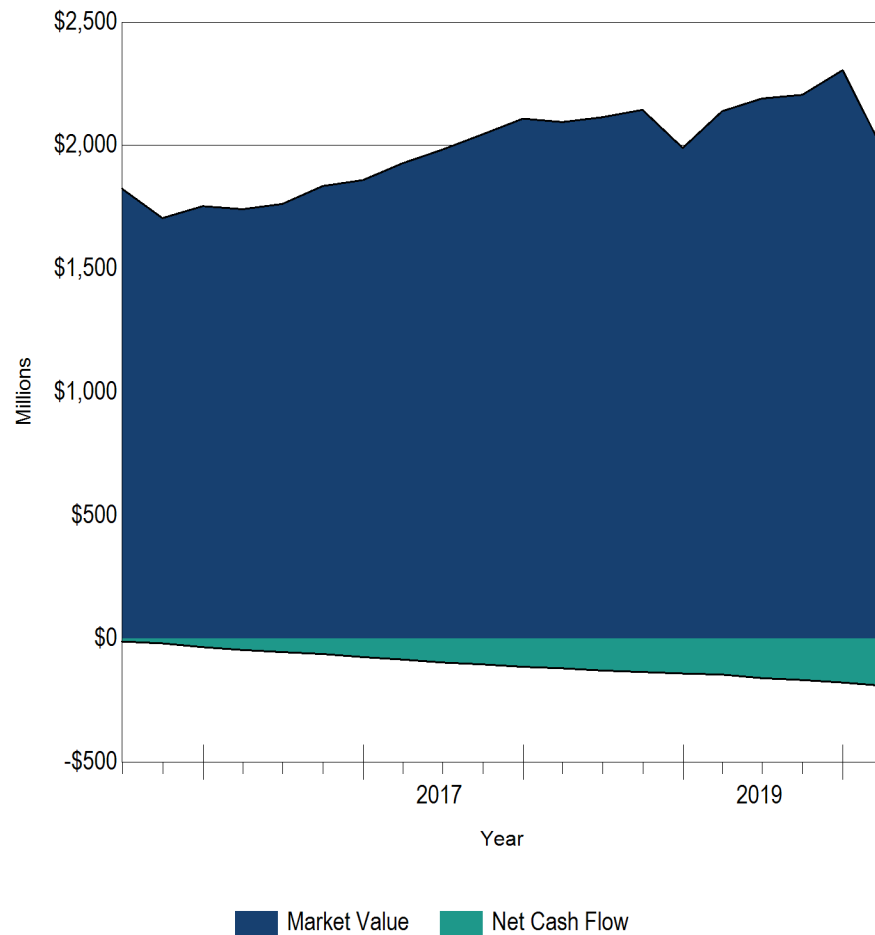
Contributions and withdrawals may include intra-account transfers between managers/funds.



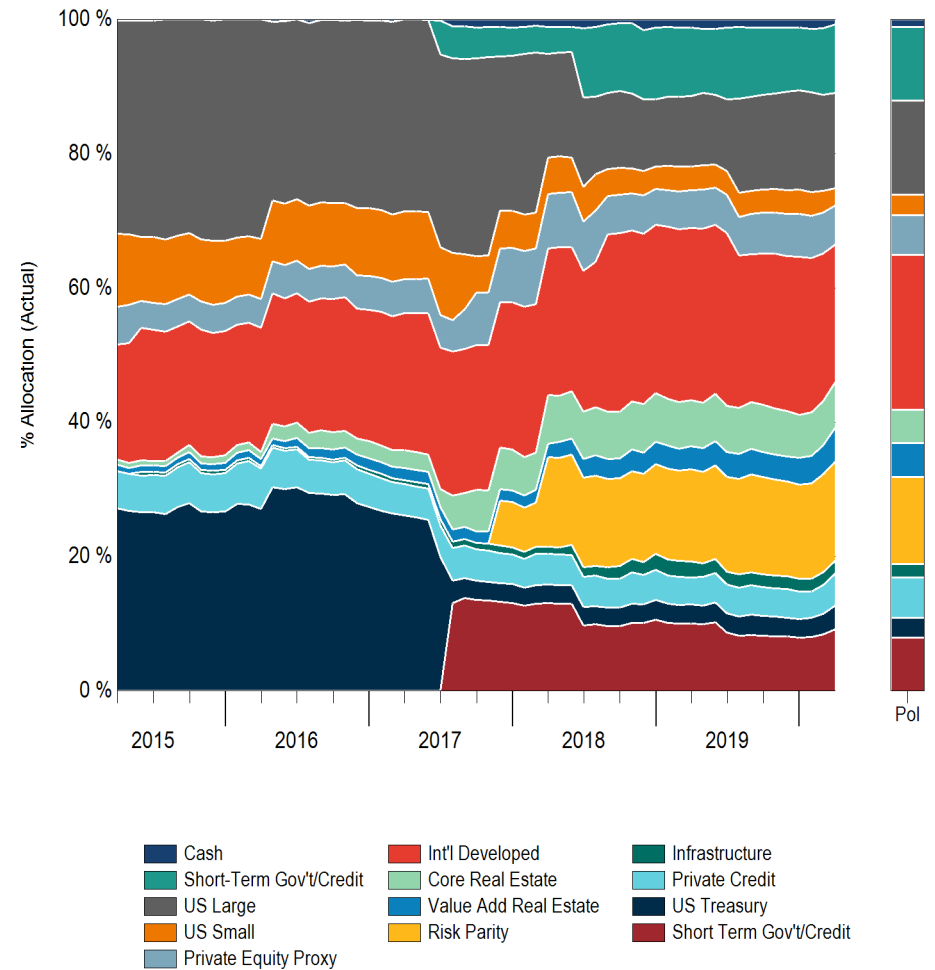
# Total Fund Asset Allocation History

Period Ending: March 31, 2020

Market Value History  
Cumulative Cash Flows



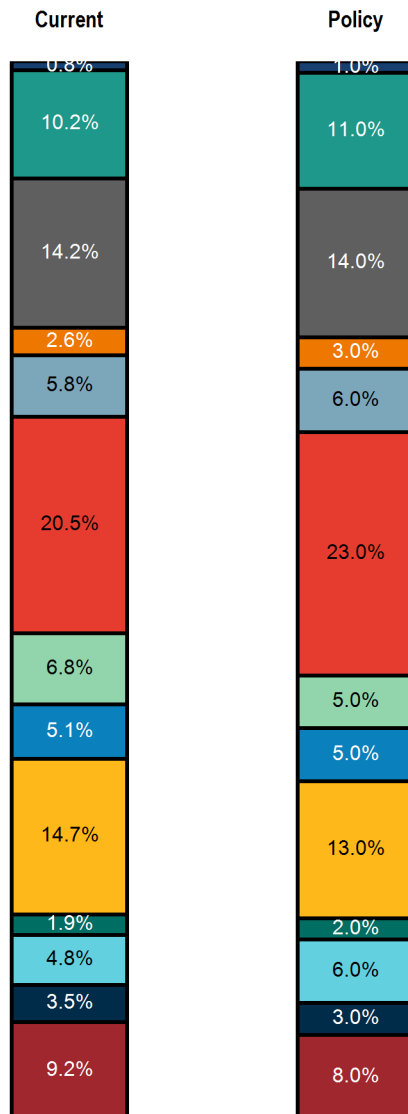
Asset Allocation History





# Total Fund Asset Allocation vs. Policy

Period Ending: March 31, 2020



	Current	%	Policy	%
<b>Liquidity Sub-Portfolio</b>	<b>\$217,946,339</b>	<b>11.0%</b>	<b>\$238,274,127</b>	<b>12.0%</b>
Cash	\$15,074,021	0.8%	\$19,856,177	1.0%
Short-Term Gov't/Credit	\$202,872,317	10.2%	\$218,417,950	11.0%
<b>Growth Sub-Portfolio</b>	<b>\$1,515,339,166</b>	<b>76.3%</b>	<b>\$1,528,925,647</b>	<b>77.0%</b>
US Large	\$281,086,379	14.2%	\$277,986,481	14.0%
US Small	\$51,955,756	2.6%	\$59,568,532	3.0%
Private Equity Proxy	\$115,300,878	5.8%	\$119,137,063	6.0%
Int'l Developed	\$406,215,177	20.5%	\$456,692,076	23.0%
Core Real Estate	\$134,066,213	6.8%	\$99,280,886	5.0%
Value Add Real Estate	\$101,285,755	5.1%	\$99,280,886	5.0%
Risk Parity	\$292,272,805	14.7%	\$258,130,304	13.0%
Infrastructure	\$38,711,962	1.9%	\$39,712,354	2.0%
Private Credit	\$94,444,241	4.8%	\$119,137,063	6.0%
<b>Risk-Diversifying Sub-Portfolio</b>	<b>\$252,332,218</b>	<b>12.7%</b>	<b>\$218,417,950</b>	<b>11.0%</b>
US Treasury	\$69,706,578	3.5%	\$59,568,532	3.0%
Short Term Gov't/Credit	\$182,625,640	9.2%	\$158,849,418	8.0%
<b>Total</b>	<b>\$1,985,617,723</b>	<b>100.0%</b>	<b>\$1,985,617,723</b>	<b>100.0%</b>

Russell 3000 Index serving as proxy for Private Equity while capital is being called. International Equity policy target consists of 21% international developed and 6% emerging markets.

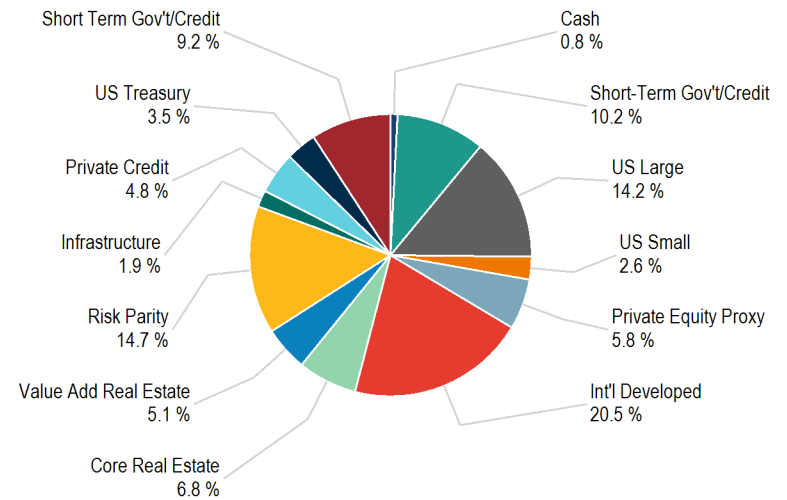


# Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2020

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>-13.4</b>	<b>-8.3</b>	<b>-5.5</b>	<b>2.5</b>	<b>3.3</b>	<b>6.5</b>
Policy Index	-12.4	-7.4	-4.7	2.7	3.6	6.5
InvMetrics Public DB Net Rank	44	49	54	56	46	26
<b>Liquidity Sub-Portfolio</b>	<b>-2.4</b>	<b>0.1</b>	<b>2.4</b>	<b>2.0</b>	<b>1.6</b>	<b>--</b>
StanCERA Liquidity Blended BM	1.6	2.9	4.3	2.5	1.8	--
<b>Cash</b>	<b>0.4</b>	<b>1.5</b>	<b>1.7</b>	<b>1.5</b>	<b>1.3</b>	<b>--</b>
FTSE T-Bill 1 Month TR	0.4	1.4	2.0	1.7	1.1	--
<b>Short-Term Gov't/Credit</b>	<b>-2.7</b>	<b>-0.1</b>	<b>2.5</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US Gov't/Credit 1-3 Yr. TR	1.7	3.0	4.5	--	--	--
eV US Government Fixed Inc Net Rank	99	99	99	--	--	--
<b>Growth Sub-Portfolio</b>	<b>-17.0</b>	<b>-11.2</b>	<b>-8.3</b>	<b>2.2</b>	<b>3.5</b>	<b>7.7</b>
StanCERA Growth Blended BM	-15.8	-9.9	-7.0	3.1	--	--
<b>Public Equities</b>	<b>-24.3</b>	<b>-16.6</b>	<b>-13.6</b>	<b>1.0</b>	<b>3.5</b>	<b>9.1</b>
MSCI ACWI IMI NR	-22.4	-15.6	-12.7	0.8	2.4	5.8
<b>US Large</b>	<b>-21.0</b>	<b>-12.3</b>	<b>-9.0</b>	<b>4.3</b>	<b>5.8</b>	<b>10.2</b>
Russell 1000	-20.2	-11.8	-8.0	4.6	6.2	10.4
eV US Large Cap Equity Net Rank	51	46	47	40	37	35
<b>US Small</b>	<b>-37.8</b>	<b>-33.5</b>	<b>-31.4</b>	<b>-10.2</b>	<b>-4.6</b>	<b>5.0</b>
Russell 2000	-30.6	-25.5	-24.0	-4.6	-0.2	6.9
eV US Small Cap Value Equity Net Rank	77	75	69	59	80	59
<b>Private Equity Proxy</b>	<b>-20.9</b>	<b>-12.7</b>	<b>-9.1</b>	<b>5.7</b>	<b>7.1</b>	<b>10.7</b>
Russell 3000 +3%	-19.7	-9.8	-6.1	7.0	8.8	13.2
eV US Large Cap Equity Net Rank	51	48	47	33	26	29

Current Allocation



Policy Index (5/31/2019): 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, and 1% Citi 1 Month T-Bills. StanCERA Liquidity Blended BM (8/31/2019): 92% BBgbarc US Gov't/Credit 1-3 Yr. TR and 8% FTSE T-Bill 1 month TR. StanCERA Growth Blended BM (8/31/2019): 18% Russell 1000, 4% Russell 2000, 8% Russell 3000 + 3%, 30% MSCI ACWI ex-US Gross, 6% NCREIF Property, 6% actual private Value Add Real Estate returns, 17% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 3% actual Infrastructure returns, and 8% actual Private Credit returns.

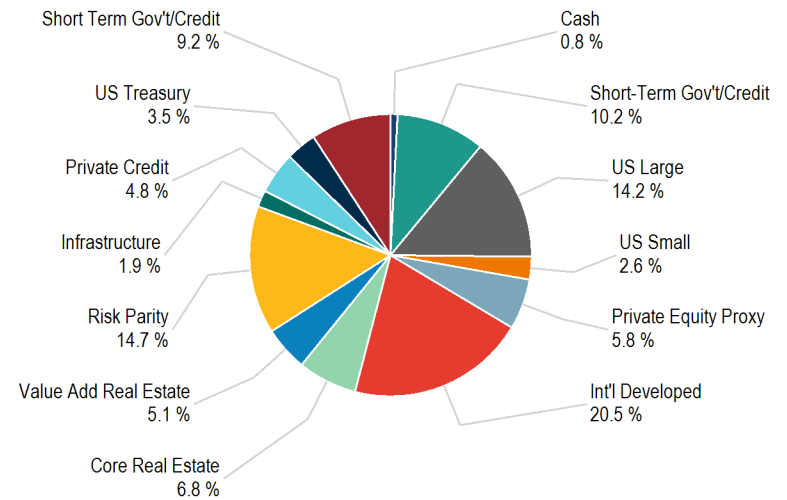


# Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2020

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Int'l Developed</b>	<b>-25.2</b>	<b>-19.3</b>	<b>-17.0</b>	<b>-3.2</b>	<b>-1.0</b>	<b>2.5</b>
MSCI ACWI ex USA	-23.4	-18.0	-15.6	-2.0	-0.6	2.1
eV ACWI ex-US Large Cap Equity Net Rank	76	70	74	71	60	55
<b>Core Real Estate</b>	<b>-5.1</b>	<b>-1.7</b>	<b>-0.3</b>	<b>3.5</b>	<b>2.1</b>	<b>4.7</b>
NCREIF Property Index	N/A	3.0	4.5	6.2	7.5	10.1
InvMetrics Public DB Real Estate Priv Net Rank	98	98	96	96	98	99
<b>Value Add Real Estate</b>	<b>4.8</b>	<b>10.0</b>	<b>11.4</b>	<b>11.2</b>	<b>12.3</b>	<b>--</b>
NCREIF Property Index +2%	N/A	4.5	6.6	8.3	9.6	--
<b>Risk Parity</b>	<b>-9.8</b>	<b>-5.6</b>	<b>-0.7</b>	<b>--</b>	<b>--</b>	<b>--</b>
60% MSCI ACWI Net/40% BBgBarc Global Aggregate	-13.3	-8.2	-4.9	--	--	--
<b>Infrastructure</b>	<b>5.3</b>	<b>10.9</b>	<b>15.2</b>	<b>17.1</b>	<b>--</b>	<b>--</b>
CPI + 5%	1.7	4.5	6.6	7.0	--	--
eV Infrastructure Net Rank	1	1	1	1	--	--
<b>Private Credit</b>	<b>-5.0</b>	<b>-3.8</b>	<b>-2.4</b>	<b>1.8</b>	<b>1.9</b>	<b>--</b>
S&P/LSTA Leveraged Loan Index+2%	-12.6	-9.3	-7.3	1.2	3.2	--
<b>Risk-Diversifying Sub-Portfolio</b>	<b>2.2</b>	<b>3.9</b>	<b>5.9</b>	<b>3.9</b>	<b>3.4</b>	<b>4.3</b>
StanCERA Risk-Diversifying Blended BM	4.0	5.4	7.6	3.8	2.6	2.7
<b>US Treasury</b>	<b>9.7</b>	<b>11.6</b>	<b>15.3</b>	<b>7.2</b>	<b>5.3</b>	<b>5.2</b>
BBgBarc US Treasury 7-10 Yr TR	10.1	11.8	16.2	7.0	4.4	5.4
eV US Government Fixed Inc Net Rank	1	1	1	1	1	1

Current Allocation



Policy Index (5/31/2019): 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, and 1% Citi 1 Month T-Bills. StanCERA Liquidity Blended BM (8/31/2019): 92% BBgBarc US Gov't/Credit 1-3 Yr. TR and 8% FTSE T-Bill 1 month TR. StanCERA Growth Blended BM (8/31/2019): 18% Russell 1000, 4% Russell 2000, 8% Russell 3000 + 3%, 30% MSCI ACWI ex-US Gross, 6% NCREIF Property, 6% actual private Value Add Real Estate returns, 17% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 3% actual Infrastructure returns, and 8% actual Private Credit returns. NCREIF Property Index performance not available at time of production.

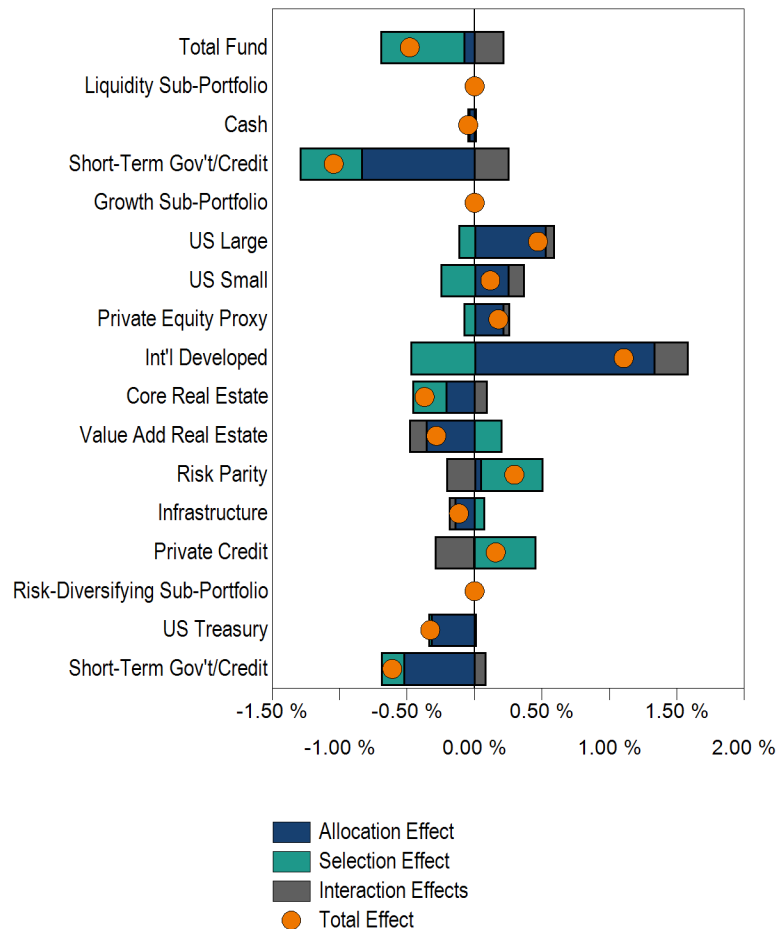


# Total Fund

## Attribution Analysis - Asset Class Level (Net of Fees)

Period Ending: March 31, 2020

### Attribution Effects Last Three Months



### Performance Attribution

	Quarter
Wtd. Actual Return	-13.42%
Wtd. Index Return *	-12.46%
<b>Excess Return</b>	<b>-0.96%</b>
Selection Effect	-0.61%
Allocation Effect	-0.08%
Interaction Effect	0.21%

\*Calculated from benchmark returns and weightings of each component.

### Attribution Summary Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Liquidity Sub-Portfolio	-2.4%	1.6%	-4.0%	--	--	--	--
Cash	0.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%
Short-Term Gov't/Credit	-2.7%	1.7%	-4.4%	-0.5%	-0.8%	0.2%	-1.0%
Growth Sub-Portfolio	-17.0%	-15.8%	-1.2%	--	--	--	--
US Large	-21.0%	-20.2%	-0.8%	-0.1%	0.5%	0.1%	0.5%
US Small	-37.8%	-30.6%	-7.1%	-0.2%	0.3%	0.1%	0.1%
Private Equity Proxy	-20.9%	-19.7%	-1.1%	-0.1%	0.2%	0.0%	0.2%
Int'l Developed	-25.2%	-23.4%	-1.9%	-0.5%	1.3%	0.2%	1.1%
Core Real Estate	-5.1%	0.0%	-5.1%	-0.2%	-0.2%	0.1%	-0.4%
Value Add Real Estate	4.8%	0.5%	4.3%	0.2%	-0.4%	-0.1%	-0.3%
Risk Parity	-9.8%	-13.3%	3.5%	0.5%	0.0%	-0.2%	0.3%
Infrastructure	5.3%	1.7%	3.7%	0.1%	-0.1%	0.0%	-0.1%
Private Credit	-5.0%	-12.6%	7.6%	0.4%	0.0%	-0.3%	0.2%
Risk-Diversifying Sub-Portfolio	2.2%	4.0%	-1.8%	--	--	--	--
US Treasury	9.7%	10.1%	-0.5%	0.0%	-0.3%	0.0%	-0.3%
Short-Term Gov't/Credit	-0.4%	1.7%	-2.1%	-0.2%	-0.5%	0.1%	-0.6%
<b>Total</b>	<b>-13.4%</b>	<b>-12.5%</b>	<b>-1.0%</b>	<b>-0.6%</b>	<b>-0.1%</b>	<b>0.2%</b>	<b>-0.5%</b>

Policy Index (5/31/2019): 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBGBarc US Gov't/Credit 1-3 Yr, 3% BBGBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBGBarc Global Aggregate, and 1% Citi 1 Month T-Bills. StanCERA Liquidity Blended BM (8/31/2019): 92% BBGBarc US Gov't/Credit 1-3 Yr. TR and 8% FTSE T-Bill 1 month TR. StanCERA Growth Blended BM (8/31/2019): 18% Russell 1000, 4% Russell 2000, 8% Russell 3000 + 3%, 30% MSCI ACWI ex-US Gross, 6% NCREIF Property, 6% actual private Value Add Real Estate returns, 17% 60% MSCI ACWI / 40% BBGBarc Global Aggregate, 3% actual Infrastructure returns, and 8% actual Private Credit returns.

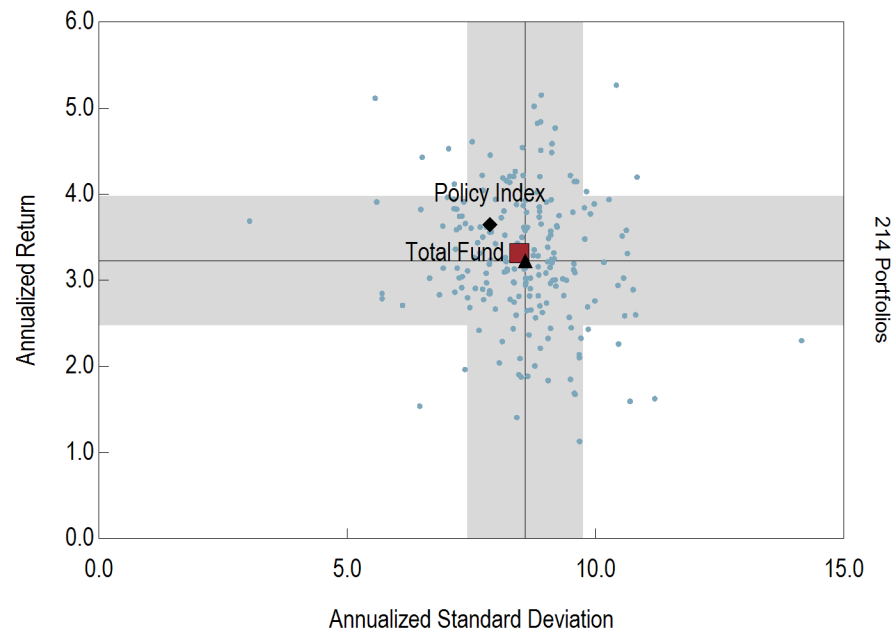


# Total Fund Risk Analysis - 5 Years (Net of Fees)

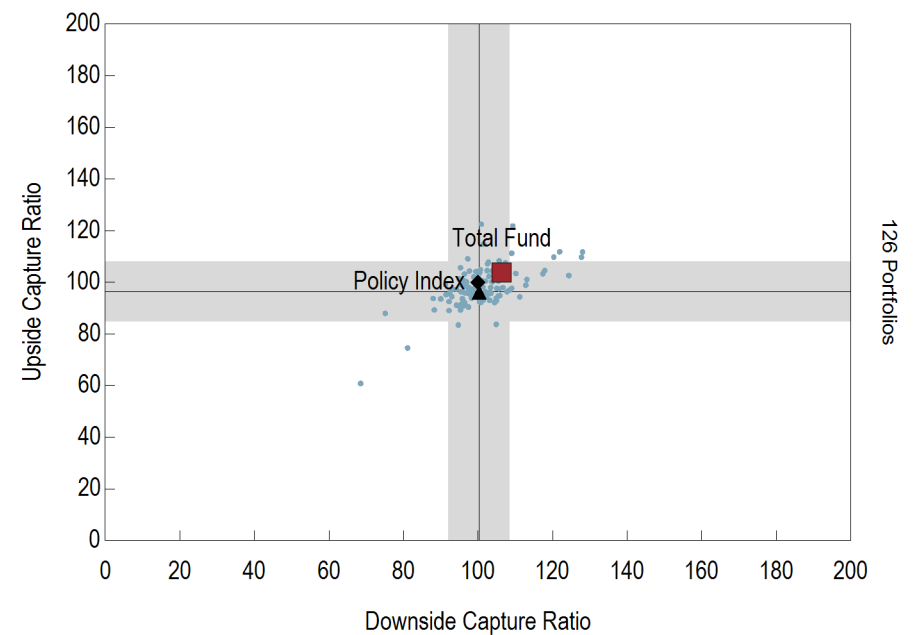
Period Ending: March 31, 2020

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	3.32%	-0.33%	8.46%	-0.57%	1.07	1.27%	0.98	0.26	-0.26	103.88%	106.39%
Policy Index	3.65%	0.00%	7.87%	0.00%	1.00	0.00%	1.00	0.32	--	100.00%	100.00%

Risk vs. Return



Up Markets vs. Down Markets





# Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
<b>Total Fund</b>	<b>1,985,617,723</b>	<b>100.0</b>	<b>-13.4</b>	<b>-8.3</b>	<b>-5.5</b>	<b>2.5</b>	<b>3.3</b>	<b>6.5</b>	<b>17.4</b>	<b>-4.4</b>	<b>15.3</b>	<b>7.8</b>	<b>-0.6</b>	<b>8.3</b>	<b>Dec-94</b>
Policy Index			-12.4	-7.4	-4.7	2.7	3.6	6.5	16.9	-3.7	14.3	8.5	0.2	7.5	Dec-94
InvMetrics Public DB Net Rank			44	49	54	56	46	26	77	51	36	36	55		
<b>Liquidity Sub-Portfolio</b>	<b>217,946,339</b>	<b>11.0</b>	<b>-2.4</b>	<b>0.1</b>	<b>2.4</b>	<b>2.0</b>	<b>1.6</b>	<b>--</b>	<b>7.7</b>	<b>0.8</b>	<b>0.4</b>	<b>1.3</b>	<b>1.0</b>	<b>8.9</b>	<b>Apr-11</b>
StanCERA Liquidity Blended BM			1.6	2.9	4.3	2.5	1.8	--	3.9	1.6	0.8	1.2	0.6	1.5	Apr-11
<b>Cash</b>	<b>15,074,021</b>	<b>0.8</b>	<b>0.4</b>	<b>1.5</b>	<b>1.7</b>	<b>1.5</b>	<b>1.3</b>	<b>--</b>	<b>1.6</b>	<b>1.6</b>	<b>0.9</b>	<b>1.3</b>	<b>1.0</b>	<b>8.7</b>	<b>Apr-11</b>
FTSE T-Bill 1 Month TR			0.4	1.4	2.0	1.7	1.1	--	2.2	1.8	0.8	0.2	0.0	0.6	Apr-11
<b>Short-Term Gov't/Credit</b>	<b>202,872,317</b>	<b>10.2</b>	<b>-2.7</b>	<b>-0.1</b>	<b>2.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>8.5</b>	<b>0.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.5</b>	<b>Jun-17</b>
BBgBarc US Govt/Credit 1-3 Yr. TR			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jun-17
eV US Government Fixed Inc Net Rank			99	99	99	--	--	--	1	87	--	--	--		
Insight	202,872,317	10.2	-2.7	-0.1	2.5	--	--	--	8.5	0.6	--	--	--	2.5	Jun-17
BBgBarc US Govt/Credit 1-3 Yr. TR			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jun-17
eV US Short Duration Fixed Inc Net Rank			86	79	60	--	--	--	1	96	--	--	--		
<b>Growth Sub-Portfolio</b>	<b>1,515,339,166</b>	<b>76.3</b>	<b>-17.0</b>	<b>-11.2</b>	<b>-8.3</b>	<b>2.2</b>	<b>3.5</b>	<b>7.7</b>	<b>20.9</b>	<b>-6.1</b>	<b>19.3</b>	<b>8.9</b>	<b>-0.8</b>	<b>6.8</b>	<b>Dec-03</b>
StanCERA Growth Blended BM			-15.8	-9.9	-7.0	3.1	--	--	20.7	-4.9	19.1	8.1	--	--	Dec-03
<b>Public Equities</b>	<b>333,042,135</b>	<b>16.8</b>	<b>-24.3</b>	<b>-16.6</b>	<b>-13.6</b>	<b>1.0</b>	<b>3.5</b>	<b>9.1</b>	<b>29.4</b>	<b>-7.2</b>	<b>19.1</b>	<b>12.2</b>	<b>-0.6</b>	<b>7.4</b>	<b>Dec-03</b>
MSCI ACWI IMI NR			-22.4	-15.6	-12.7	0.8	2.4	5.8	26.4	-10.1	23.9	8.4	-2.2	5.8	Dec-03
<b>US Large</b>	<b>281,086,379</b>	<b>14.2</b>	<b>-21.0</b>	<b>-12.3</b>	<b>-9.0</b>	<b>4.3</b>	<b>5.8</b>	<b>10.2</b>	<b>30.6</b>	<b>-4.0</b>	<b>21.1</b>	<b>10.8</b>	<b>0.5</b>	<b>11.4</b>	<b>Dec-94</b>
Russell 1000			-20.2	-11.8	-8.0	4.6	6.2	10.4	31.4	-4.8	21.7	12.1	0.9	9.2	Dec-94
eV US Large Cap Equity Net Rank			51	46	47	40	37	35	39	36	50	39	47		
BlackRock Russell 1000 Growth	147,201,980	7.4	-14.1	-3.6	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.2	5.7	14.1	Jul-10
Russell 1000 Growth			-14.1	-3.6	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.1	5.7	14.1	Jul-10
eV US Large Cap Growth Equity Net Rank			50	23	34	39	24	--	28	52	39	19	35		
BlackRock Russell 1000 Value	67,281,388	3.4	-26.6	-20.1	-17.0	-2.0	2.0	7.8	26.7	-8.2	13.8	17.3	-3.6	9.3	Jul-09
Russell 1000 Value			-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8	9.2	Jul-09
eV US Large Cap Value Equity Net Rank			53	54	52	55	48	42	47	41	83	20	57		
Dodge & Cox-Equity	66,603,012	3.4	-29.1	-22.0	-20.0	-2.8	2.5	8.1	23.9	-6.5	16.9	21.2	-4.0	10.4	Dec-94
Russell 1000 Value			-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8	8.6	Dec-94
eV US Large Cap Value Equity Net Rank			75	71	74	65	37	34	74	27	49	6	59		

Policy Index (5/31/2019): 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, and 1% Citi 1 Month T-Bills. StanCERA Liquidity Blended BM (8/31/2019): 92% BBgBarc US Govt/Credit 1-3 Yr. TR and 8% FTSE T-Bill 1 month TR. StanCERA Growth Blended BM (8/31/2019): 18% Russell 1000, 4% Russell 2000, 8% Russell 3000 + 3%, 30% MSCI ACWI ex-US Gross, 6% NCREIF Property, 6% actual private Value Add Real Estate returns, 17% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 3% actual Infrastructure returns, and 8% actual Private Credit returns.



# Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
<b>US Small</b>	<b>51,955,756</b>	<b>2.6</b>	<b>-37.8</b>	<b>-33.5</b>	<b>-31.4</b>	<b>-10.2</b>	<b>-4.6</b>	<b>5.0</b>	<b>25.1</b>	<b>-16.7</b>	<b>14.8</b>	<b>16.2</b>	<b>-4.5</b>	<b>7.7</b>	<b>Dec-08</b>
Russell 2000			-30.6	-25.5	-24.0	-4.6	-0.2	6.9	25.5	-11.0	14.6	21.3	-4.4	9.2	Dec-08
eV US Small Cap Value Equity Net Rank			77	75	69	59	80	59	35	67	16	95	48		
<b>Capital Prospects</b>	<b>51,955,756</b>	<b>2.6</b>	<b>-37.8</b>	<b>-33.5</b>	<b>-31.4</b>	<b>-10.0</b>	<b>-3.3</b>	<b>5.3</b>	<b>25.1</b>	<b>-16.7</b>	<b>14.7</b>	<b>27.1</b>	<b>-7.5</b>	<b>8.0</b>	<b>Dec-08</b>
Russell 2000 Value			-35.7	-30.6	-29.6	-9.5	-2.4	4.8	22.4	-12.9	7.8	31.7	-7.5	6.9	Dec-08
eV US Small Cap Value Equity Net Rank			77	75	69	57	65	52	35	67	17	39	73		
<b>Private Equity Proxy</b>	<b>115,300,878</b>	<b>5.8</b>	<b>-20.9</b>	<b>-12.7</b>	<b>-9.1</b>	<b>5.7</b>	<b>7.1</b>	<b>10.7</b>	<b>31.1</b>	<b>-0.2</b>	<b>21.2</b>	<b>11.7</b>	<b>1.4</b>	<b>7.9</b>	<b>Nov-03</b>
Russell 3000 +3%			-19.7	-9.8	-6.1	7.0	8.8	13.2	34.0	-2.2	24.1	15.7	3.5	10.8	Nov-03
eV US Large Cap Equity Net Rank			51	48	47	33	26	29	37	14	50	34	40		
<b>Northern Trust Russell 3000</b>	<b>115,300,878</b>	<b>5.8</b>	<b>-20.9</b>	<b>-12.7</b>	<b>-9.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>31.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.9</b>	<b>Dec-18</b>
Russell 3000			-20.9	-12.7	-9.1	--	--	--	31.0	--	--	--	--	2.9	Dec-18
eV US Large Cap Equity Net Rank			51	48	47	--	--	--	37	--	--	--	--		
<b>Int'l Developed</b>	<b>406,215,177</b>	<b>20.5</b>	<b>-25.2</b>	<b>-19.3</b>	<b>-17.0</b>	<b>-3.2</b>	<b>-1.0</b>	<b>2.5</b>	<b>21.8</b>	<b>-15.8</b>	<b>27.4</b>	<b>5.3</b>	<b>-3.8</b>	<b>4.5</b>	<b>Sep-04</b>
MSCI ACWI ex USA			-23.4	-18.0	-15.6	-2.0	-0.6	2.1	21.5	-14.2	27.2	4.5	-5.7	4.2	Sep-04
eV ACWI ex-US Large Cap Equity Net Rank			76	70	74	71	60	55	66	58	61	17	68		
<b>LSV Asset Mgt</b>	<b>198,671,008</b>	<b>10.0</b>	<b>-27.5</b>	<b>-20.8</b>	<b>-19.3</b>	<b>-4.9</b>	<b>-1.8</b>	<b>2.0</b>	<b>20.8</b>	<b>-16.9</b>	<b>27.5</b>	<b>8.2</b>	<b>-5.4</b>	<b>4.1</b>	<b>Sep-04</b>
MSCI ACWI ex USA			-23.4	-18.0	-15.6	-2.0	-0.6	2.1	21.5	-14.2	27.2	4.5	-5.7	4.2	Sep-04
eV ACWI ex-US Large Cap Equity Net Rank			87	82	83	87	75	70	75	74	61	3	80		
<b>Fidelity</b>	<b>207,544,170</b>	<b>10.5</b>	<b>-22.9</b>	<b>-17.9</b>	<b>-14.7</b>	<b>-1.6</b>	<b>-0.4</b>	<b>2.8</b>	<b>22.8</b>	<b>-14.7</b>	<b>27.0</b>	<b>1.8</b>	<b>-2.3</b>	<b>2.0</b>	<b>Apr-06</b>
MSCI ACWI ex USA			-23.4	-18.0	-15.6	-2.0	-0.6	2.1	21.5	-14.2	27.2	4.5	-5.7	1.5	Apr-06
eV ACWI ex-US Large Cap Equity Net Rank			52	60	58	51	50	53	56	48	66	44	47		
<b>Core Real Estate</b>	<b>134,066,213</b>	<b>6.8</b>	<b>-5.1</b>	<b>-1.7</b>	<b>-0.3</b>	<b>3.5</b>	<b>2.1</b>	<b>4.7</b>	<b>10.0</b>	<b>1.6</b>	<b>5.2</b>	<b>5.2</b>	<b>-0.8</b>	<b>1.9</b>	<b>Mar-08</b>
NCREIF Property Index			N/A	3.0	4.5	6.2	7.5	10.1	6.4	6.7	7.0	8.0	13.3	6.0	Mar-08
InvMetrics Public DB Real Estate Priv Net Rank			98	98	96	96	98	99	6	99	89	94	98		
<b>Prime Property Fund</b>	<b>59,298,963</b>	<b>3.0</b>	<b>0.6</b>	<b>3.6</b>	<b>5.5</b>	<b>7.2</b>	<b>--</b>	<b>--</b>	<b>6.2</b>	<b>8.0</b>	<b>8.8</b>	<b>9.2</b>	<b>--</b>	<b>8.0</b>	<b>Sep-15</b>
NCREIF-ODCE			1.0	3.8	4.9	6.8	--	--	5.3	8.3	7.6	8.8	--	7.7	Sep-15
InvMetrics Public DB Real Estate Priv Net Rank			48	23	17	5	--	--	31	29	12	9	--		
<b>BlackRock US Real Estate</b>	<b>16,422,629</b>	<b>0.8</b>	<b>-28.5</b>	<b>-24.6</b>	<b>-24.0</b>	<b>-4.3</b>	<b>-1.5</b>	<b>--</b>	<b>23.1</b>	<b>-4.2</b>	<b>3.7</b>	<b>6.6</b>	<b>4.4</b>	<b>3.9</b>	<b>Sep-12</b>
DJ US Select RESI TR USD			-28.5	-24.6	-24.0	-4.3	-1.4	--	23.1	-4.2	3.8	6.6	4.5	3.9	Sep-12
<b>PGIM Real Estate US Debt Fund</b>	<b>58,344,620</b>	<b>2.9</b>	<b>1.1</b>	<b>4.0</b>	<b>5.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.5</b>	<b>Sep-18</b>
BBgBarc CMBS IG TR USD			0.5	2.1	5.4	--	--	--	8.3	--	--	--	--	6.3	Sep-18
InvMetrics Public DB Real Estate Priv Net Rank			18	9	16	--	--	--	37	--	--	--	--		

Policy Index (5/31/2019): 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, and 1% Citi 1 Month T-Bills. StanCERA Liquidity Blended BM (8/31/2019): 92% BBgBarc US Gov't/Credit 1-3 Yr. TR and 8% FTSE T-Bill 1 month TR. StanCERA Growth Blended BM (8/31/2019): 18% Russell 1000, 4% Russell 2000, 8% Russell 3000 + 3%, 30% MSCI ACWI ex-US Gross, 6% NCREIF Property, 6% actual private Value Add Real Estate returns, 17% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 3% actual Infrastructure returns, and 8% actual Private Credit returns. NCREIF Property Index performance not available at time of production.



# Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
<b>Value Add Real Estate</b>	<b>101,285,755</b>	<b>5.1</b>	<b>4.8</b>	<b>10.0</b>	<b>11.4</b>	<b>11.2</b>	<b>12.3</b>	<b>--</b>	<b>9.0</b>	<b>11.7</b>	<b>11.9</b>	<b>8.8</b>	<b>18.9</b>	<b>10.8</b>	<b>Jul-14</b>
NCREIF Property Index +2%			N/A	4.5	6.6	8.3	9.6	--	8.5	8.8	9.1	10.1	15.6	10.5	Jul-14
American Strategic Value Realty	67,630,097	3.4	N/A	4.3	6.1	8.2	10.4	--	8.5	9.2	10.1	11.7	18.3	10.9	Dec-14
NCREIF Property Index			N/A	3.0	4.5	6.2	7.5	--	6.4	6.7	7.0	8.0	13.3	7.8	Dec-14
Greenfield Gap VII	10,698,152	0.5	7.0	18.4	18.7	14.9	14.7	--	15.4	12.9	14.7	6.1	19.4	12.6	Jul-14
NCREIF ODCE + 1%			1.2	4.6	5.9	7.9	9.5	--	6.4	9.4	8.7	9.8	16.2	10.4	Jul-14
Greenfield Gap VIII	22,957,506	1.2	18.1	22.6	23.4	--	--	--	6.4	--	--	--	--	22.4	Apr-18
NCREIF ODCE + 1%			1.2	4.6	5.9	--	--	--	6.4	--	--	--	--	7.2	Apr-18
<b>Risk Parity</b>	<b>292,272,805</b>	<b>14.7</b>	<b>-9.8</b>	<b>-5.6</b>	<b>-0.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>22.0</b>	<b>-7.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.5</b>	<b>Nov-17</b>
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			-13.3	-8.2	-4.9	--	--	--	18.6	-6.0	--	--	--	-1.0	Nov-17
AQR Global Risk Premium - EL	147,900,082	7.4	-10.0	-5.1	-0.3	--	--	--	21.9	--	--	--	--	2.7	Mar-18
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			-13.3	-8.2	-4.9	--	--	--	18.6	--	--	--	--	-1.8	Mar-18
PanAgora Risk Parity Multi Asset	144,372,723	7.3	-9.7	-6.1	-1.0	--	--	--	22.1	-7.6	--	--	--	1.3	Nov-17
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			-13.3	-8.2	-4.9	--	--	--	18.6	-6.0	--	--	--	-1.0	Nov-17
<b>Infrastructure</b>	<b>38,711,962</b>	<b>1.9</b>	<b>5.3</b>	<b>10.9</b>	<b>15.2</b>	<b>17.1</b>	<b>--</b>	<b>--</b>	<b>13.1</b>	<b>8.3</b>	<b>20.9</b>	<b>4.1</b>	<b>--</b>	<b>8.3</b>	<b>May-15</b>
CPI + 5%			1.7	4.5	6.6	7.0	--	--	7.4	7.0	7.2	7.2	--	6.8	May-15
eV Infrastructure Net Rank			1	1	1	1	--	--	99	1	25	99	--		
MS Infrastructure Partners II	38,711,962	1.9	5.3	10.9	15.2	17.1	--	--	13.1	8.3	20.9	4.1	--	8.2	May-15
CPI + 5%			1.7	4.2	6.2	6.9	--	--	7.0	7.0	7.2	7.2	--	6.7	May-15
eV Infrastructure Net Rank			1	1	1	1	--	--	99	1	25	99	--		
<b>Private Credit</b>	<b>94,444,241</b>	<b>4.8</b>	<b>-5.0</b>	<b>-3.8</b>	<b>-2.4</b>	<b>1.8</b>	<b>1.9</b>	<b>--</b>	<b>4.8</b>	<b>4.2</b>	<b>-0.4</b>	<b>1.9</b>	<b>5.4</b>	<b>3.2</b>	<b>May-13</b>
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.7	May-13
Medley Capital	10,177,631	0.5	-3.1	-13.7	-16.7	-10.0	-4.3	--	-14.3	-12.7	3.4	3.4	5.4	-0.6	May-13
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.7	May-13
Owl Rock First Lien Fund	5,019,972	0.3	-0.1	--	--	--	--	--	--	--	--	--	--	-0.1	Oct-19
S&P/LSTA Leveraged Loan Index+2%			-12.6	--	--	--	--	--	--	--	--	--	--	-10.6	Oct-19
Raven Capital	7,944,078	0.4	-44.6	-42.7	-41.5	-13.4	-10.1	--	8.3	5.3	-6.1	-3.6	1.2	-8.9	May-13
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.7	May-13
Raven Opportunity III	44,724,086	2.3	3.8	7.2	10.3	9.3	--	--	9.9	11.0	-7.4	-4.5	--	2.6	Jul-15
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	--	--	10.8	2.4	6.2	12.3	--	3.1	Jul-15
White Oak Pinnacle	26,578,475	1.3	1.9	5.7	7.6	6.0	6.3	--	6.9	8.4	2.0	5.9	8.6	10.7	Aug-13
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.8	Aug-13

American Strategic Value Realty market value as of 12/31/2019, adjusted for any cash flows. NCREIF Property Index not available at time of production.



# Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
<b>Risk-Diversifying Sub-Portfolio</b>	<b>252,332,218</b>	<b>12.7</b>	<b>2.2</b>	<b>3.9</b>	<b>5.9</b>	<b>3.9</b>	<b>3.4</b>	<b>4.3</b>	<b>5.9</b>	<b>1.1</b>	<b>3.8</b>	<b>5.2</b>	<b>0.2</b>	<b>4.9</b>	<b>Nov-03</b>
<i>StanCERA Risk-Diversifying Blended BM</i>			4.0	5.4	7.6	3.8	2.6	2.7	5.3	1.4	1.3	1.3	0.9	--	Nov-03
<b>US Treasury</b>	<b>69,706,578</b>	<b>3.5</b>	<b>9.7</b>	<b>11.6</b>	<b>15.3</b>	<b>7.2</b>	<b>5.3</b>	<b>5.2</b>	<b>7.6</b>	<b>0.7</b>	<b>5.0</b>	<b>5.2</b>	<b>0.2</b>	<b>5.5</b>	<b>Nov-03</b>
<i>BBgBarc US Treasury 7-10 Yr TR</i>			10.1	11.8	16.2	7.0	4.4	5.4	8.5	0.9	2.6	1.1	1.6	5.3	Nov-03
<i>eV US Government Fixed Inc Net Rank</i>			1	1	1	1	1	1	1	86	1	1	78		
<b>Northern Trust Intermediate Gov't Bond</b>	<b>48,940,355</b>	<b>2.5</b>	<b>5.3</b>	<b>6.6</b>	<b>9.1</b>	--	--	--	<b>5.2</b>	<b>1.4</b>	--	--	--	<b>4.3</b>	<b>Jul-17</b>
<i>BBgBarc US Govt Int TR</i>			5.2	6.4	8.9	--	--	--	5.2	1.4	--	--	--	4.3	Jul-17
<i>eV US Government Fixed Inc Net Rank</i>			44	58	59	--	--	--	79	1	--	--	--		
<b>Northern Trust Long Term Gov't Bond</b>	<b>20,766,223</b>	<b>1.0</b>	<b>21.5</b>	<b>25.7</b>	<b>33.3</b>	--	--	--	<b>14.7</b>	<b>-1.7</b>	--	--	--	<b>14.0</b>	<b>Jul-17</b>
<i>BBgBarc US Govt Long TR</i>			20.6	24.8	32.3	--	--	--	14.7	-1.8	--	--	--	13.7	Jul-17
<i>US Long Duration Fixed Income Rank</i>			--	--	--	--	--	--	72	25	--	--	--		
<b>Short-Term Gov't/Credit</b>	<b>182,625,640</b>	<b>9.2</b>	<b>-0.4</b>	<b>1.2</b>	<b>2.8</b>	--	--	--	<b>5.4</b>	<b>1.2</b>	--	--	--	<b>2.2</b>	<b>Jul-17</b>
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jul-17
<i>eV US Short Duration Fixed Inc Net Rank</i>			62	58	54	--	--	--	11	75	--	--	--		
<b>DFA</b>	<b>182,625,640</b>	<b>9.2</b>	<b>-0.4</b>	<b>1.2</b>	<b>2.8</b>	--	--	--	<b>5.4</b>	<b>1.2</b>	--	--	--	<b>2.2</b>	<b>Jul-17</b>
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jul-17
<i>eV US Short Duration Fixed Inc Net Rank</i>			62	58	54	--	--	--	11	75	--	--	--		

Policy Index (5/31/2019): 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. StanCERA Risk-Diversifying Blended BM (8/31/2019): 27% BBgBarc US Treasury 7-10 Yr. TR and 73% BBgBarc US Gov't/Credit 1-3 Yr. TR.



# Total Fund

## Private Markets - Investment Summary

Period Ending: March 31, 2020

		Verus Internal Analysis									
		Market Value									
Inception Date	Manager Name/Fund Name	as of 3/31/2020 <sup>3</sup>	Total Commitment	Capital Called	% Called	Remaining Commitment	Total Distributions	Distrib./ Paid-In (DPI) <sup>1</sup>	Tot. Value/ Paid-In (TVPI) <sup>2</sup>	IRR Since Inception <sup>5</sup>	Latest Valuation
<b>Real Estate</b>											
7/31/2014	Greenfield Gap VII NCREIF-ODCE PME	\$10,698,152	\$15,000,000	\$14,335,328	96%	\$664,672	\$11,813,117	82.4%	157.0%	14.2%	12/31/2019
6/30/2018	Greenfield Gap VIII NCREIF-ODCE PME	\$22,957,506	\$40,000,000	\$19,201,369	48%	\$20,798,631	\$1,939,034	10.1%	129.7%	9.1%	12/31/2019
										27.1%	12/31/2019
										6.6%	12/31/2019
	<b>Total Real Estate</b>	<b>\$33,655,658</b>	\$55,000,000	\$33,536,697	61%	\$21,463,303	\$13,752,151	41.0%	141.4%		
	<b>% of Portfolio (Market Value)</b>	<b>1.7%</b>									
<b>Direct Lending</b>											
5/31/2013	Medley Capital S&P/LSTA Leveraged Loan Index PME	\$10,177,631	\$30,000,000	\$29,000,453	97%	\$999,547	\$24,492,888	84.5%	119.6%	0.4%	12/31/2019
10/31/2019	Owl Rock First Lien Fund	\$5,019,972	\$10,000,000	\$5,141,193	51%	\$4,858,807	\$115,474	2.2%	99.9%	3.5%	12/31/2019
5/31/2013	Raven Capital S&P/LSTA Leveraged Loan Index PME	\$7,944,078	\$40,000,000	\$34,505,763	86%	\$5,494,237	\$23,560,780	68.3%	91.3%	N/A	N/A
7/31/2015	Raven Opportunity III S&P/LSTA Leveraged Loan Index PME	\$44,724,086	\$50,000,000	\$47,252,238	95%	\$2,747,762	\$9,149,635	19.4%	114.0%	-2.8%	12/31/2019
8/31/2013	White Oak Pinnacle S&P/LSTA Leveraged Loan Index PME	\$26,578,475	\$40,000,000	\$40,000,000	100%	\$0	\$43,683,947	109.2%	175.7%	3.8%	12/31/2019
										6.8%	12/31/2019
										5.0%	12/31/2019
	<b>Total Direct Lending</b>	<b>\$94,444,241</b>	\$170,000,000	\$155,899,647	92%	\$14,100,353	\$101,002,724	64.8%	125.4%	7.5%	12/31/2019
	<b>% of Portfolio (Market Value)</b>	<b>4.8%</b>								4.0%	12/31/2019
<b>Infrastructure</b>											
5/31/2015	MS Infrastructure Partners II CPI PME	\$38,711,962	\$50,000,000	\$50,536,641	101%	-\$536,641	\$18,608,746	36.8%	113.4%	12.6%	12/31/2019
										2.0%	12/31/2019
	<b>Total Infrastructure</b>	<b>\$38,711,962</b>	\$50,000,000	\$50,536,641	101%	-\$536,641	\$18,608,746	36.8%	113.4%		
	<b>% of Portfolio (Market Value)</b>	<b>1.9%</b>									

1 (DPI) is equal to (capital returned / capital called)

2 (TVPI) is equal to (market value + capital returned)/ capital called

3 Last known market value + capital calls - distributions

4 Includes redeemed contributions, which are amounts withheld from distributions and applied to fulfill capital calls

5 Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each funds' IRR figure is provided by its respective manager. Benchmark IRRs are calculated using Long-Nickels ICM Methodology.



# Total Fund

## Performance Analysis - 3 and 5 Years (Net of Fees)

Period Ending: March 31, 2020

### 3 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
BlackRock Russell 1000 Growth	11.32%	0.00%	15.39%	0.01%	1.00	0.04%	1.00	0.62	0.04	99.97%	99.97%
BlackRock Russell 1000 Value	-2.05%	0.13%	16.75%	0.13%	1.00	0.06%	1.00	-0.22	2.17	100.31%	99.71%
Dodge & Cox-Equity	-2.84%	-0.66%	18.29%	-0.51%	1.07	3.56%	0.97	-0.25	-0.19	112.29%	107.79%
Capital Prospects	-9.98%	-0.47%	23.97%	0.11%	1.06	3.52%	0.98	-0.49	-0.13	102.26%	101.59%
LSV Asset Mgt	-4.89%	-2.93%	17.13%	-2.70%	1.12	3.21%	0.98	-0.39	-0.91	105.32%	112.37%
Fidelity	-1.56%	0.40%	14.93%	0.35%	0.98	2.07%	0.98	-0.22	0.19	96.53%	96.82%
Prime Property Fund	7.15%	0.34%	3.03%	0.16%	1.03	0.69%	0.95	1.79	0.49	105.35%	--
American Strategic Value Realty	8.24%	2.09%	3.60%	0.02%	1.34	1.01%	0.98	1.81	2.07	136.65%	--
BlackRock US Real Estate	-4.31%	-0.03%	18.35%	-0.03%	1.00	0.05%	1.00	-0.33	-0.57	99.69%	99.96%

### 5 Years

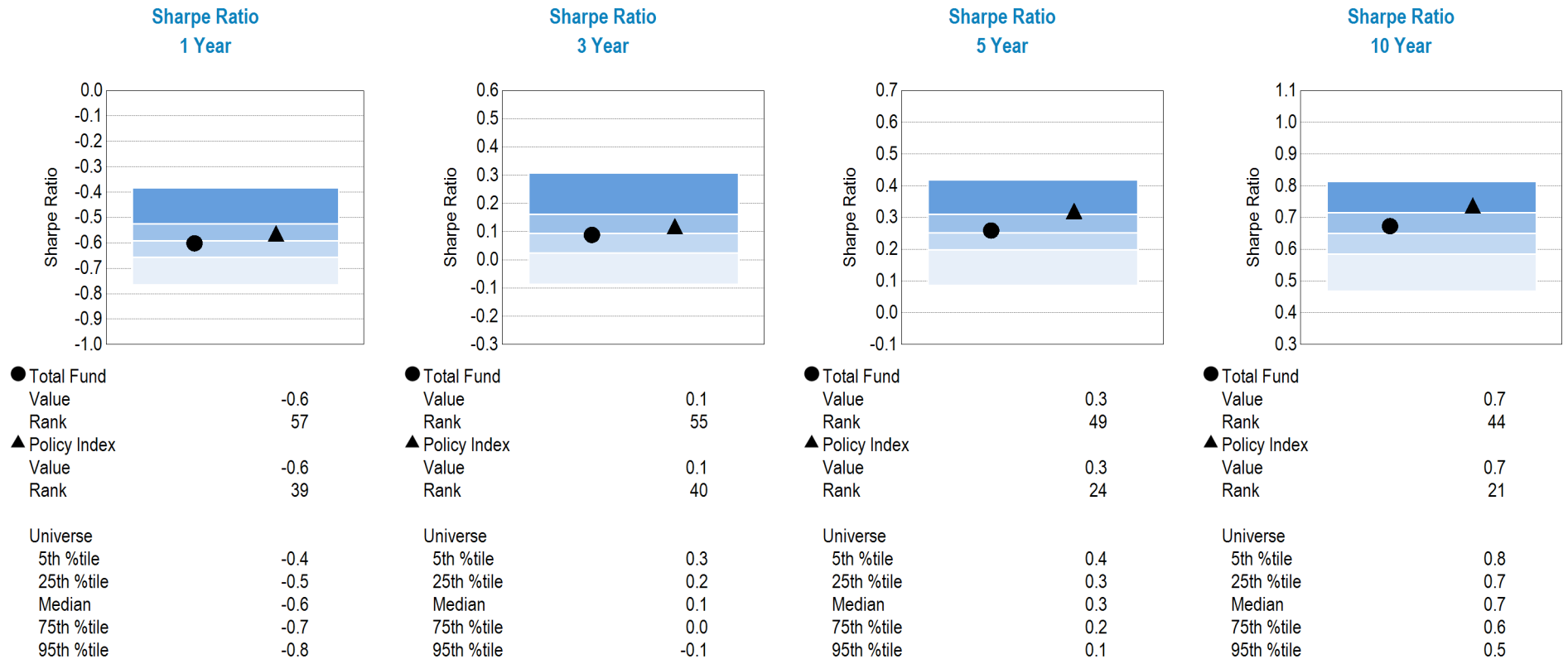
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
BlackRock Russell 1000 Growth	10.39%	0.02%	13.97%	0.03%	1.00	0.04%	1.00	0.66	0.67	100.07%	99.94%
BlackRock Russell 1000 Value	2.01%	0.11%	14.81%	0.11%	1.00	0.07%	1.00	0.06	1.64	100.27%	99.73%
Dodge & Cox-Equity	2.51%	0.61%	16.58%	0.44%	1.08	4.20%	0.94	0.08	0.14	117.95%	105.32%
Capital Prospects	-3.33%	-0.91%	20.80%	-0.83%	1.03	3.17%	0.98	-0.21	-0.29	93.61%	100.06%
LSV Asset Mgt	-1.79%	-1.15%	16.21%	-1.08%	1.10	3.13%	0.97	-0.18	-0.37	111.91%	107.14%
Fidelity	-0.41%	0.24%	14.00%	0.21%	0.95	2.17%	0.98	-0.11	0.11	90.95%	95.77%
BlackRock US Real Estate	-1.50%	-0.05%	17.17%	-0.05%	1.00	0.04%	1.00	-0.15	-1.14	99.63%	100.01%

Performance Analysis excludes closed end funds and those funds without 3 years of performance.



# Total Fund Sharpe Ratio Rankings (Net of Fees)

Period Ending: March 31, 2020





# Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2020

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Cash Account	Cash and Equivalents	0.10% of Assets	\$15,073,963	\$15,074	0.10%
Insight	Domestic Fixed Income	0.12% of Assets	\$202,872,317	\$243,447	0.12%
BlackRock Russell 1000 Growth	Domestic Equity	0.02% of Assets	\$147,201,980	\$29,440	0.02%
BlackRock Russell 1000 Value	Domestic Equity	0.02% of Assets	\$67,281,388	\$13,456	0.02%
Dodge & Cox-Equity	Domestic Equity	0.40% of First 10.0 Mil, 0.20% of Next 90.0 Mil, 0.15% Thereafter	\$66,603,012	\$153,206	0.23%
Capital Prospects	Domestic Equity	0.75% of Assets	\$51,955,756	\$389,668	0.75%
Northern Trust Russell 3000	Domestic Equity	0.02% of Assets	\$115,300,878	\$23,060	0.02%
LSV Asset Mgt	International Equity	0.75% of First 25.0 Mil, 0.65% of Next 25.0 Mil, 0.55% of Next 50.0 Mil, 0.45% Thereafter	\$198,671,008	\$1,069,020	0.54%
Fidelity	International Equity	0.25% of Assets	\$207,544,170	\$518,860	0.25%
Prime Property Fund	Real Estate	0.84% of Assets	\$59,298,963	\$498,111	0.84%
BlackRock US Real Estate	Real Estate	0.09% of First 100.0 Mil, 0.07% Thereafter	\$16,422,629	\$14,780	0.09%
American Strategic Value Realty	Real Estate	1.25% of First 10.0 Mil, 1.20% of Next 15.0 Mil, 1.10% of Next 25.0 Mil, 1.00% Thereafter	\$67,630,097	\$756,301	1.12%
AQR Global Risk Premium - EL	Alternatives	0.38% of Assets	\$147,900,082	\$562,020	0.38%
PanAgora Risk Parity Multi Asset	Alternatives	0.35% of Assets	\$144,372,723	\$505,305	0.35%
Owl Rock First Lien Fund	Alternatives	0.70% of Assets	\$5,019,972	\$35,140	0.70%
Northern Trust Intermediate Gov't Bond	Domestic Fixed Income	0.05% of First 25.0 Mil, 0.04% Thereafter	\$48,940,355	\$22,076	0.05%
Northern Trust Long Term Gov't Bond	Domestic Fixed Income	0.05% of First 25.0 Mil, 0.04% Thereafter	\$20,766,223	\$10,383	0.05%
DFA	Domestic Fixed Income	0.20% of First 25.0 Mil, 0.10% Thereafter	\$182,625,640	\$207,626	0.11%
<b>Total</b>			<b>\$1,713,525,399</b>	<b>\$5,066,974</b>	<b>0.30%</b>

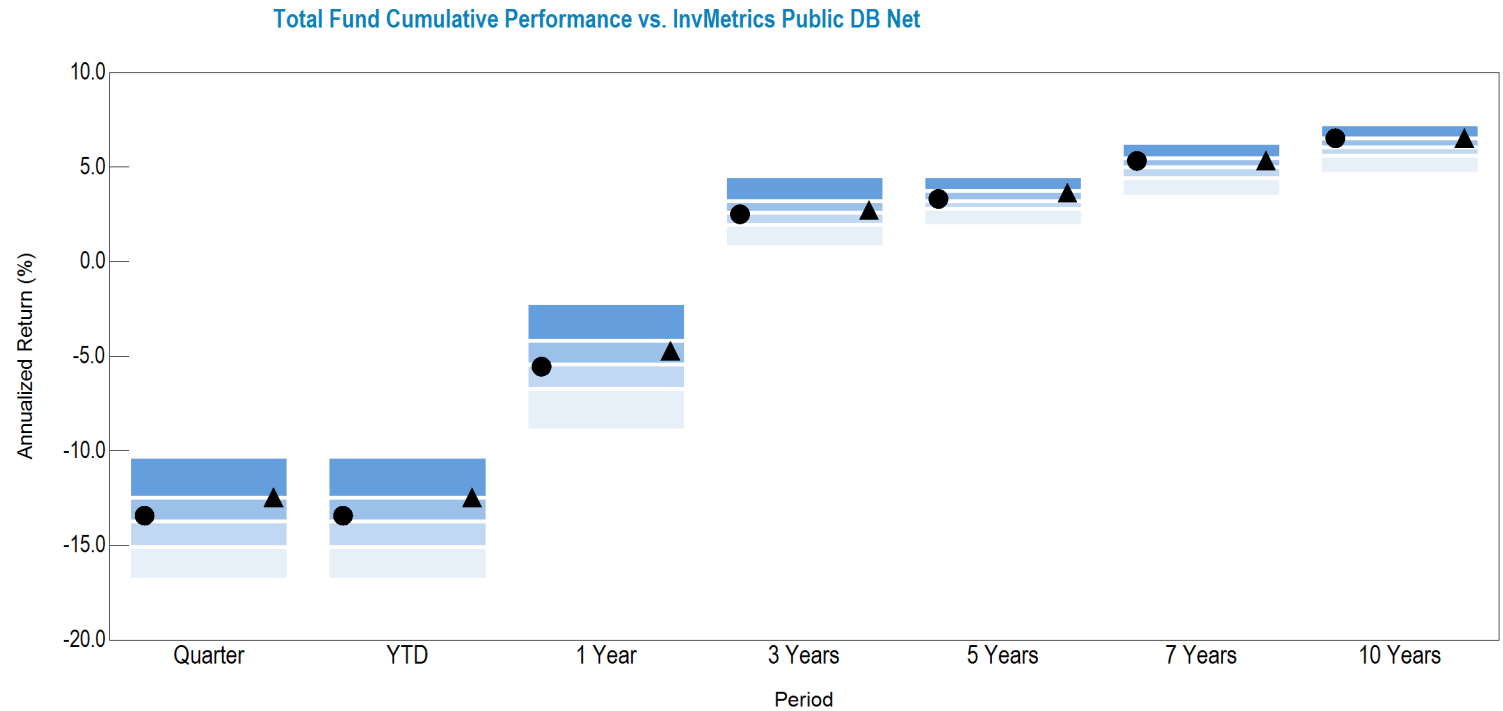
Closed end funds excluded from fee analysis. Fidelity has performance based fees which are not included in the analysis above; fee shown is the annual base fee only. Northern Trust aggregates StanCERA's Northern Trust Bond Funds.



# Total Fund

## Peer Universe Comparison: Cumulative Performance (Net of Fees)

Period Ending: March 31, 2020



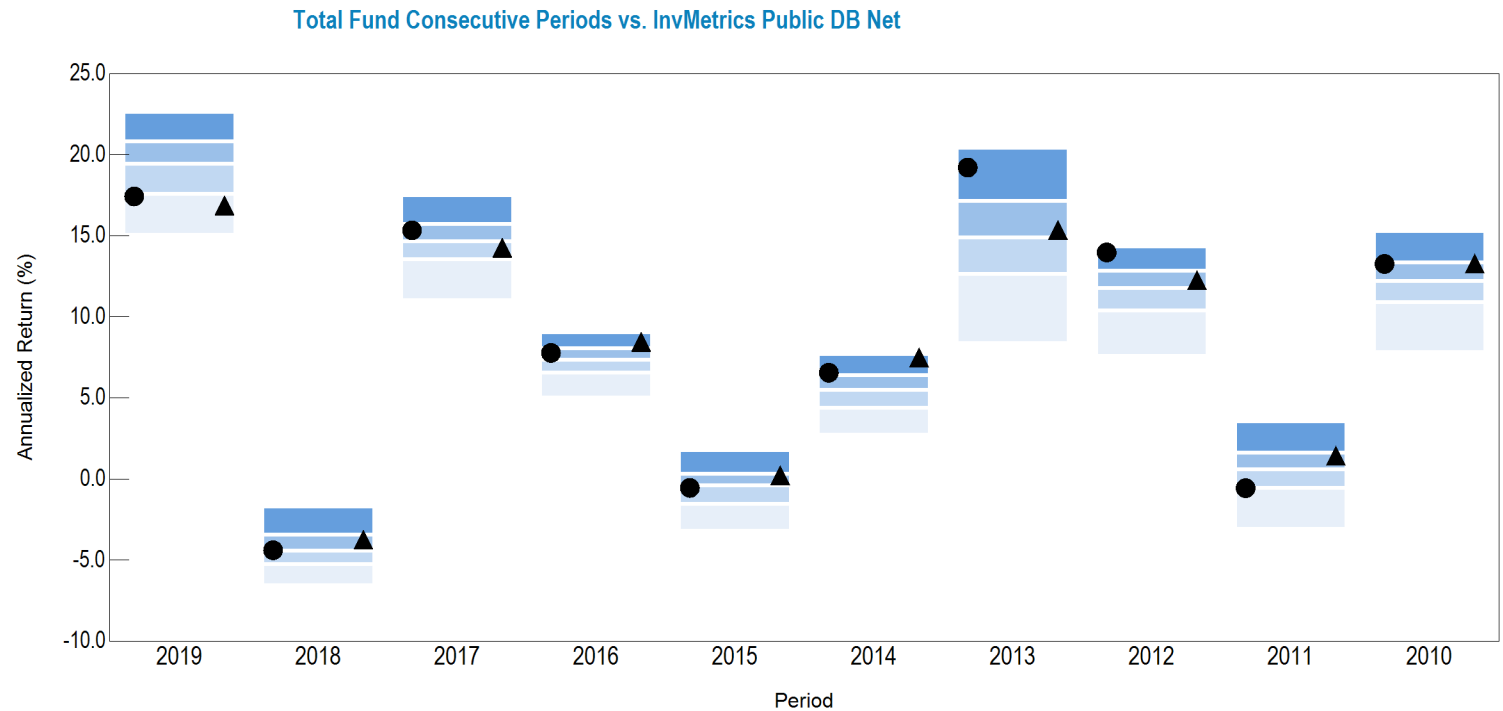
	Quarter		YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>Return (Rank)</b>	-10.3		-10.3		-2.2		4.5		4.5		6.3		7.2	
<b>5th Percentile</b>	-10.3		-10.3		-2.2		4.5		4.5		6.3		7.2	
<b>25th Percentile</b>	-12.5		-12.5		-4.2		3.2		3.8		5.5		6.5	
<b>Median</b>	-13.7		-13.7		-5.4		2.6		3.2		5.0		6.1	
<b>75th Percentile</b>	-15.1		-15.1		-6.7		2.0		2.8		4.4		5.6	
<b>95th Percentile</b>	-16.8		-16.8		-8.9		0.8		1.9		3.5		4.7	
<b># of Portfolios</b>	239		239		238		229		214		196		161	
<b>● Total Fund</b>	-13.4	(44)	-13.4	(44)	-5.5	(54)	2.5	(56)	3.3	(46)	5.3	(35)	6.5	(26)
<b>▲ Policy Index</b>	-12.4	(25)	-12.4	(25)	-4.7	(33)	2.7	(45)	3.6	(29)	5.4	(34)	6.5	(25)



# Total Fund

## Peer Universe Comparison: Consecutive Periods (Net of Fees)

Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	22.6	-1.7	17.5	9.0	1.7	7.7	20.4	14.3	3.6	15.3
25th Percentile	20.8	-3.4	15.8	8.1	0.4	6.4	17.2	12.9	1.6	13.4
Median	19.5	-4.4	14.7	7.4	-0.4	5.5	14.9	11.8	0.6	12.2
75th Percentile	17.6	-5.2	13.6	6.6	-1.5	4.4	12.7	10.4	-0.5	10.9
95th Percentile	15.1	-6.5	11.1	5.0	-3.2	2.7	8.4	7.6	-3.1	7.9
# of Portfolios	550	496	269	269	262	210	191	159	137	131
● Total Fund	17.4 (77)	-4.4 (51)	15.3 (36)	7.8 (36)	-0.6 (55)	6.5 (22)	19.2 (12)	14.0 (9)	-0.6 (77)	13.3 (27)
▲ Policy Index	16.9 (84)	-3.7 (34)	14.3 (60)	8.5 (18)	0.2 (29)	7.5 (8)	15.4 (45)	12.3 (41)	1.4 (30)	13.3 (27)



## Domestic Equity Managers

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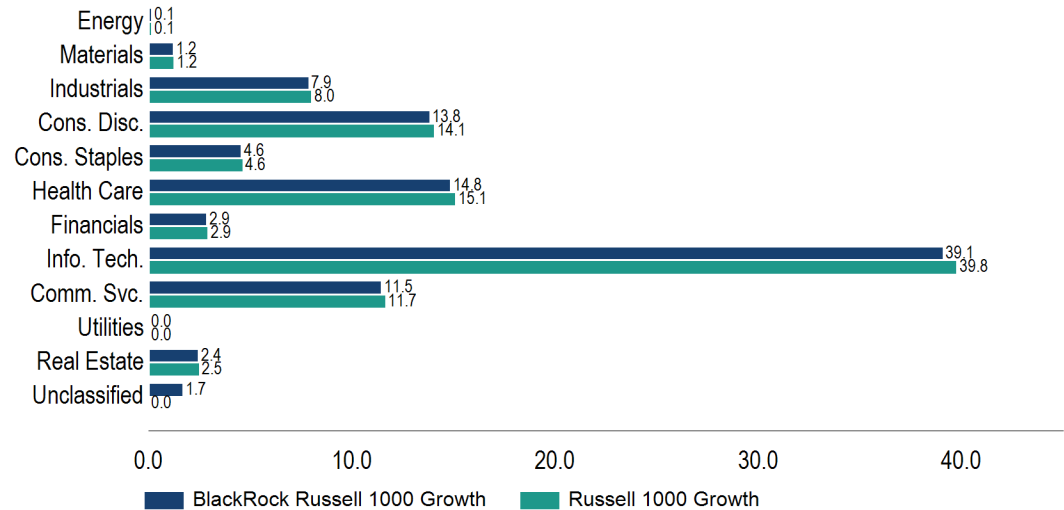
# BlackRock Russell 1000 Growth Manager Portfolio Overview

Period Ending: March 31, 2020

## Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	532	532
Weighted Avg. Market Cap. (\$B)	349.88	355.15
Median Market Cap. (\$B)	9.83	9.83
Price To Earnings	23.77	23.75
Price To Book	6.74	6.72
Price To Sales	3.97	3.97
Return on Equity (%)	35.35	35.36
Yield (%)	1.34	1.34
Beta	1.00	1.00

## Sector Allocation (%) vs Russell 1000 Growth



## Largest Holdings

	End Weight	Return
MICROSOFT	9.02	0.28
APPLE	7.93	-13.20
AMAZON.COM	6.17	5.51
FACEBOOK CLASS A	3.02	-18.73
ALPHABET 'C'	2.64	-13.03
ALPHABET A	2.63	-13.25
VISA 'A'	2.09	-14.13
UNITEDHEALTH GROUP	1.78	-14.83
ISHARES RUSSELL 1000 GROWTH ETF	1.68	-14.11
MASTERCARD	1.62	-18.99

## Bottom Contributors

	Avg Wgt	Return	Contribution
APPLE	2.82	-13.20	-0.37
BOEING	0.37	-53.94	-0.20
FACEBOOK CLASS A	1.06	-18.73	-0.20
ALPHABET A	0.87	-13.25	-0.11
ALPHABET 'C'	0.86	-13.03	-0.11
MASTERCARD	0.57	-18.99	-0.11
VISA 'A'	0.69	-14.13	-0.10
UNITEDHEALTH GROUP	0.60	-14.83	-0.09
CISCO SYSTEMS	0.44	-17.44	-0.08
MERCK & COMPANY	0.47	-14.73	-0.07

## Top Contributors

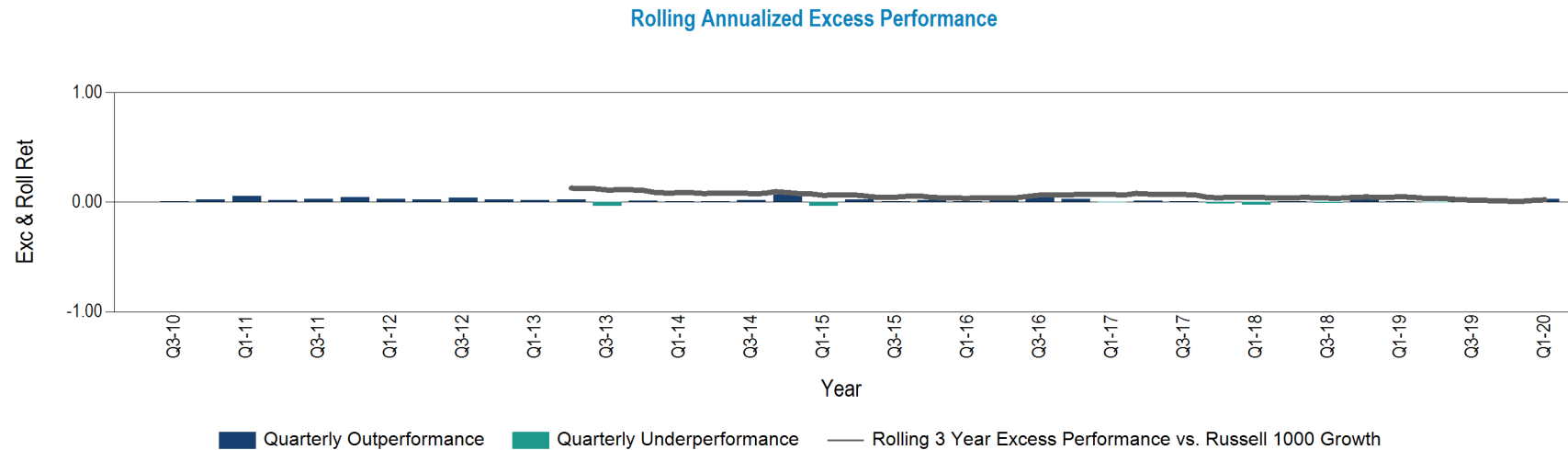
	Avg Wgt	Return	Contribution
AMAZON.COM	1.65	5.51	0.09
NETFLIX	0.29	16.05	0.05
NVIDIA	0.30	12.10	0.04
TESLA	0.13	25.26	0.03
ELI LILLY	0.24	6.10	0.01
VERTEX PHARMS.	0.12	8.68	0.01
DEXCOM	0.04	23.10	0.01
EQUINIX REIT	0.11	7.45	0.01
CITRIX SYS.	0.03	28.02	0.01
MICROSOFT	2.57	0.28	0.01

Unclassified sector allocation includes cash allocations.

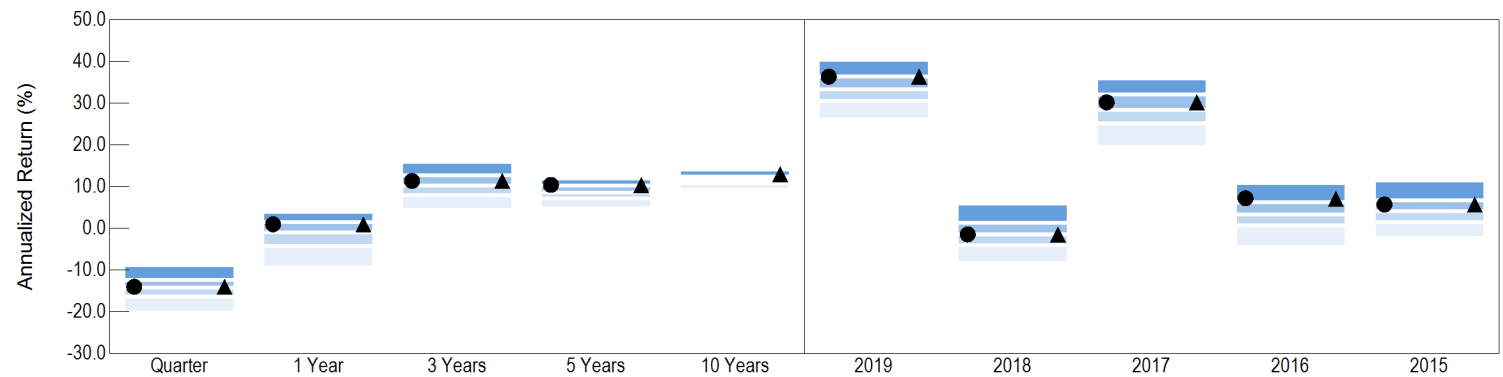


# BlackRock Russell 1000 Growth Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2020



## BlackRock Russell 1000 Growth vs. eV US Large Cap Growth Equity Net Universe

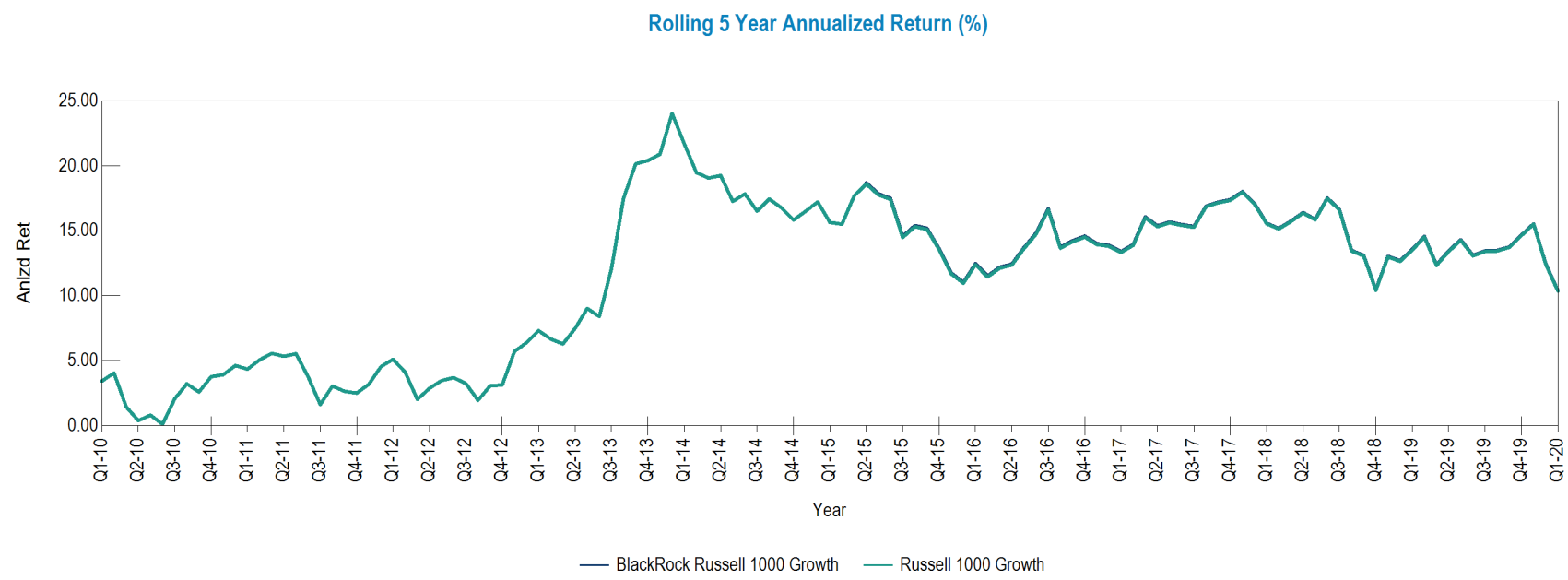
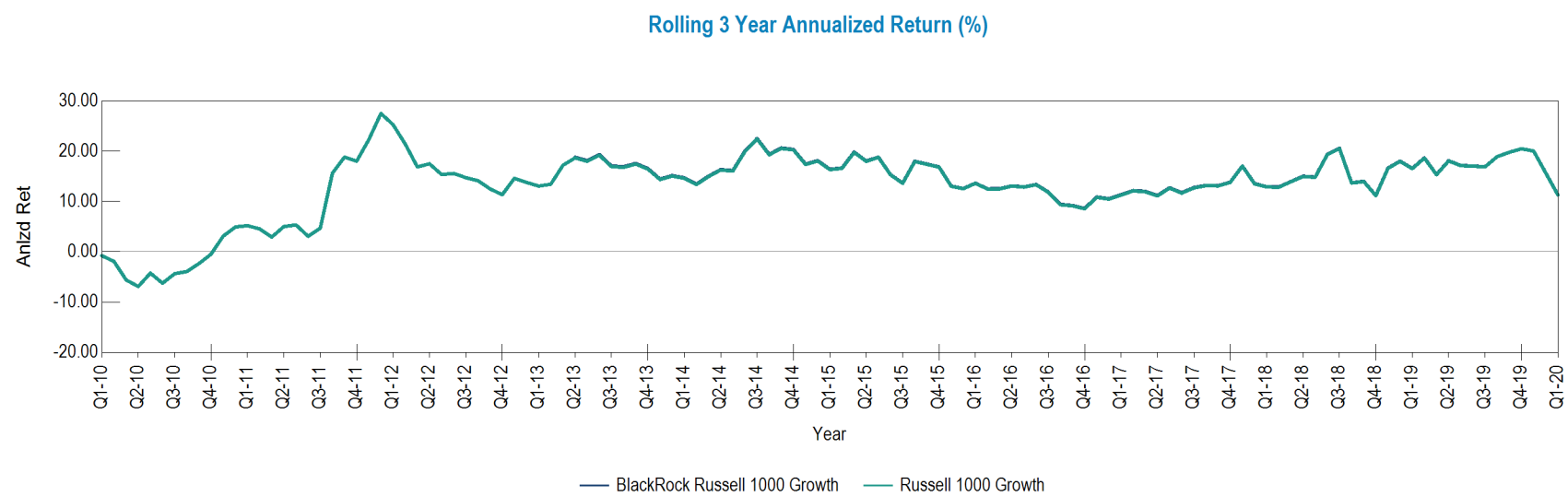


		Return (Rank)																			
5th Percentile		-8.9	3.9	15.9	11.9	14.0	40.3	5.8	36.0	10.8	11.4										
25th Percentile		-12.3	1.6	12.8	10.3	12.5	36.5	1.4	32.2	6.3	6.8										
Median		-14.1	-1.0	10.2	8.6	11.8	33.4	-1.3	28.5	3.4	4.1										
75th Percentile		-16.3	-4.1	8.1	7.2	10.9	30.6	-4.1	25.2	0.8	1.6										
95th Percentile		-20.2	-9.3	4.5	4.8	9.3	26.1	-8.4	19.5	-4.5	-2.3										
# of Portfolios		168	166	160	150	128	186	179	182	182	175										
●	BlackRock Russell 1000 Growth	-14.1	(50)	0.9	(33)	11.3	(39)	10.4	(24)	--	(--)	36.4	(27)	-1.5	(52)	30.2	(38)	7.2	(19)	5.7	(35)
▲	Russell 1000 Growth	-14.1	(50)	0.9	(34)	11.3	(39)	10.4	(24)	13.0	(18)	36.4	(27)	-1.5	(52)	30.2	(38)	7.1	(20)	5.7	(35)



BlackRock Russell 1000 Growth  
Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020

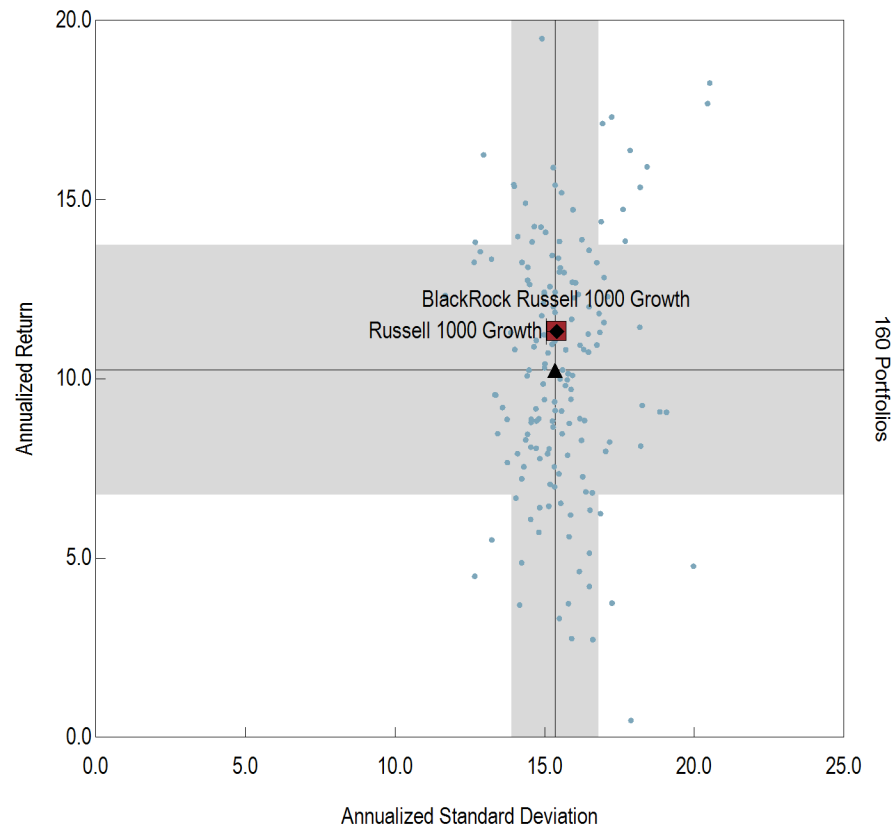




# BlackRock Russell 1000 Growth Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020

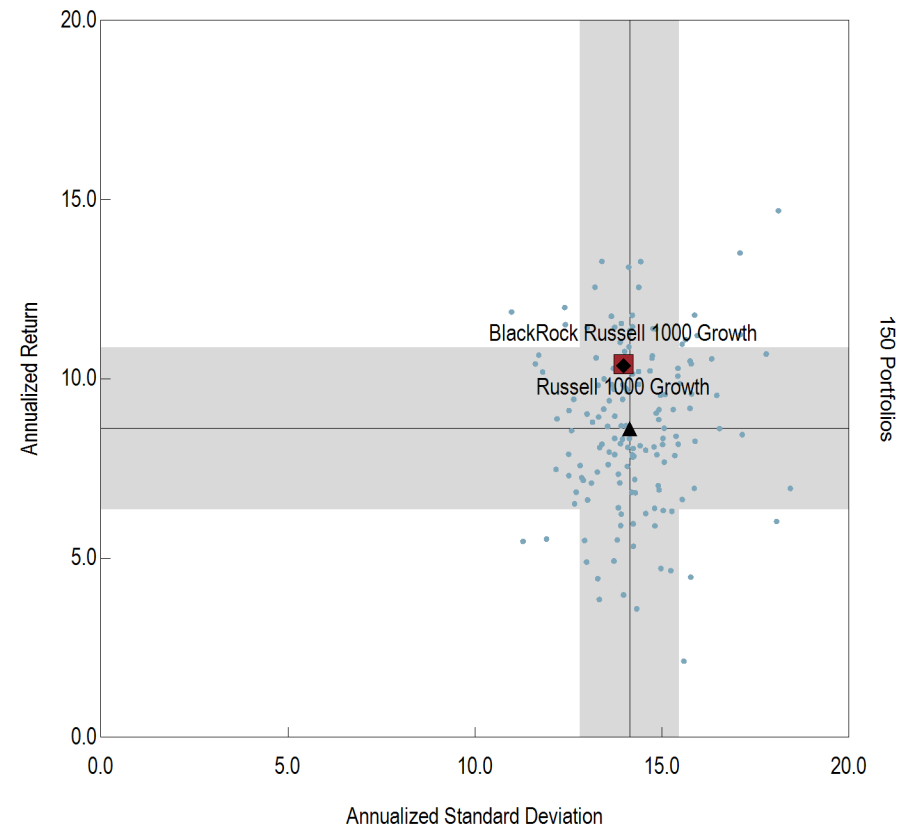
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Growth	11.34%	15.39%	0.63
Russell 1000 Growth	11.32%	15.40%	0.62
eV US Large Cap Growth Equity Net Median	10.24%	15.35%	0.55

5 Years



5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Growth	10.4%	14.0%	0.7
Russell 1000 Growth	10.4%	14.0%	0.7
eV US Large Cap Growth Equity Net Median	8.6%	14.1%	0.5



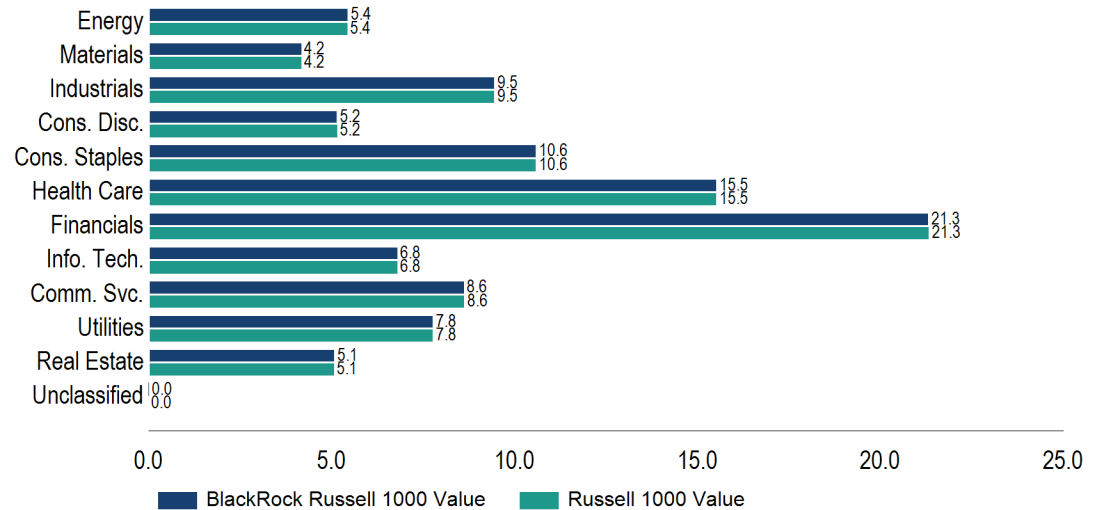
# BlackRock Russell 1000 Value Manager Portfolio Overview

Period Ending: March 31, 2020

## Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	763	765
Weighted Avg. Market Cap. (\$B)	98.92	98.90
Median Market Cap. (\$B)	6.31	6.29
Price To Earnings	12.56	12.56
Price To Book	2.15	2.17
Price To Sales	1.86	1.86
Return on Equity (%)	15.02	15.02
Yield (%)	3.48	3.48
Beta	1.00	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
BERKSHIRE HATHAWAY 'B'	3.42	-19.28
JOHNSON & JOHNSON	2.83	-9.52
JP MORGAN CHASE & CO.	2.69	-35.00
PROCTER & GAMBLE	2.41	-11.40
INTEL	2.22	-9.13
VERIZON COMMUNICATIONS	2.13	-11.58
AT&T	2.04	-24.41
PFIZER	1.74	-15.84
BANK OF AMERICA	1.63	-39.32
WALT DISNEY	1.61	-33.21

## Bottom Contributors

	Avg Wgt	Return	Contribution
JP MORGAN CHASE & CO.	1.01	-35.00	-0.35
EXXON MOBIL	0.68	-44.80	-0.31
BANK OF AMERICA	0.66	-39.32	-0.26
WELLS FARGO & CO	0.47	-46.09	-0.22
CHEVRON	0.53	-39.17	-0.21
BERKSHIRE HATHAWAY 'B'	1.03	-19.28	-0.20
WALT DISNEY	0.58	-33.21	-0.19
CITIGROUP	0.40	-46.92	-0.19
AT&T	0.66	-24.41	-0.16
RAYTHEON TECHNOLOGIES	0.28	-36.71	-0.10

## Top Contributors

	Avg Wgt	Return	Contribution
GILEAD SCIENCES	0.16	16.19	0.03
REGENERON PHARMS.	0.06	30.04	0.02
DIGITAL REALTY TST.	0.06	17.02	0.01
NORTONLIFELOCK	0.03	27.67	0.01
BIOGEN	0.08	6.62	0.01
SPRINT	0.01	65.45	0.00
QIAGEN	0.02	23.08	0.00
NEWMONT	0.08	4.50	0.00
PROGRESSIVE OHIO	0.07	5.30	0.00
LEGG MASON	0.01	37.24	0.00

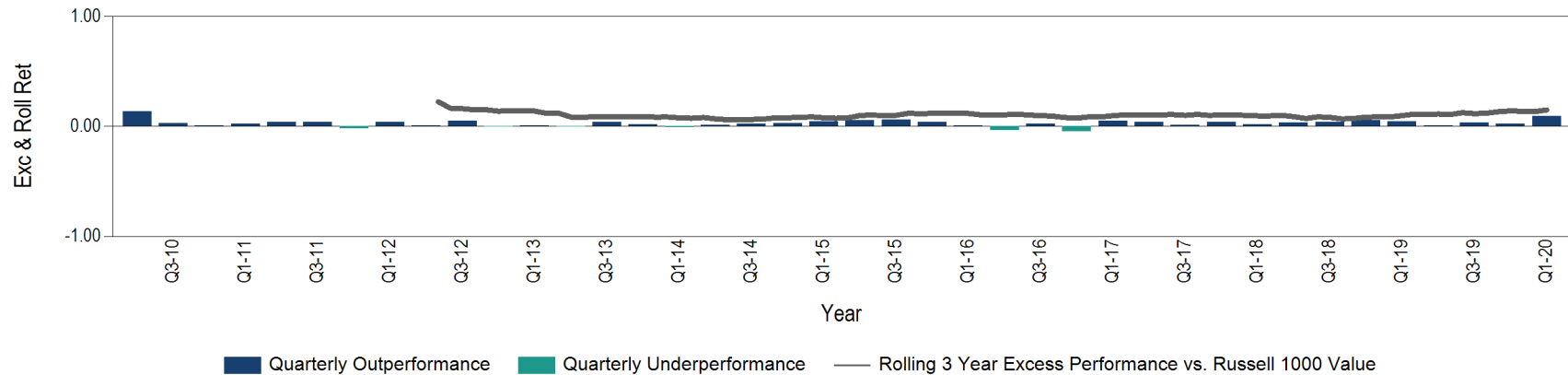
Holdings as of 2/29/2020. Unclassified sector allocation includes cash allocations.



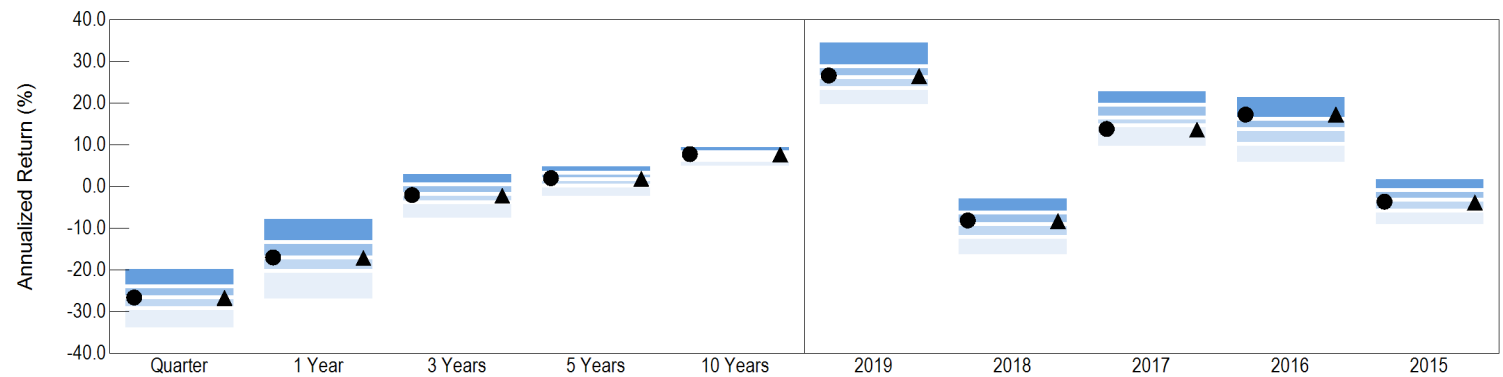
# BlackRock Russell 1000 Value Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2020

## Rolling Annualized Excess Performance



## BlackRock Russell 1000 Value vs. eV US Large Cap Value Equity Net Universe

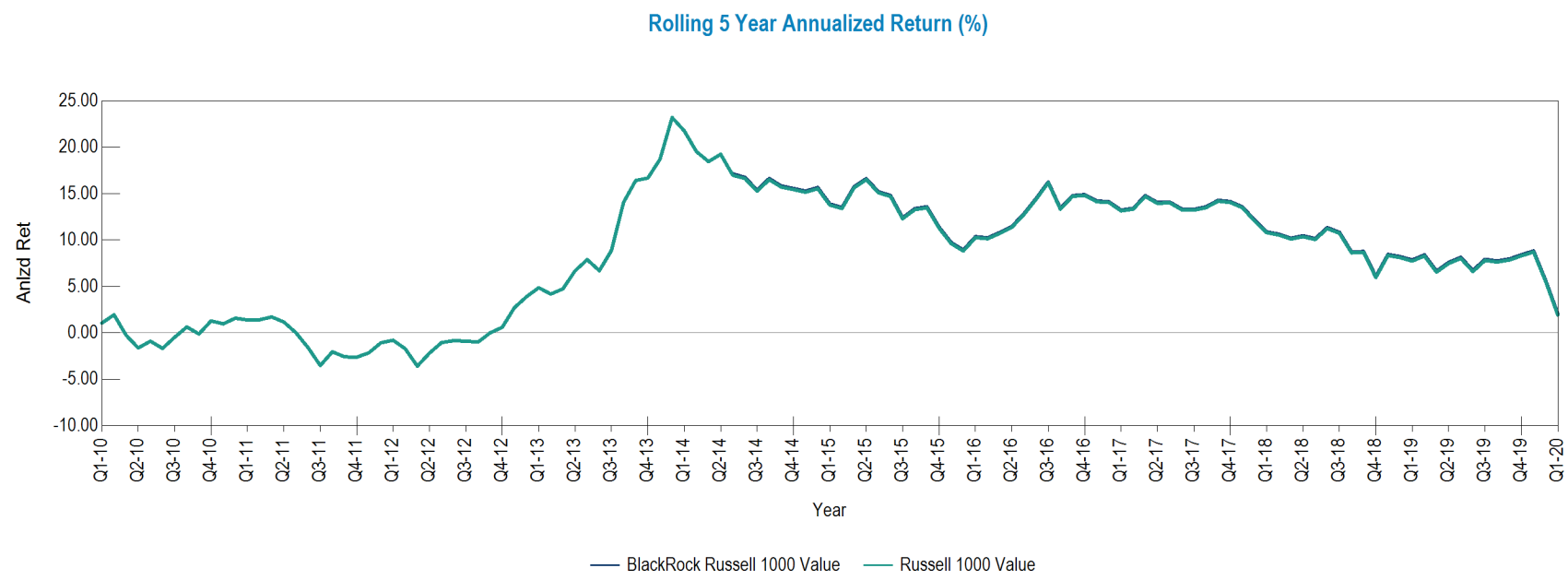
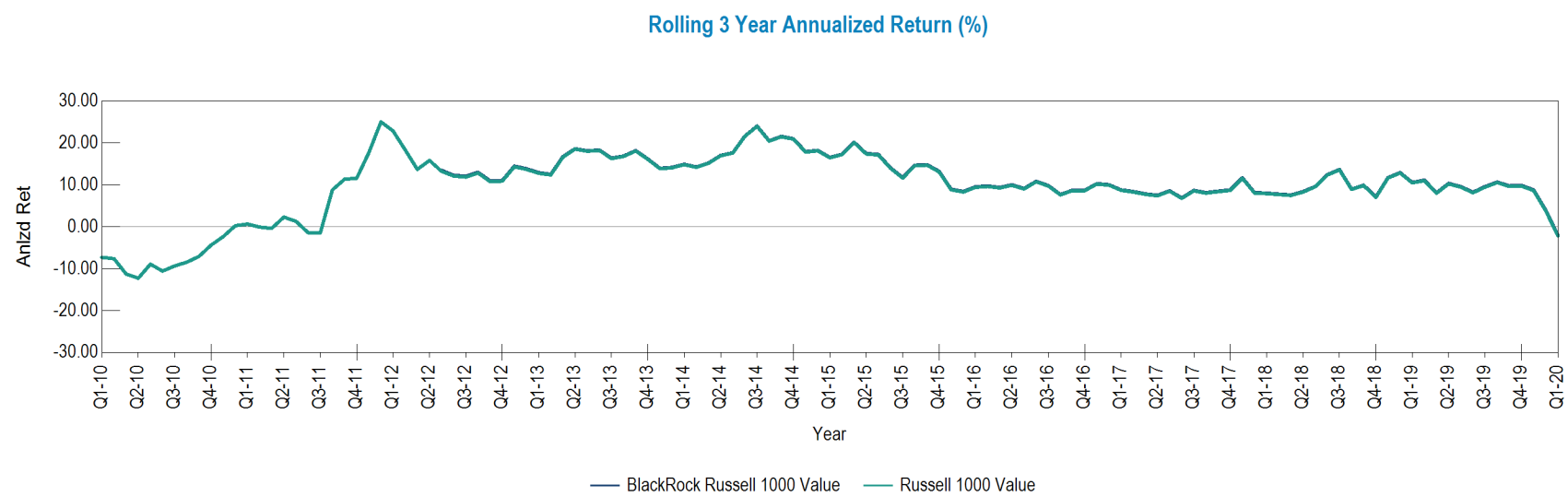


	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	-19.4		-7.4		3.4		5.2		9.9		34.9		-2.5		23.3		21.8		2.2	
25th Percentile	-23.8		-13.2		0.7		3.4		8.3		28.9		-6.1		19.7		16.3		-0.8	
Median	-26.5		-16.9		-1.7		1.9		7.4		26.3		-9.0		16.7		13.8		-3.1	
75th Percentile	-29.1		-20.2		-3.7		0.4		6.4		23.8		-12.0		14.8		10.4		-5.7	
95th Percentile	-34.2		-27.3		-7.9		-2.5		4.7		19.5		-16.7		9.4		5.6		-9.4	
# of Portfolios	228		226		221		213		172		249		239		231		225		195	
● BlackRock Russell 1000 Value	-26.6 (53)		-17.0 (52)		-2.0 (54)		2.0 (47)		7.8 (42)		26.7 (47)		-8.1 (40)		13.8 (83)		17.3 (20)		-3.6 (57)	
▲ Russell 1000 Value	-26.7 (53)		-17.2 (52)		-2.2 (57)		1.9 (50)		7.7 (44)		26.5 (49)		-8.3 (43)		13.7 (86)		17.3 (19)		-3.8 (59)	



BlackRock Russell 1000 Value  
Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

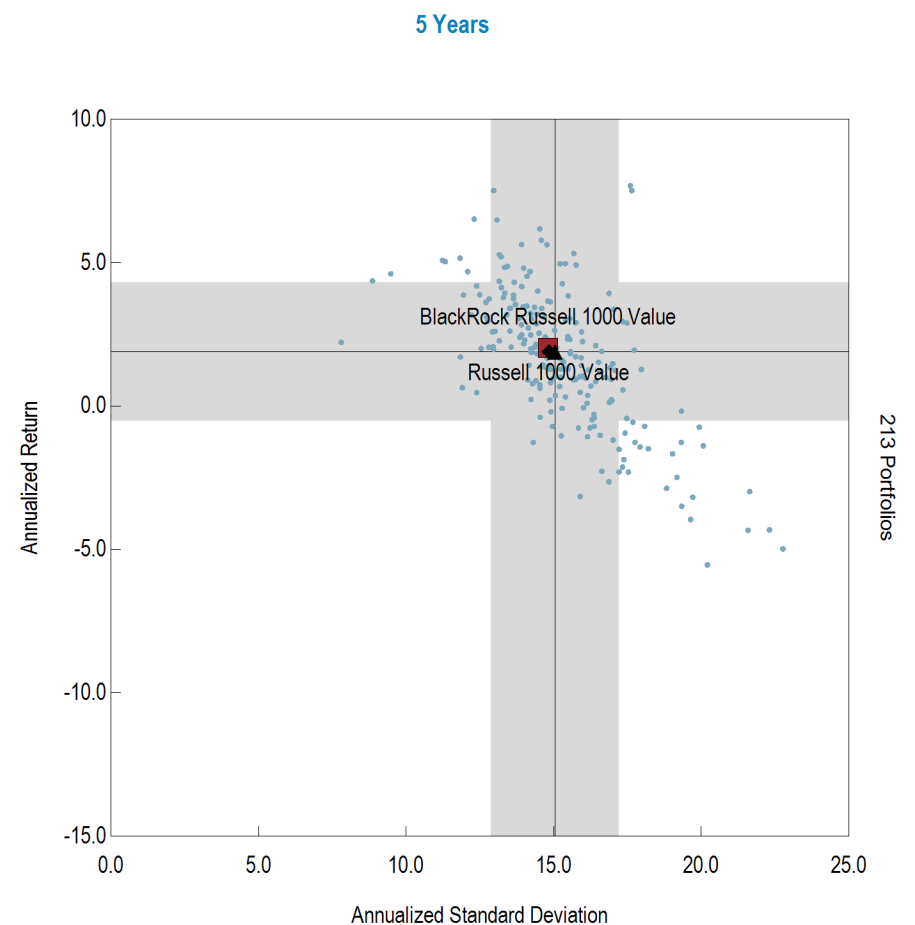
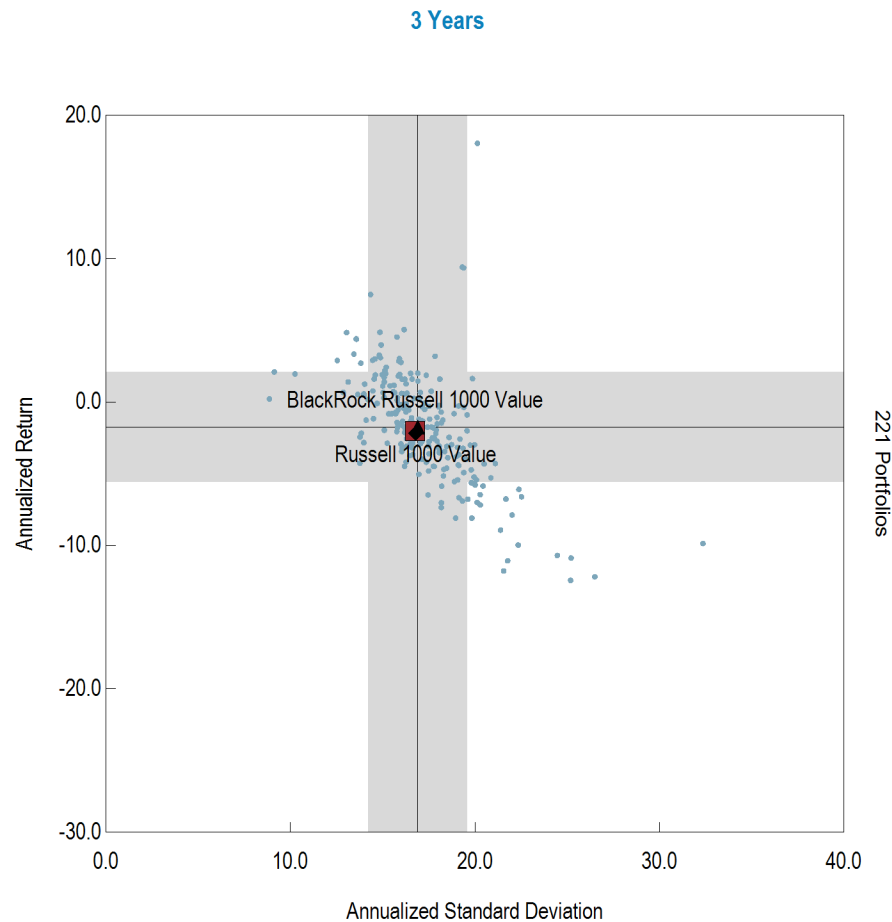
Period Ending: March 31, 2020





# BlackRock Russell 1000 Value Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020



	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Value	-2.03%	16.75%	-0.22
Russell 1000 Value	-2.18%	16.79%	-0.23
eV US Large Cap Value Equity Net Median	-1.73%	16.90%	-0.20

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Value	2.0%	14.8%	0.1
Russell 1000 Value	1.9%	14.8%	0.1
eV US Large Cap Value Equity Net Median	1.9%	15.0%	0.0



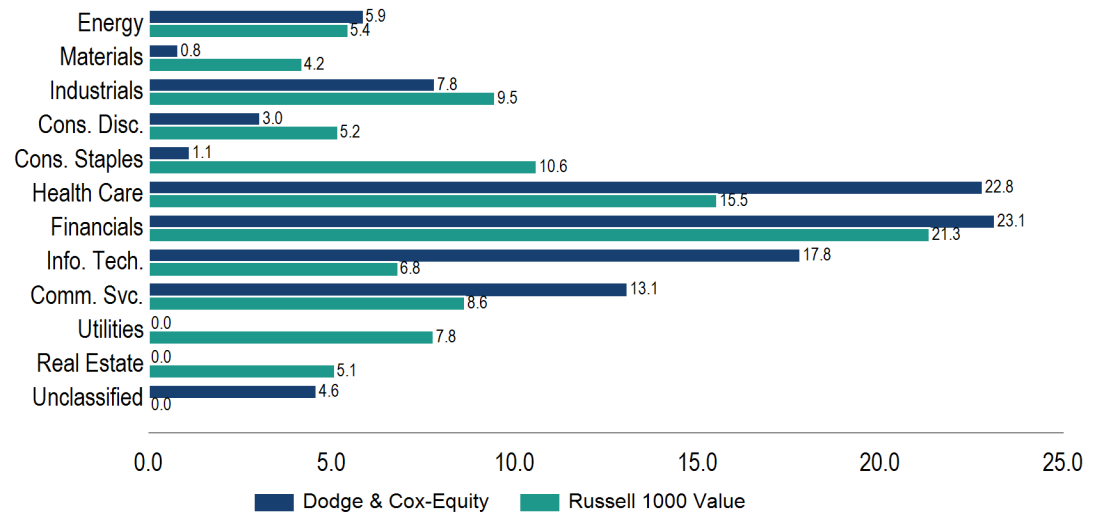
# Dodge & Cox-Equity Manager Portfolio Overview

Period Ending: March 31, 2020

## Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	68	765
Weighted Avg. Market Cap. (\$B)	130.28	98.90
Median Market Cap. (\$B)	20.59	6.29
Price To Earnings	11.73	12.56
Price To Book	2.45	2.17
Price To Sales	1.46	1.86
Return on Equity (%)	14.94	15.02
Yield (%)	3.04	3.48
Beta	1.06	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
CHARLES SCHWAB	3.95	-29.04
FEDEX	3.66	-19.40
ALPHABET 'C'	3.58	-13.03
MICROSOFT	3.50	0.28
BANK OF AMERICA	3.27	-39.32
COMCAST A	3.22	-22.68
HP	3.13	-14.77
CHARTER COMMS.CL.A	3.03	-10.05
SANOFI ADR 2:1 (XSC)	3.00	-12.91
WELLS FARGO & CO	2.93	-46.09

## Bottom Contributors

	Avg Wgt	Return	Contribution
OCCIDENTAL PTL.	2.76	-70.13	-1.93
CAPITAL ONE FINL.	3.30	-50.81	-1.68
WELLS FARGO & CO	3.36	-46.09	-1.55
BANK OF AMERICA	3.05	-39.32	-1.20
CHARLES SCHWAB	3.50	-29.04	-1.02
APACHE	1.01	-83.54	-0.84
METLIFE	2.00	-39.49	-0.79
BAKER HUGHES A	1.32	-58.69	-0.78
RAYTHEON TECHNOLOGIES	2.11	-36.71	-0.78
SCHLUMBERGER	1.14	-65.95	-0.75

## Top Contributors

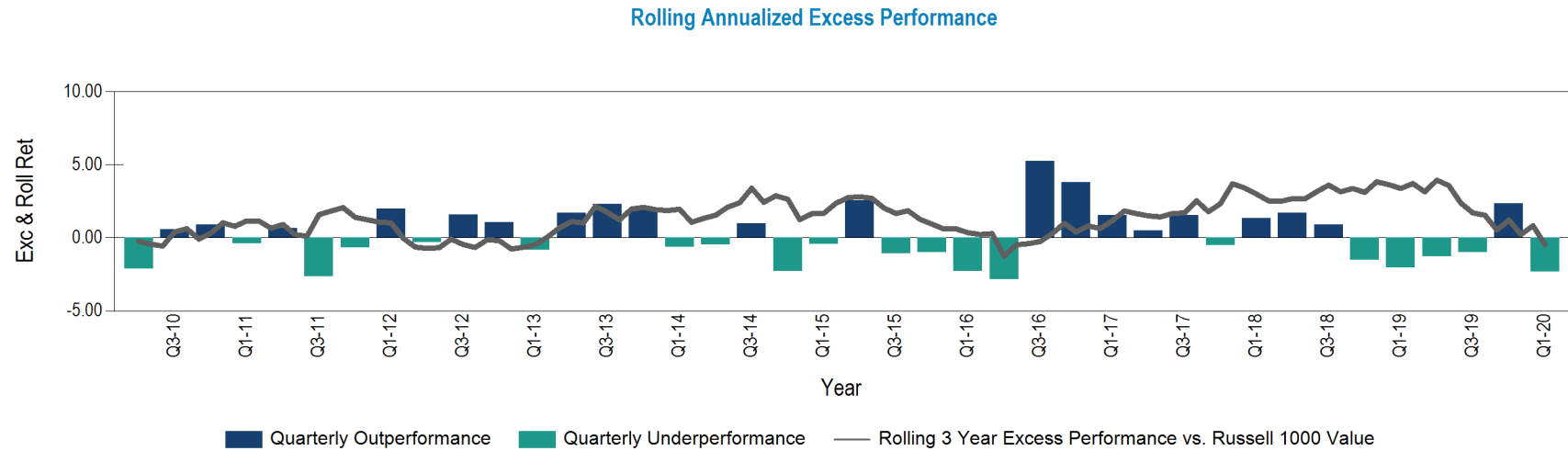
	Avg Wgt	Return	Contribution
SPRINT	0.49	65.45	0.32
GILEAD SCIENCES	1.30	16.19	0.21
ELI LILLY	0.92	6.10	0.06
MICROSOFT	1.22	0.28	0.00
BIOMARIN PHARM.	0.32	-0.06	0.00
ALPHABET A	0.17	-13.25	-0.02
ALNYLAM	0.53	-5.49	-0.03
PHARMACEUTICALS	0.26	-16.14	-0.04
INCYTE	0.16	-35.94	-0.06
NEWS 'A'	0.35	-19.60	-0.07

Holdings as of 2/29/2020. Unclassified sector allocation includes cash allocations.

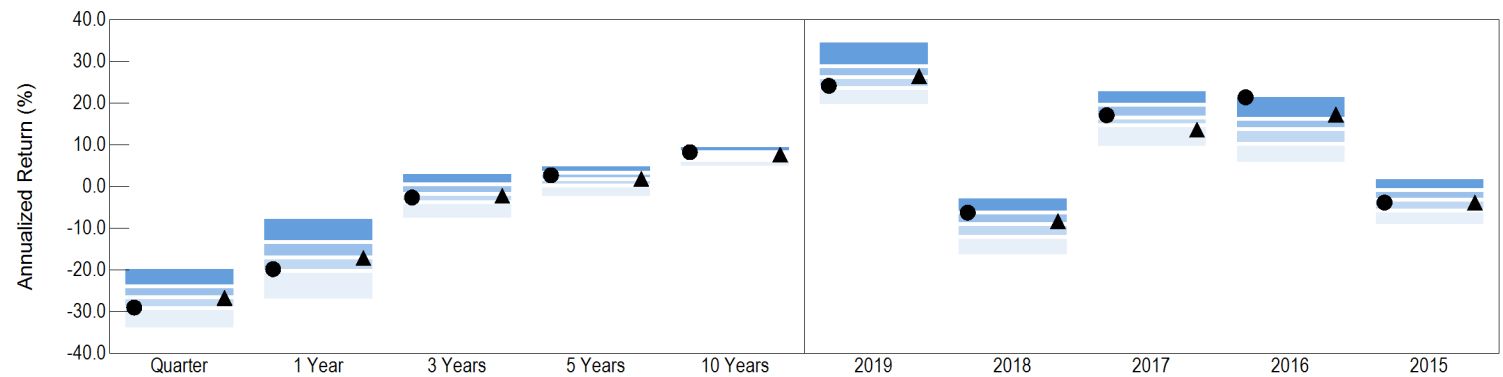


# Dodge & Cox-Equity Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2020



## Dodge & Cox-Equity vs. eV US Large Cap Value Equity Net Universe



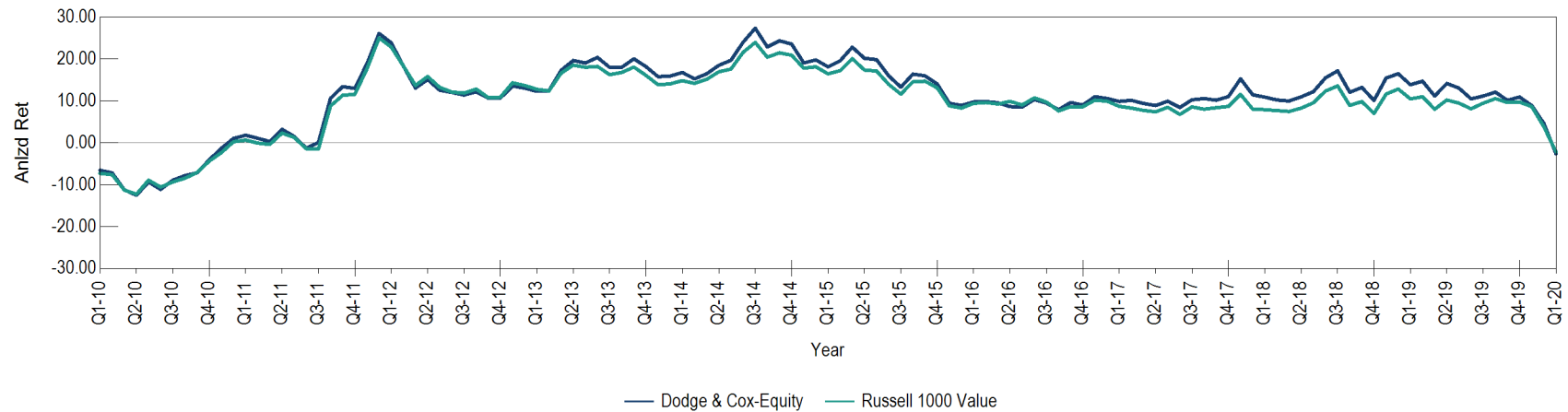
	Return (Rank)															
5th Percentile	-19.4	(75)	-7.4	(72)	3.4	(62)	5.2	(34)	9.9	(27)	34.9	(72)	-2.5	(26)	23.3	(45)
25th Percentile	-23.8	(53)	-13.2	(52)	0.7	(57)	3.4	(50)	8.3	(44)	28.9	(49)	-6.1	(43)	19.7	(86)
Median	-26.5		-16.9		-1.7		1.9		7.4		26.3		-9.0		16.7	
75th Percentile	-29.1		-20.2		-3.7		0.4		6.4		23.8		-12.0		14.8	
95th Percentile	-34.2		-27.3		-7.9		-2.5		4.7		19.5		-16.7		9.4	
# of Portfolios	228		226		221		213		172		249		239		231	
● Dodge & Cox-Equity	-29.0	(75)	-19.8	(72)	-2.6	(62)	2.7	(34)	8.3	(27)	24.2	(72)	-6.3	(26)	17.1	(45)
▲ Russell 1000 Value	-26.7	(53)	-17.2	(52)	-2.2	(57)	1.9	(50)	7.7	(44)	26.5	(49)	-8.3	(43)	13.7	(86)
															21.4	(6)
															17.3	(19)
															-3.9	(59)
															-3.8	(59)



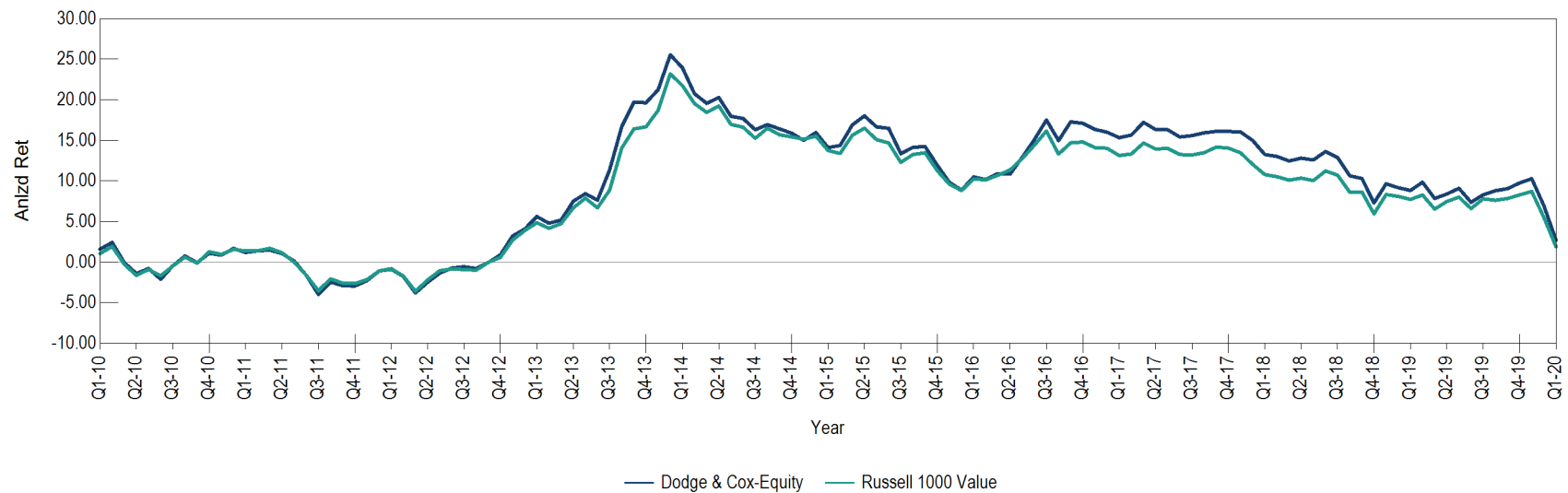
Dodge & Cox-Equity  
Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020

Rolling 3 Year Annualized Return (%)



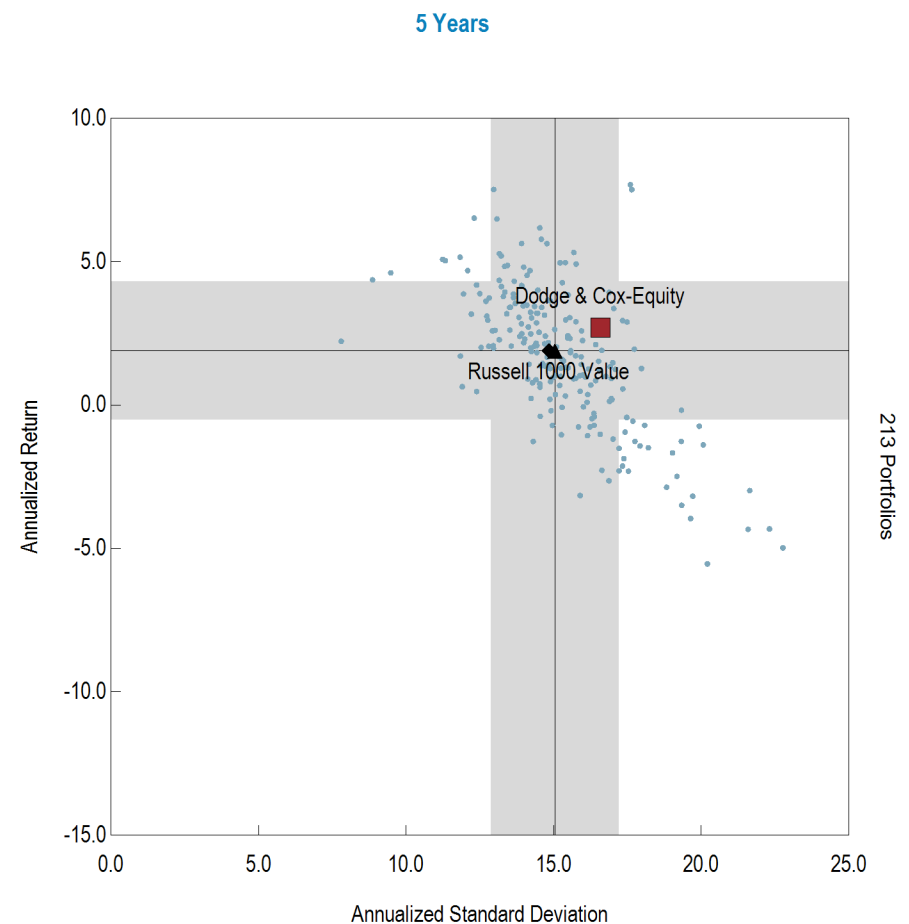
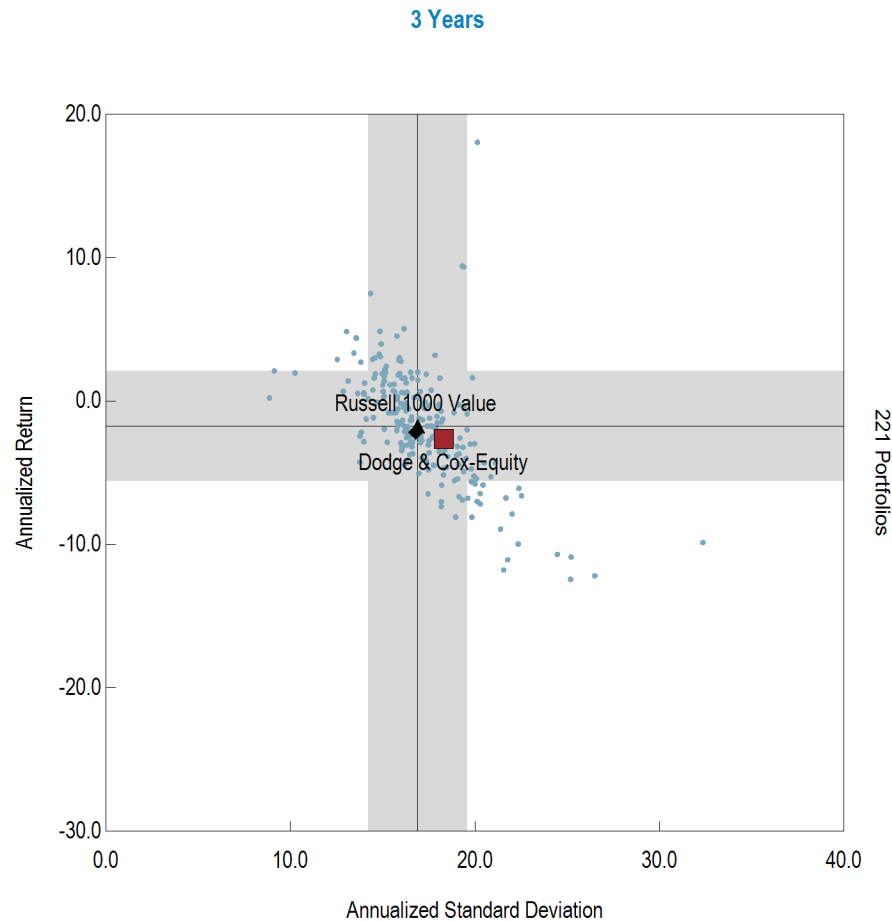
Rolling 5 Year Annualized Return (%)





# Dodge & Cox-Equity Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020



	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Dodge & Cox-Equity	-2.63%	18.30%	-0.24
Russell 1000 Value	-2.18%	16.79%	-0.23
eV US Large Cap Value Equity Net Median	-1.73%	16.90%	-0.20

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Dodge & Cox-Equity	2.7%	16.6%	0.1
Russell 1000 Value	1.9%	14.8%	0.1
eV US Large Cap Value Equity Net Median	1.9%	15.0%	0.0



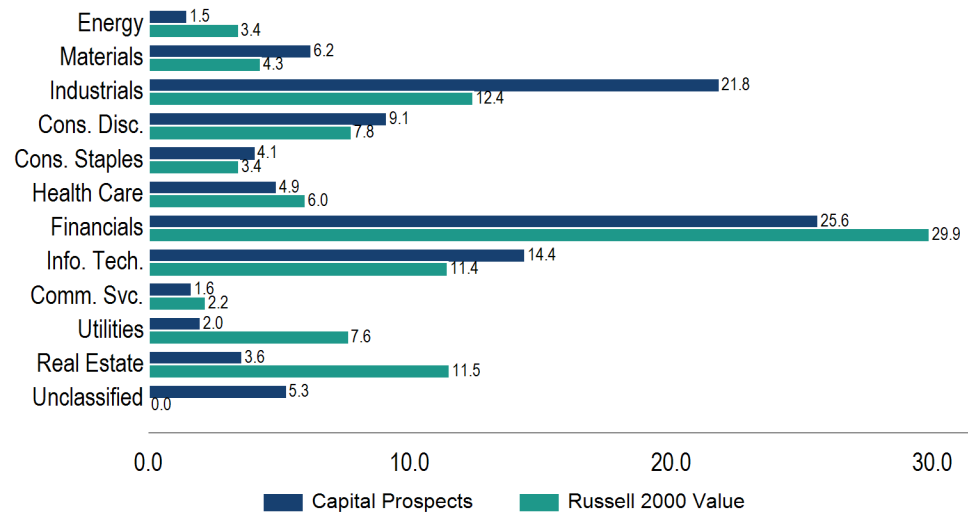
# Capital Prospects Manager Portfolio Overview

Period Ending: March 31, 2020

## Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	269	1,391
Weighted Avg. Market Cap. (\$B)	1.81	1.62
Median Market Cap. (\$B)	0.98	0.42
Price To Earnings	11.38	10.46
Price To Book	1.82	1.64
Price To Sales	1.26	1.11
Return on Equity (%)	9.19	5.52
Yield (%)	2.57	3.17
Beta	1.08	1.00

## Sector Allocation (%) vs Russell 2000 Value



## Largest Holdings

	End Weight	Return
CROWN HDG.	1.62	-19.99
LITTELFUSE	1.37	-30.08
HOSTESS BRANDS CL.A	1.18	-26.68
HILLENBRAND	1.09	-41.91
DARLING INGREDIENTS	1.09	-31.73
AIR LEASE	0.98	-52.94
OFG BANCORP	0.95	-52.36
ARTISAN PTNS.ASTMGMT.	0.94	-31.16
VERSO 'A'	0.94	-37.44
KNOWLES	0.92	-36.74

## Bottom Contributors

	Avg Wgt	Return	Contribution
CINEMARK HOLDINGS	1.11	-69.43	-0.77
AIR LEASE	1.25	-52.94	-0.66
OFG BANCORP	1.11	-52.36	-0.58
GRANITE POINT MORTGAGE TRUST	0.68	-72.42	-0.49
HOWMET AEROSPACE	1.02	-47.77	-0.49
ONESP WORLD HOLDINGS	0.51	-75.83	-0.38
PEBBLEBROOK HOTEL TRUST	0.65	-59.34	-0.38
BANC OF CALIFORNIA	0.68	-53.21	-0.36
HILLENBRAND	0.86	-41.91	-0.36
VERSO 'A'	0.94	-37.44	-0.35

## Top Contributors

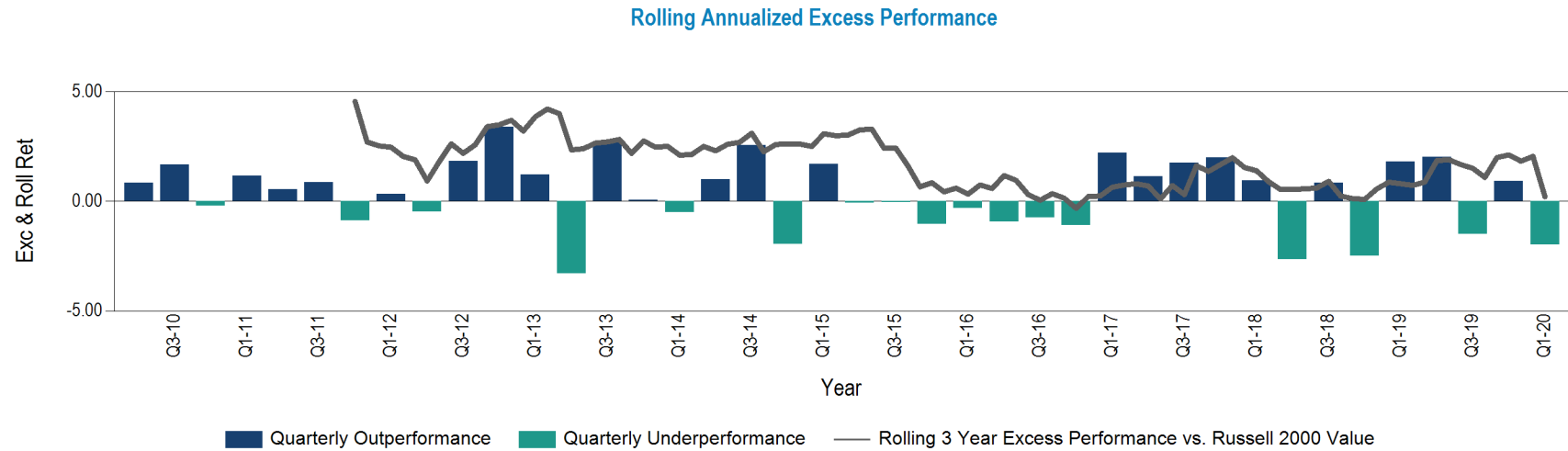
	Avg Wgt	Return	Contribution
VIRTU FINANCIAL CL.A	0.12	31.87	0.04
QTS REALTY TRUST CL.A	0.40	7.96	0.03
VISTA OUTDOOR	0.14	17.65	0.02
CSS INDS.	0.02	112.47	0.02
COHERENT	0.01	-36.03	0.00
TTEC HOLDINGS	0.09	-6.46	-0.01
1-800-FLOWERS.COM 'A'	0.08	-8.76	-0.01
WRIGHT MEDICAL GROUP	0.13	-6.00	-0.01
AMERESCO CLASS A	0.33	-2.69	-0.01
SILGAN HOLDINGS	0.17	-6.21	-0.01

Holdings as of 2/29/2020. Unclassified sector allocation includes cash allocations.

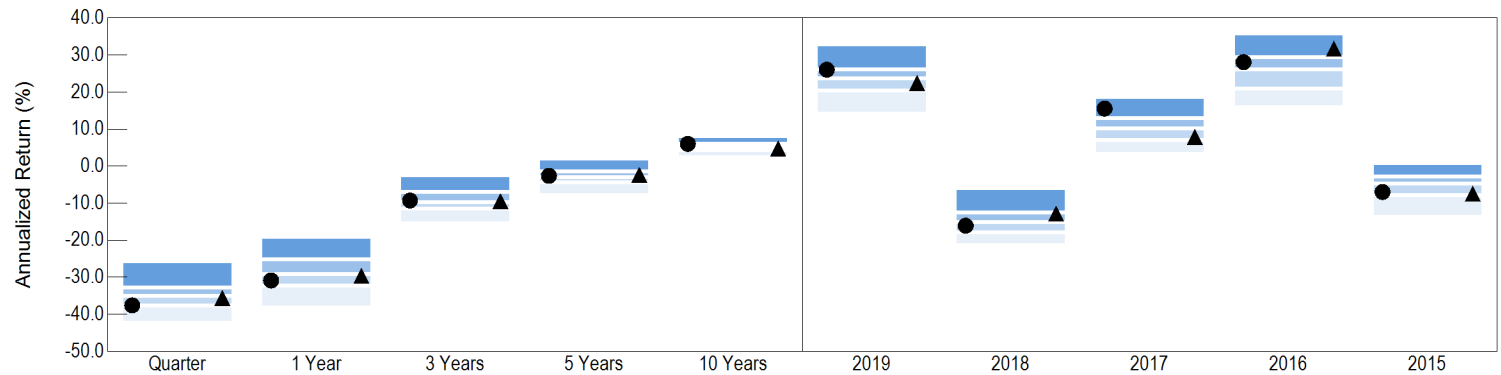


# Capital Prospects Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2020



## Capital Prospects vs. eV US Small Cap Value Equity Net Universe



		Return (Rank)																			
5th Percentile		-25.8	-19.2	-2.6	2.0	8.1	32.8	-6.0	18.6	35.7	0.8										
25th Percentile		-32.8	-25.0	-6.8	-1.3	6.1	26.3	-12.4	13.1	29.5	-2.7										
Median		-35.1	-29.1	-9.7	-2.9	5.3	23.8	-15.0	10.3	26.2	-4.6										
75th Percentile		-37.6	-32.2	-11.4	-4.3	4.4	20.4	-17.8	7.2	21.1	-7.8										
95th Percentile		-42.3	-38.2	-15.4	-7.8	2.5	14.2	-21.3	3.3	15.9	-13.7										
# of Portfolios		158	157	152	146	126	176	168	170	151	137										
●	Capital Prospects	-37.6	(76)	-30.9	(66)	-9.3	(44)	-2.6	(41)	6.0	(27)	26.0	(28)	-16.1	(60)	15.5	(13)	28.1	(32)	-7.0	(71)
▲	Russell 2000 Value	-35.7	(58)	-29.6	(56)	-9.5	(45)	-2.4	(38)	4.8	(67)	22.4	(60)	-12.9	(31)	7.8	(70)	31.7	(15)	-7.5	(73)

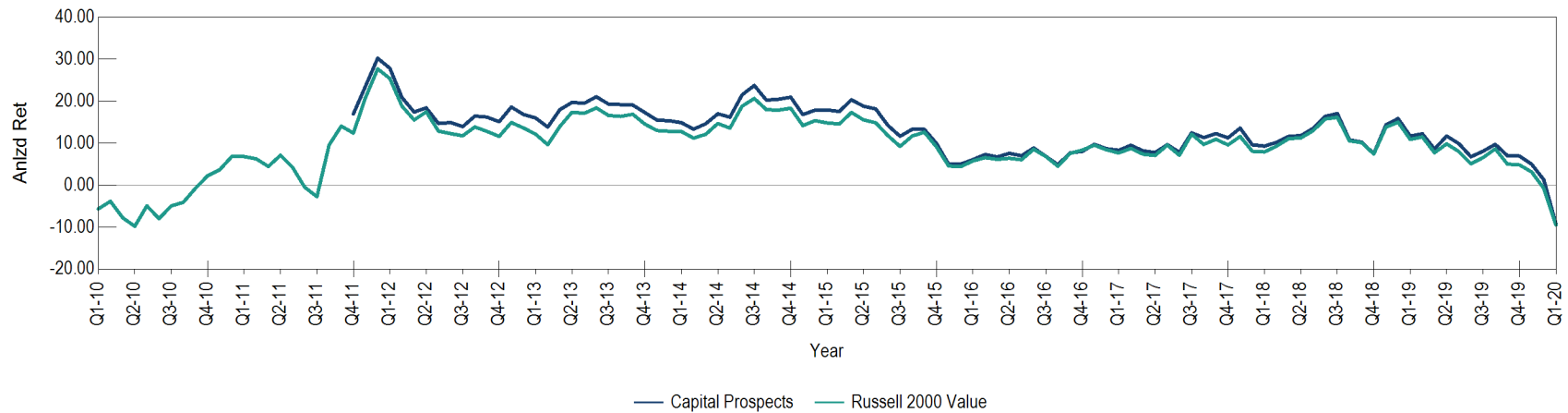


## Capital Prospects

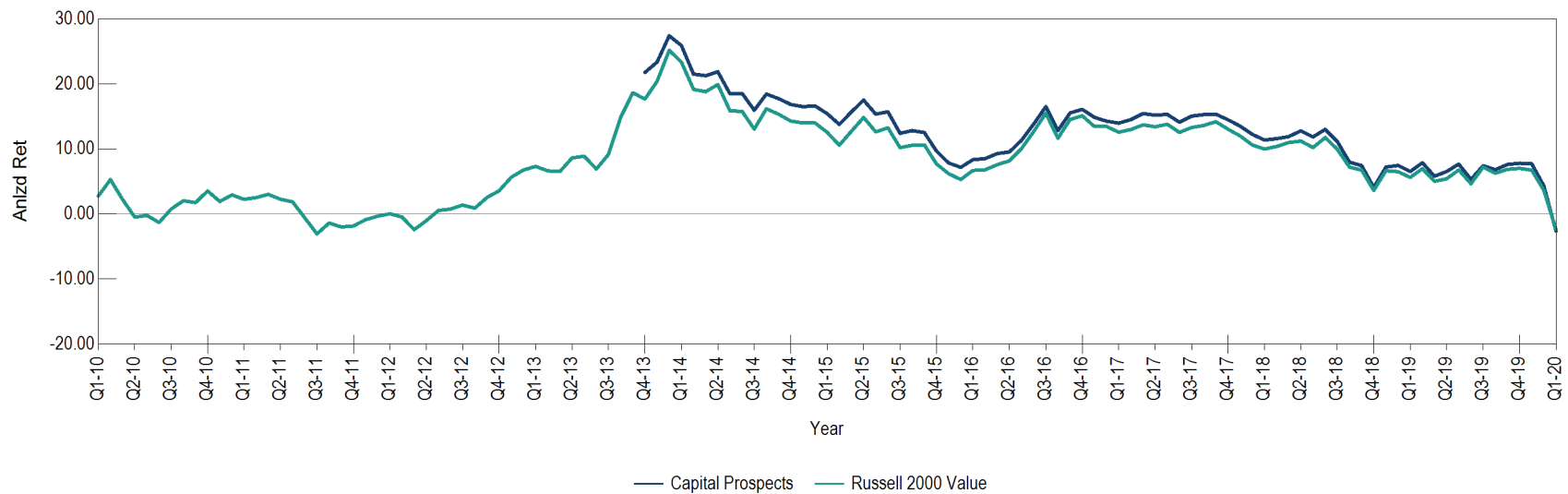
### Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)

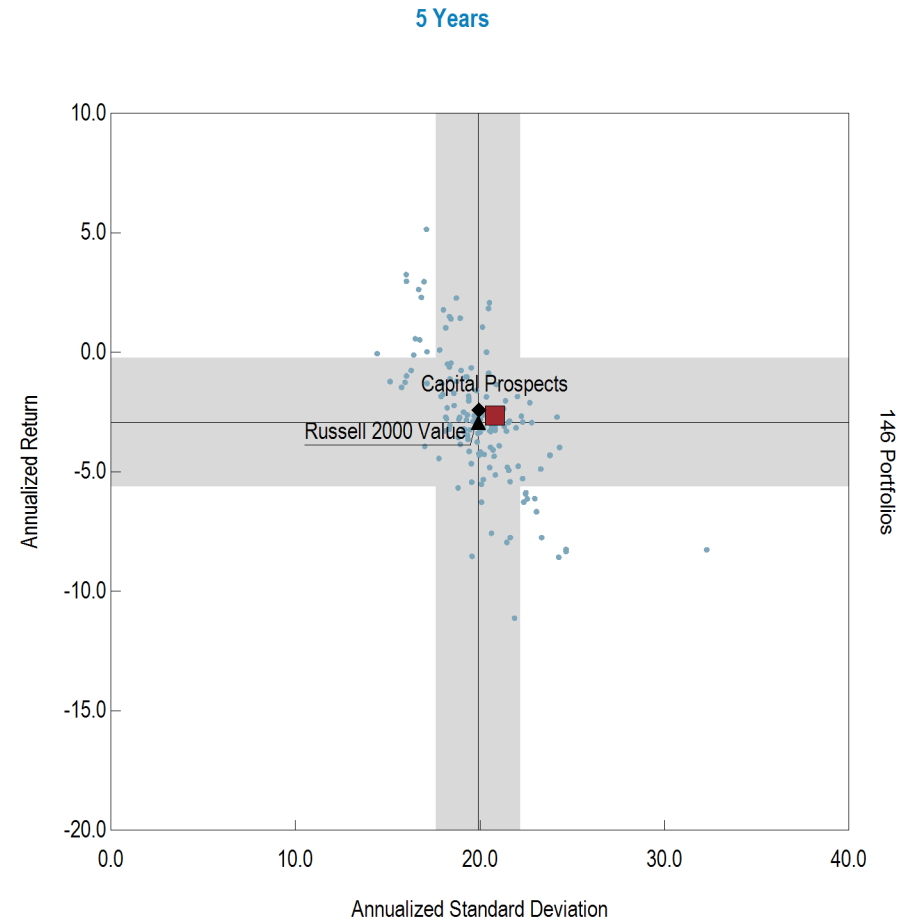
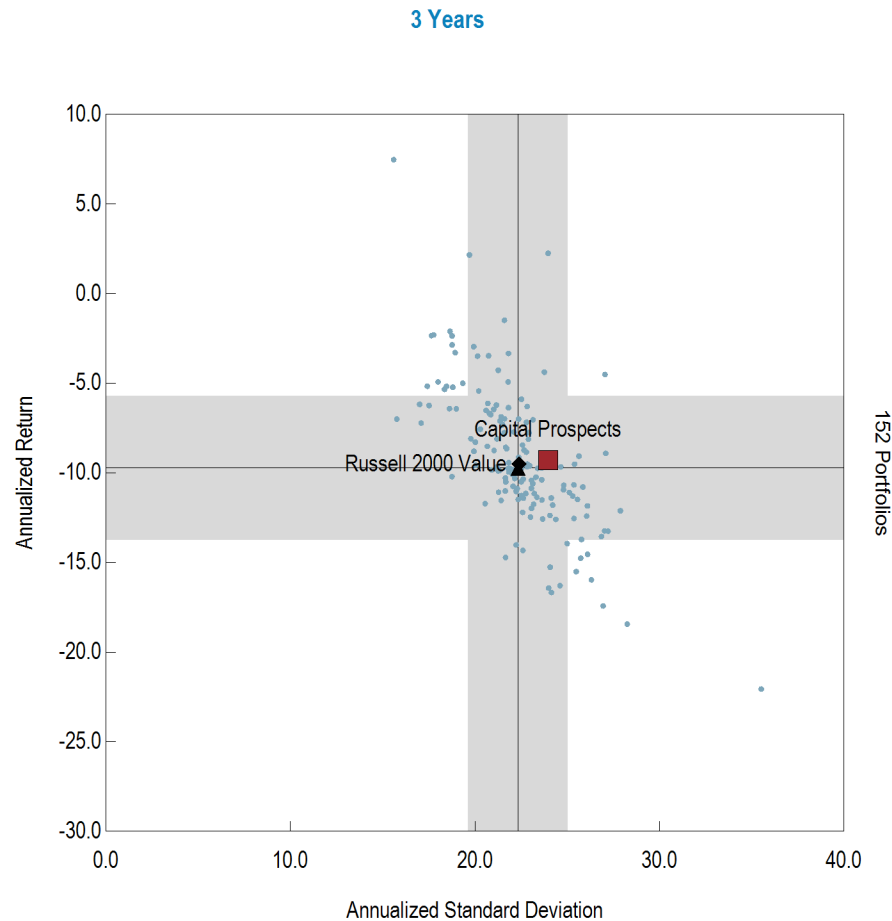




# Capital Prospects

## Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020



	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Capital Prospects	-9.30%	23.98%	-0.46
Russell 2000 Value	-9.51%	22.39%	-0.50
eV US Small Cap Value Equity Net Median	-9.74%	22.34%	-0.51

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Capital Prospects	-2.6%	20.8%	-0.2
Russell 2000 Value	-2.4%	19.9%	-0.2
eV US Small Cap Value Equity Net Median	-2.9%	19.9%	-0.2



## International Equity Managers

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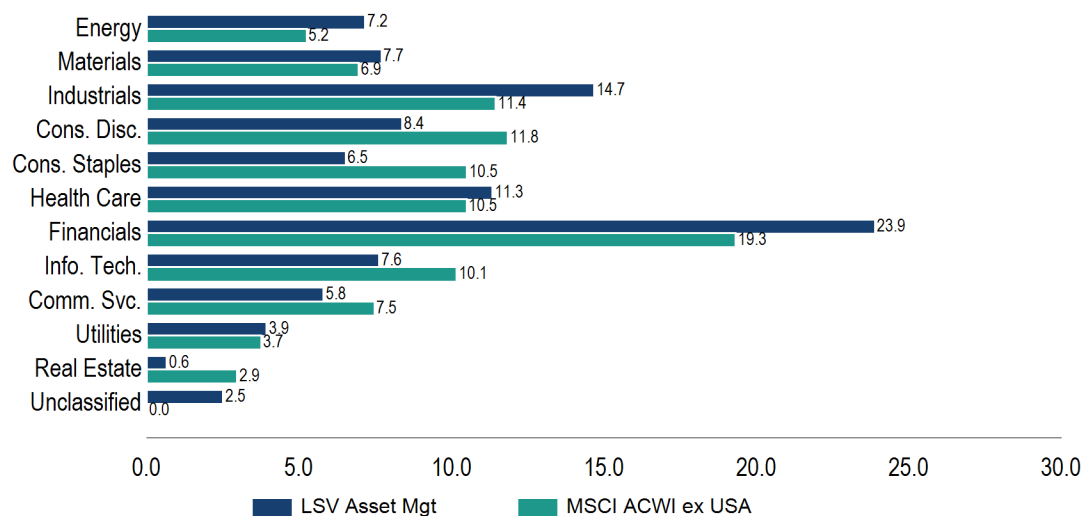
# LSV Asset Mgt Manager Portfolio Overview

Period Ending: March 31, 2020

## Characteristics

	Portfolio	MSCI ACWI ex USA
Number of Holdings	263	2,404
Weighted Avg. Market Cap. (\$B)	36.48	69.23
Median Market Cap. (\$B)	4.60	5.91
Price To Earnings	8.10	13.10
Price To Book	1.59	2.47
Price To Sales	0.66	1.32
Return on Equity (%)	13.32	15.47
Yield (%)	5.55	3.75
Beta	1.11	1.00

## Sector Allocation (%) vs MSCI ACWI ex USA



## Largest Holdings

	End Weight	Return
ROCHE HOLDING	3.77	3.03
SAMSUNG ELECTRONICS	2.06	-18.71
SANOFI	2.00	-12.59
KDDI	1.85	0.56
NIPPON TELG. & TEL.	1.72	-4.31
ENEL	1.69	-10.55
GLAXOSMITHKLINE	1.62	-19.20
KONINKLIJKE AHOLD DELHAIZE	1.61	-6.68
TOTAL	1.38	-27.33
BAE SYSTEMS	1.19	-13.53

## Bottom Contributors

	Avg Wgt	Return	Contribution
MAGNA INTL.	1.04	-42.03	-0.44
CREDIT SUISSE GROUP	0.98	-38.90	-0.38
SWISS LIFE HOLDING	1.14	-32.14	-0.37
LUKOIL OAO SPN.ADR 1:1	0.92	-40.07	-0.37
TOTAL	1.31	-27.33	-0.36
VOLKSWAGEN PREF.	0.85	-41.56	-0.35
SAMSUNG ELECTRONICS	1.87	-18.71	-0.35
CIA PARANAENSE DE ENERGIA COPEL PN	0.88	-39.92	-0.35
REPSOL YPF	0.84	-41.53	-0.35
ALLIANZ	1.10	-30.91	-0.34

## Top Contributors

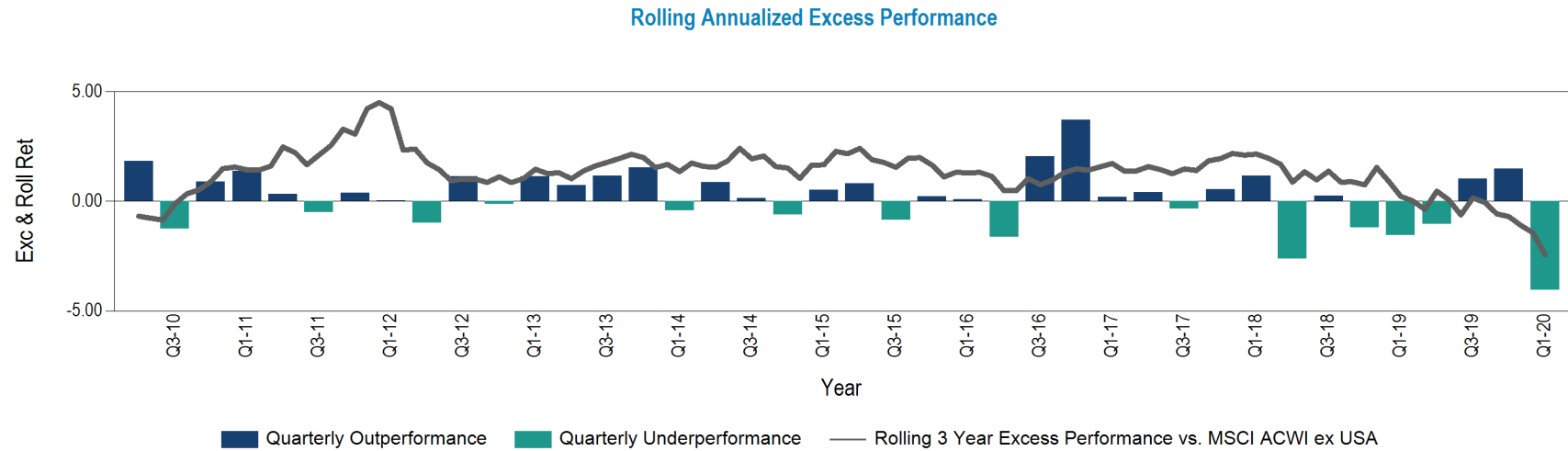
	Avg Wgt	Return	Contribution
ROCHE HOLDING	2.86	3.03	0.09
NTT DOCOMO INC	0.34	13.83	0.05
UCB	0.49	8.91	0.04
SELCUK ECZA DEPOSU	0.19	10.58	0.02
METCASH	0.22	6.72	0.01
CHINA RAILWAY CON.'H'	0.41	2.30	0.01
KDDI	1.39	0.56	0.01
CASCADES	0.24	2.88	0.01
MICRO-STAR INTERNATIONAL	0.19	1.41	0.00
LONKING HOLDINGS	0.25	-0.33	0.00

Holdings as of 2/29/2020. Unclassified sector allocation includes cash allocations.

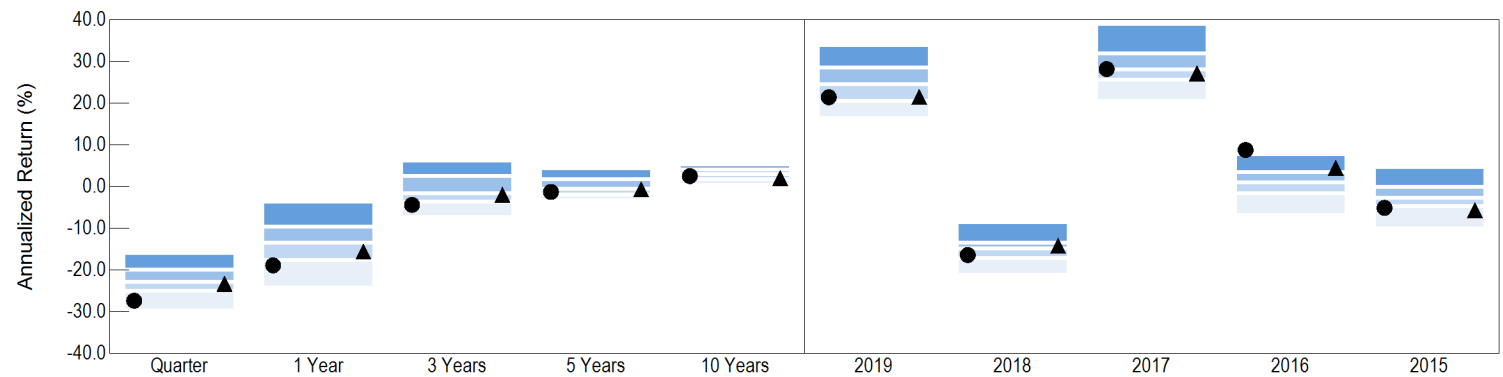


# LSV Asset Mgt Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2020



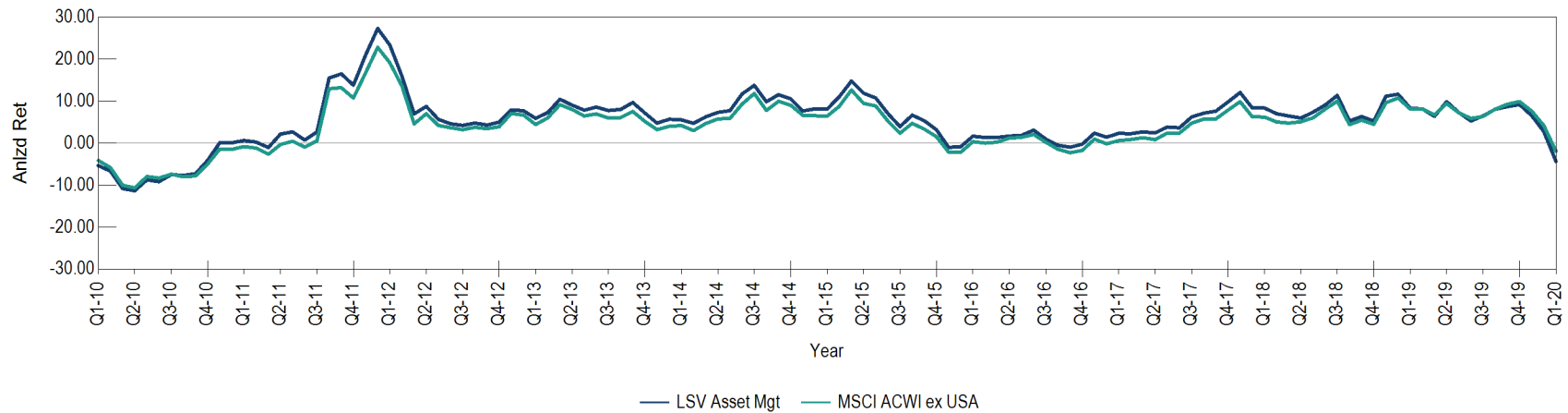
## LSV Asset Mgt vs. eV ACWI ex-US Large Cap Equity Net Universe



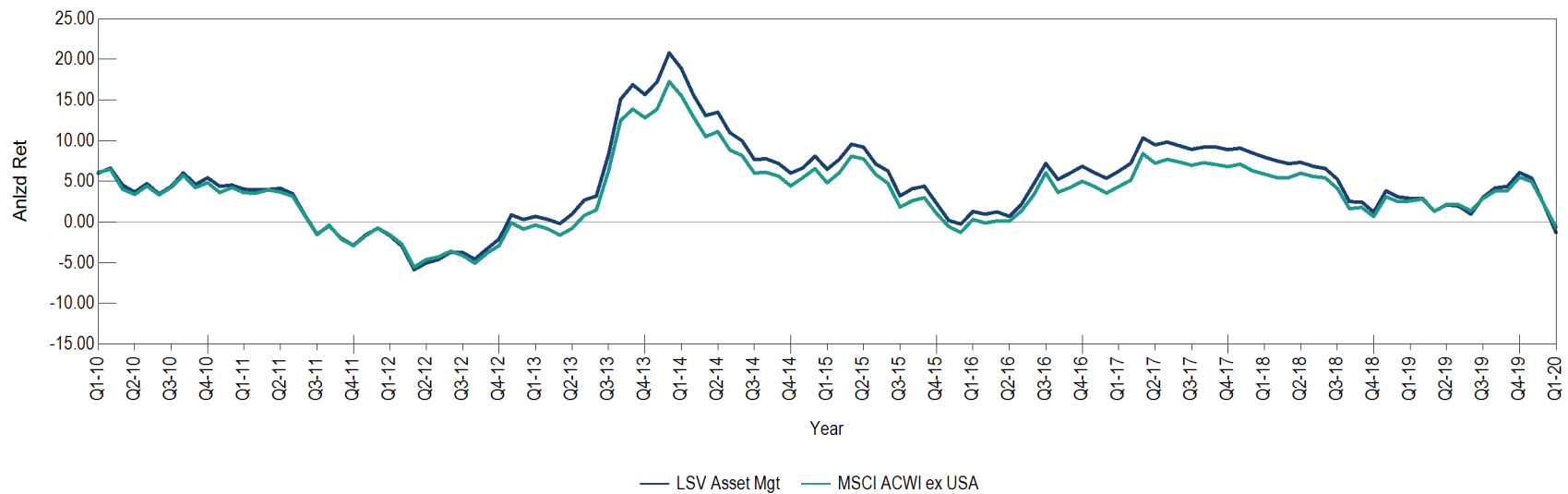
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
<b>Return (Rank)</b>										
5th Percentile	-16.1	-3.6	6.1	4.2	5.2	33.9	-8.7	39.0	7.7	4.7
25th Percentile	-19.9	-9.6	2.6	1.8	4.2	28.6	-13.4	32.1	3.5	0.0
Median	-22.8	-13.5	-1.6	-0.4	3.0	24.7	-14.8	28.3	1.1	-2.6
75th Percentile	-25.0	-17.5	-3.5	-1.8	1.9	20.7	-17.1	25.7	-1.6	-4.6
95th Percentile	-29.8	-24.2	-7.2	-3.3	0.5	16.5	-21.1	20.7	-6.7	-10.0
# of Portfolios	72	72	70	64	45	82	79	71	71	60
● LSV Asset Mgt	-27.4 (87)	-18.9 (81)	-4.4 (82)	-1.3 (66)	2.5 (54)	21.5 (67)	-16.4 (69)	28.2 (54)	8.8 (3)	-5.1 (78)
▲ MSCI ACWI ex USA	-23.4 (55)	-15.6 (62)	-2.0 (54)	-0.6 (54)	2.1 (69)	21.5 (67)	-14.2 (41)	27.2 (64)	4.5 (20)	-5.7 (81)



Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)

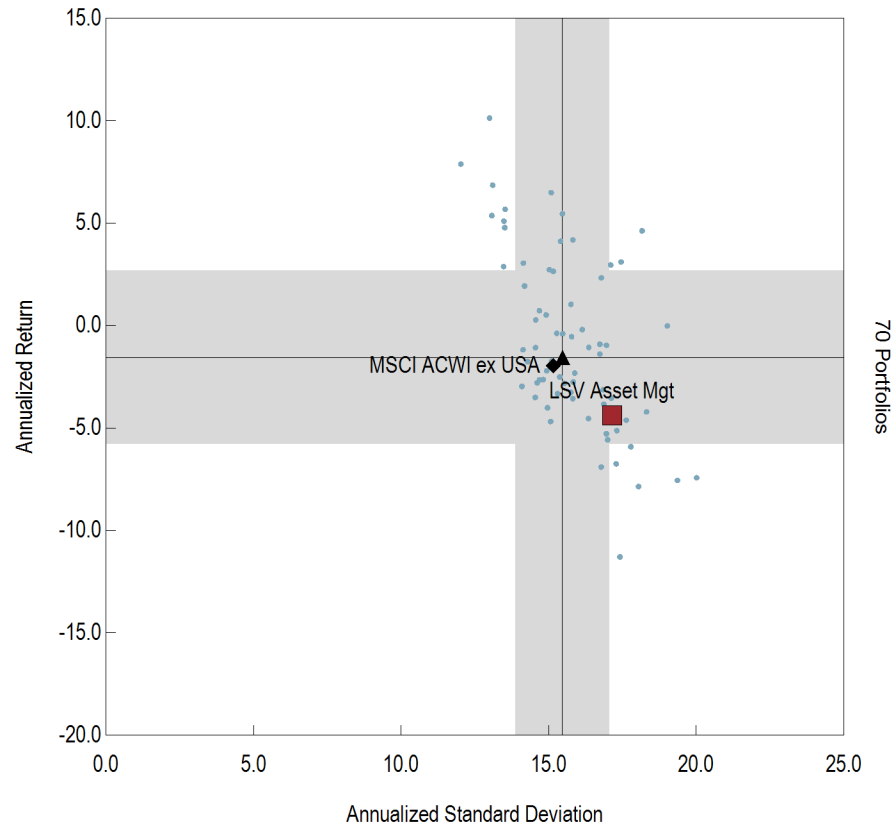




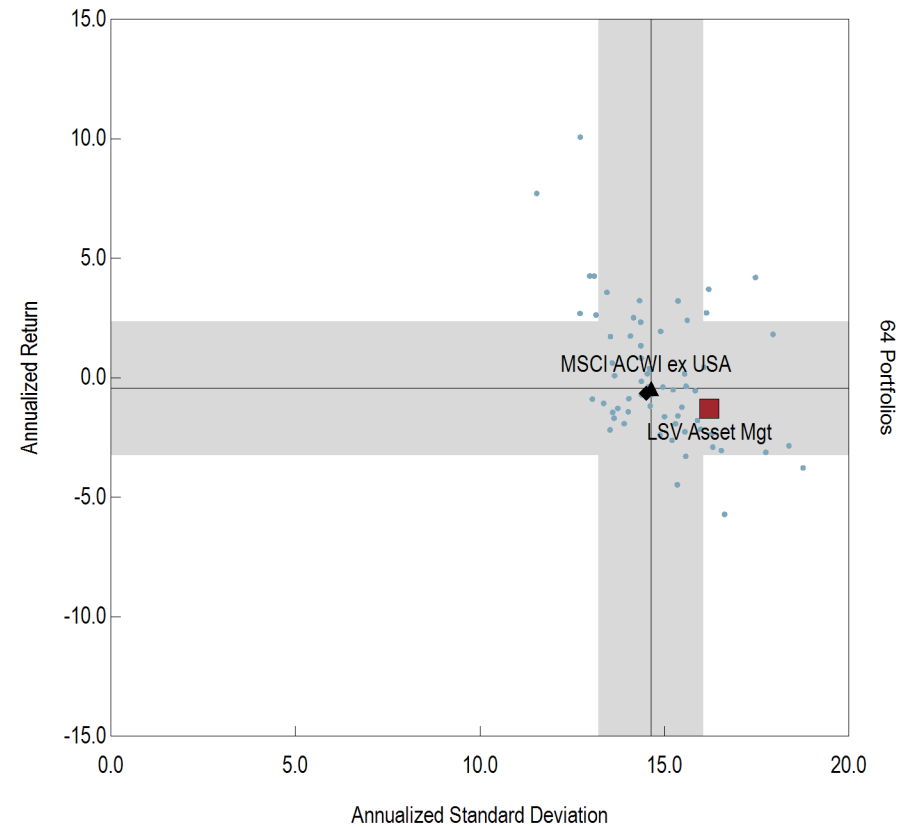
LSV Asset Mgt  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
LSV Asset Mgt	-4.39%	17.14%	-0.36
MSCI ACWI ex USA	-1.96%	15.15%	-0.24
eV ACWI ex-US Large Cap Equity Net Median	-1.56%	15.47%	-0.22

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
LSV Asset Mgt	-1.3%	16.2%	-0.1
MSCI ACWI ex USA	-0.6%	14.5%	-0.1
eV ACWI ex-US Large Cap Equity Net Median	-0.4%	14.6%	-0.1



# Fidelity

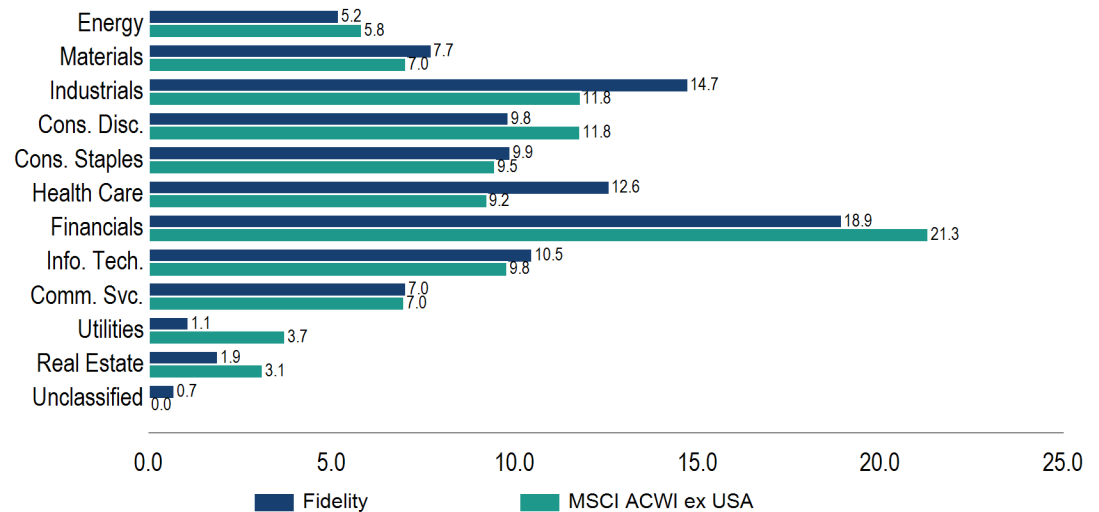
## Manager Portfolio Overview

Period Ending: March 31, 2020

### Characteristics

	Portfolio	MSCI ACWI ex USA
Number of Holdings	252	2,168
Weighted Avg. Market Cap. (\$B)	70.78	70.61
Median Market Cap. (\$B)	13.87	7.21
Price To Earnings	17.90	14.97
Price To Book	2.63	2.38
Price To Sales	1.47	1.27
Return on Equity (%)	16.10	15.19
Yield (%)	2.80	3.32
Beta		1.00

### Sector Allocation (%) vs MSCI ACWI ex USA



### Largest Holdings

	End Weight	Return
TENCENT HOLDINGS	2.27	16.85
NESTLE 'N'	2.22	-1.79
ROCHE HOLDING	2.13	3.75
AIA GROUP	2.09	-1.48
SAP	1.92	-11.01
TECHTRONIC INDS.	1.67	7.61
SANOFI	1.45	-1.06
TAIWAN SEMICON.MNFG.	1.39	5.18
ROYAL DUTCH SHELL A	1.28	-24.26
FRESENIUS MED.CARE	1.20	2.82

### Bottom Contributors

	Avg Wgt	Return	Contribution
TREASURY WINE ESTATES	0.89	-43.77	-0.39
ROYAL DUTCH SHELL A	1.46	-24.26	-0.35
SAP	1.84	-11.01	-0.20
BP	1.06	-17.11	-0.18
AXA	1.07	-15.47	-0.17
SIEMENS	0.86	-18.78	-0.16
MARUI GROUP	0.84	-18.83	-0.16
SAFRAN	0.85	-16.72	-0.14
ASAHI GROUP HOLDINGS	0.62	-19.23	-0.12
CRH (DUB)	0.91	-12.60	-0.11

### Top Contributors

	Avg Wgt	Return	Contribution
TECHTRONIC INDS.	1.40	7.61	0.11
TENCENT HOLDINGS	0.60	16.85	0.10
CHUGAI PHARM.	0.38	24.44	0.09
VINDA INTERNATIONAL HDG.	0.16	47.22	0.07
Tencent Holdings Ord Shs	0.43	16.85	0.07
ROCHE HOLDING	1.88	3.75	0.07
CELLNEX TELECOM	0.52	12.06	0.06
SHOPIFY	0.13	38.44	0.05
SUBD.VTG.SH.S:'A'			
LONDON STOCK EX.GROUP	0.50	8.86	0.04
SHOPIFY 'A' (NYS)	0.09	37.58	0.03

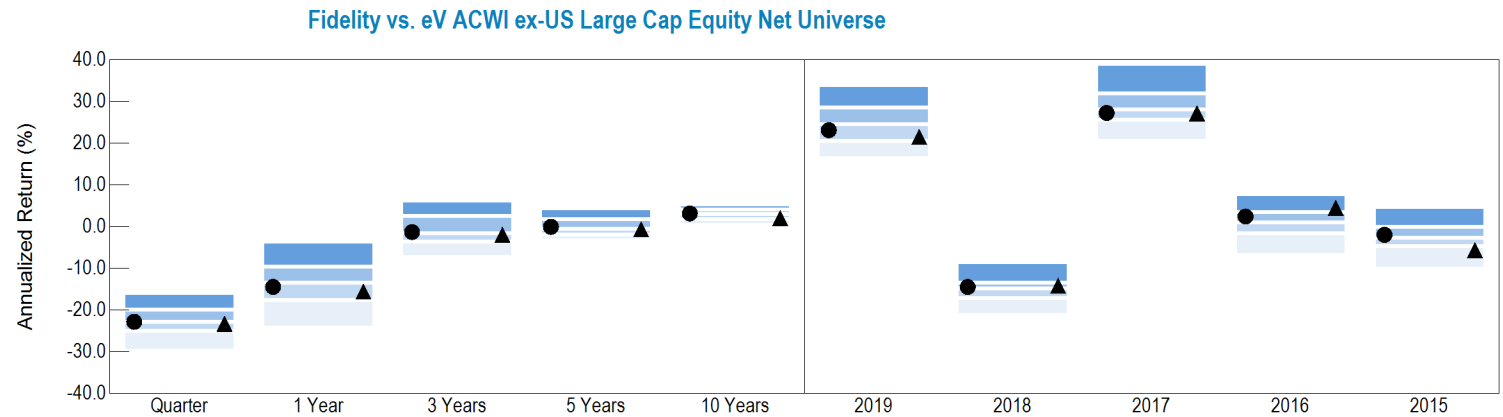
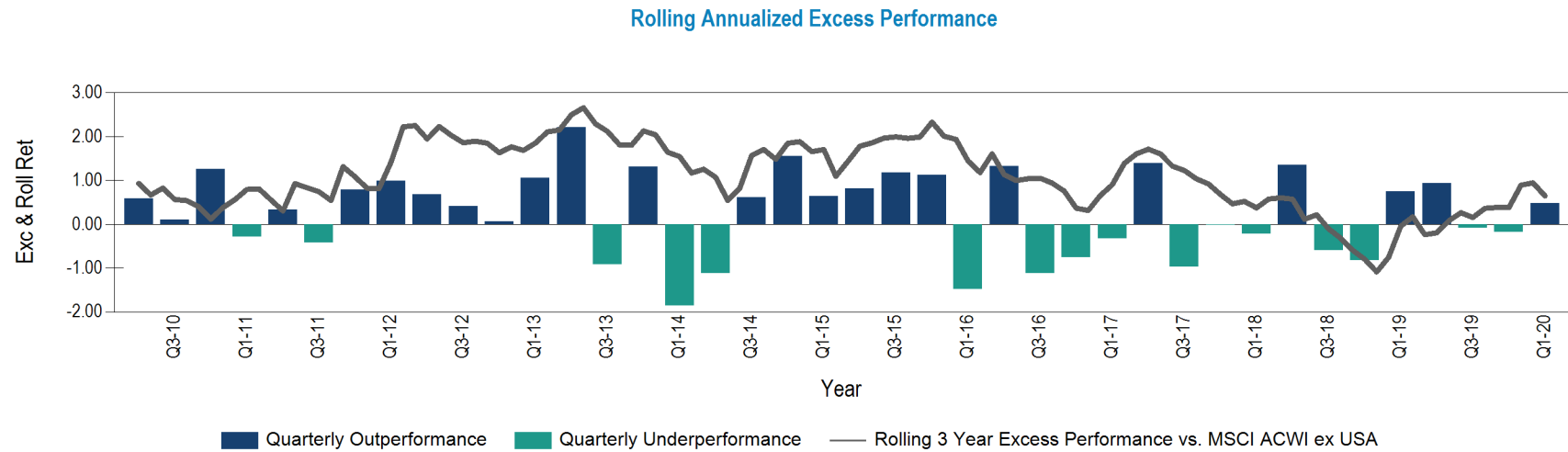
Holdings as of 2/29/2020. Unclassified sector allocation includes cash allocations.



# Fidelity

## Manager Performance Comparisons (Gross of Fees)

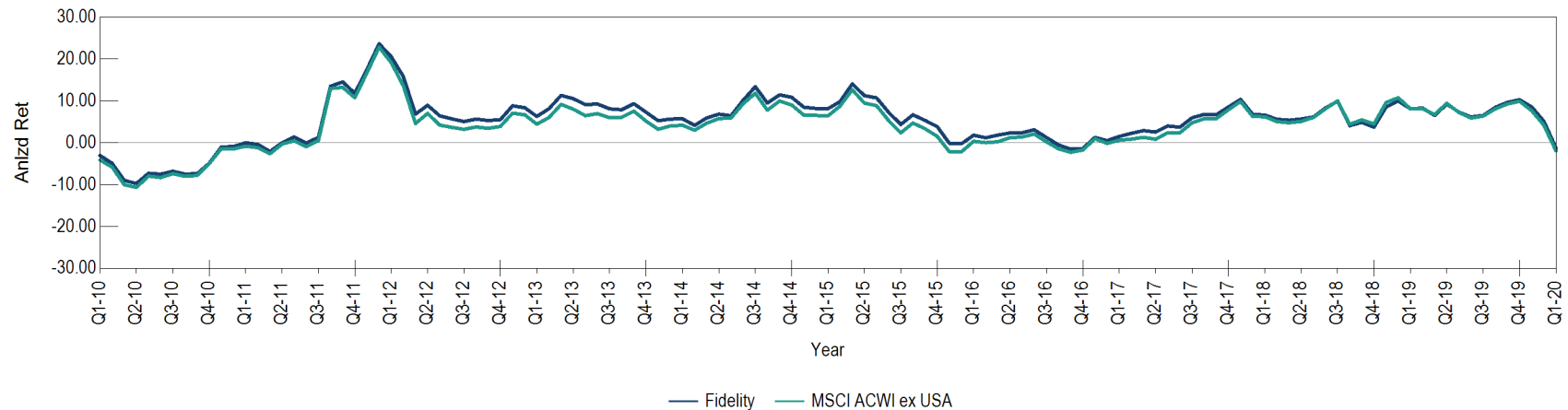
Period Ending: March 31, 2020



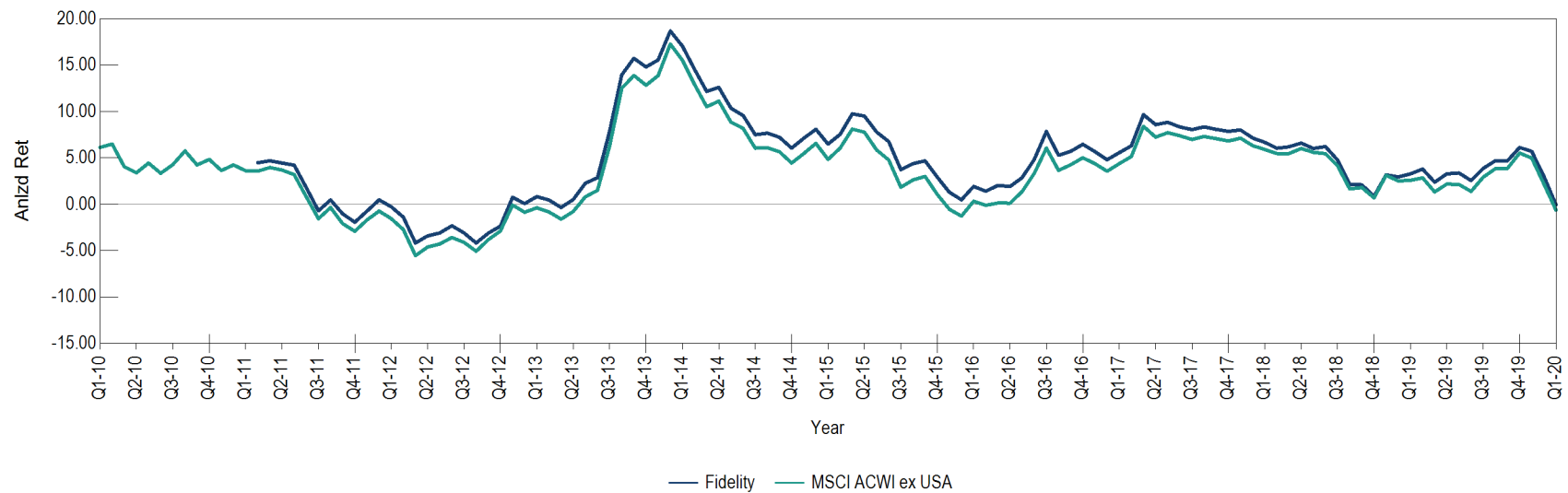
	Quarter	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	2016	2015
<b>Return (Rank)</b>										
5th Percentile	-16.1	-3.6	6.1	4.2	5.2	33.9	-8.7	39.0	7.7	4.7
25th Percentile	-19.9	-9.6	2.6	1.8	4.2	28.6	-13.4	32.1	3.5	0.0
Median	-22.8	-13.5	-1.6	-0.4	3.0	24.7	-14.8	28.3	1.1	-2.6
75th Percentile	-25.0	-17.5	-3.5	-1.8	1.9	20.7	-17.1	25.7	-1.6	-4.6
95th Percentile	-29.8	-24.2	-7.2	-3.3	0.5	16.5	-21.1	20.7	-6.7	-10.0
<b># of Portfolios</b>	72	72	70	64	45	82	79	71	71	60
● Fidelity	-22.9 (51)	-14.5 (57)	-1.3 (49)	-0.1 (44)	3.1 (44)	23.1 (55)	-14.5 (47)	27.3 (64)	2.4 (36)	-2.0 (47)
▲ MSCI ACWI ex USA	-23.4 (55)	-15.6 (62)	-2.0 (54)	-0.6 (54)	2.1 (69)	21.5 (67)	-14.2 (41)	27.2 (64)	4.5 (20)	-5.7 (81)



Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)



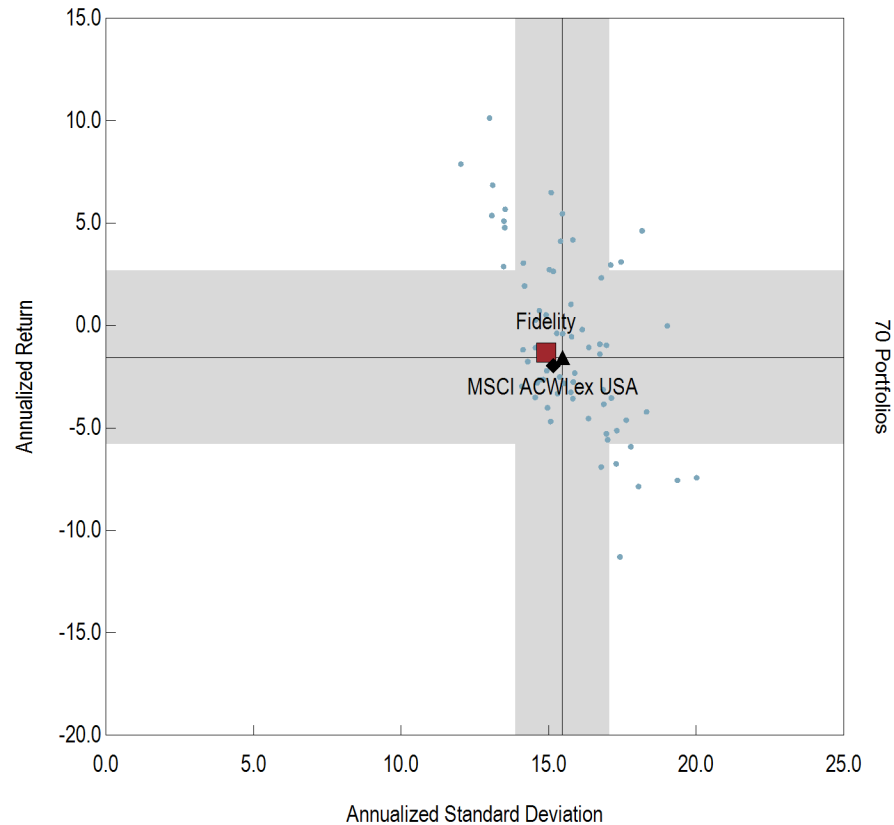


# Fidelity

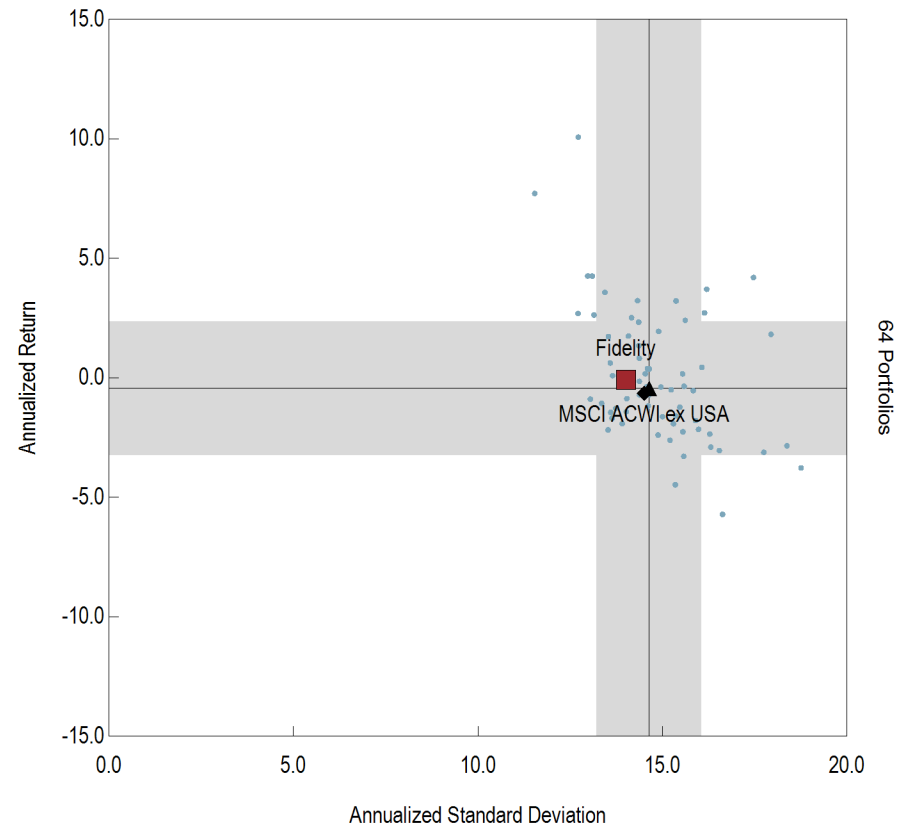
## Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2020

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Fidelity	-1.31%	14.92%	-0.20
MSCI ACWI ex USA	-1.96%	15.15%	-0.24
eV ACWI ex-US Large Cap Equity Net Median	-1.56%	15.47%	-0.22

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Fidelity	-0.1%	14.0%	-0.1
MSCI ACWI ex USA	-0.6%	14.5%	-0.1
eV ACWI ex-US Large Cap Equity Net Median	-0.4%	14.6%	-0.1



## Domestic Fixed Income Managers

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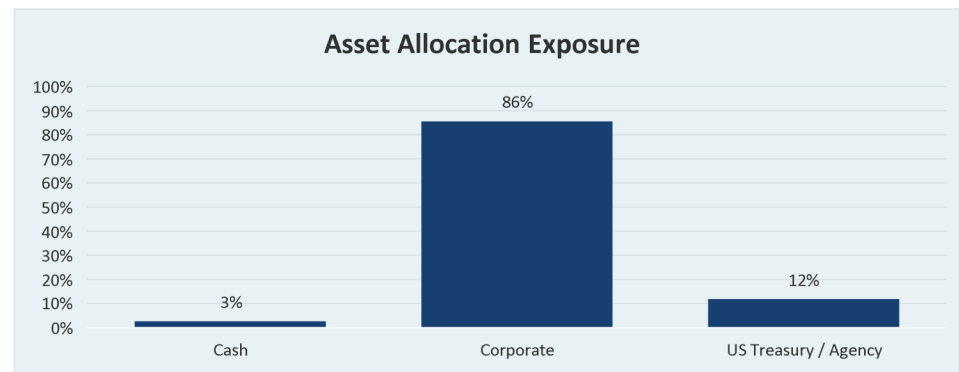
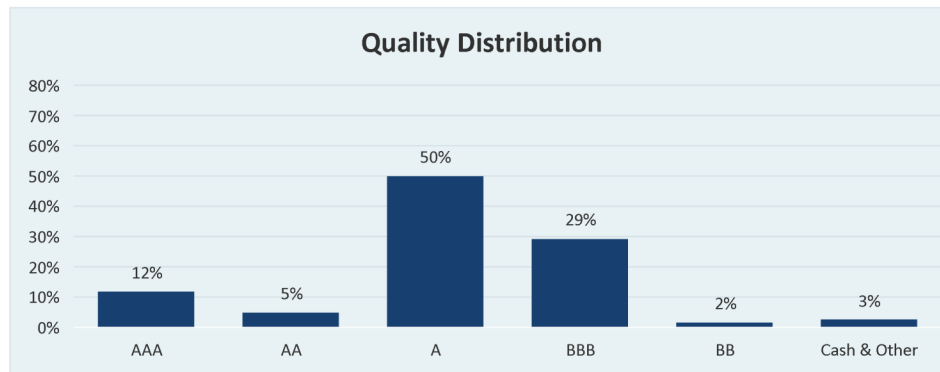
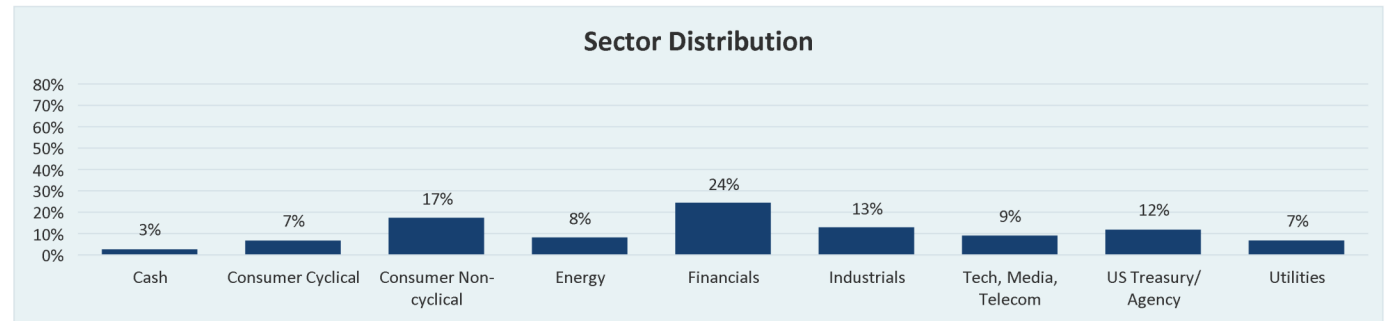


# Insight

## Manager Portfolio Overview

Period Ending: March 31, 2020

Summary	Portfolio
Average Quality	A
Effective duration (years)	3.89
Average Coupon	3.59%
Yield to Worst	3.28%



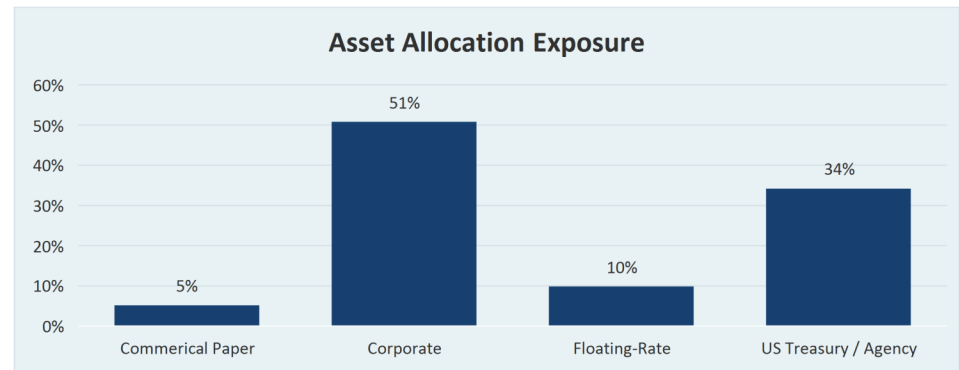
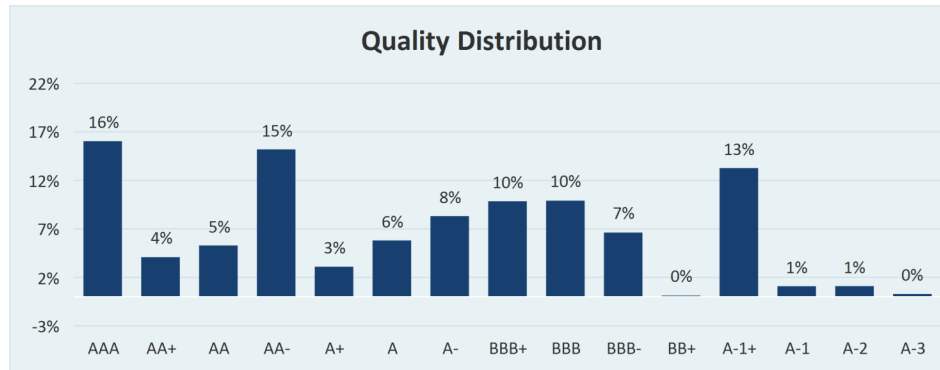
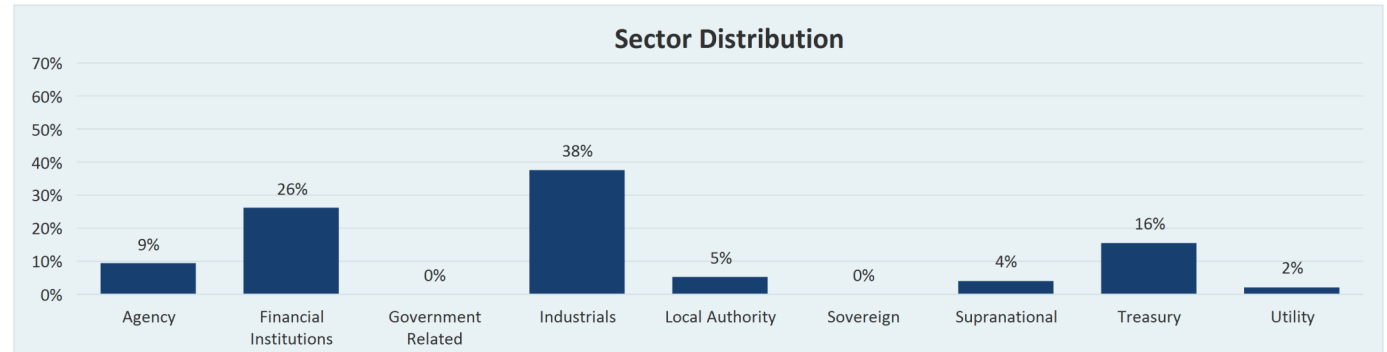


# DFA

## Manager Portfolio Overview

Period Ending: March 31, 2020

Summary	Portfolio
Average Quality	A+
Effective duration (years)	0.91
Average Coupon	2.10%
Yield to Worst	2.35%





**Performance Return Calculations**

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

**Data Source**

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

**Illiquid Alternatives**

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

**Manager Line Up**

<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>	<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>
Northern Trust Russell 3000	12/31/2018	Northern Trust	American Strategic Value Realty	12/31/2014	American Realty
BlackRock Russell 1000 Growth	6/30/2010	BlackRock	BlackRock US Real Estate	9/30/2012	BlackRock
BlackRock Russell 1000 Value	7/31/2009	BlackRock	Greenfield Gap	7/31/2014	Greenfield
Dodge & Cox - Equity	12/31/1994	Northern Trust	Medley Capital	5/31/2013	Medley Capital
Capital Prospects	12/31/2008	Northern Trust	Raven Capital	5/31/2013	Raven Capital
LSV Asset Mgt	8/31/2004	Northern Trust	Raven Opportunity III	7/31/2015	Raven Capital
Fidelity	4/30/2006	Northern Trust	White Oak Pinnacle	8/31/2013	White Oak
Insight	6/29/2017	Northern Trust	PanAgora Risk Parity Multi Asset	11/30/2017	PanAgora
DFA	7/31/2017	Northern Trust	AQR Global Risk Premium - EL	3/5/2018	AQR
Northern Trust Intermediate Gov't Bond	7/31/2017	Northern Trust	MS Infrastructure	5/31/2015	Morgan Stanley
Northern Trust Long Term Gov't Bond	7/31/2017	Northern Trust	PGIM Real Estate US Debt Fund	9/28/2018	Prudential
Prime Property Fund	9/30/2015	Prime Property	Owl Rock First Lien Fund	10/31/2019	Owl Rock

**Policy & Custom Index Composition**

Policy Index (5/31/2019):	14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills.
US Equity Blended:	60% Russell 1000, 15% Russell 2000, 25% Russell 3000 + 3%.
Prior Policy Index:	10% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 27% MSCI ACWI ex-USA, 20% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 1% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills.
StanCERA Liquidity Blended BM (8/31/2019):	92% BBgBarc US Govt/Credit 1-3 Yr. TR and 8% FTSE T-Bill 1 Month TR.
StanCERA Growth Blended BM (8/31/2019):	18% Russell 1000, 4% Russell 2000, 8% Russell 3000 + 3%, 30% MSCI ACWI ex-US Gross, 6% NCREIF Property, 6% actual private Value Add Real Estate returns, 17% 60% MSCI ACWI/40% BBgBarc Global Aggregate, 3% actual Infrastructure returns, and 8% actual Private Credit returns.
StanCERA Risk-Diversifying Blended BM (8/31/2019):	27% BBgBarc US Treasury 7-10 Yr. TR and 73% BBgBarc US Govt/Credit 1-3 Yr. TR.



### Other Disclosures

Fiscal Year End: 6/30

Cash Account includes cash held at Northern Trust for all closed end funds and cash held by BlackRock.

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

All data prior to 6/30/2015 provided by the previous consultant.



## Appendix

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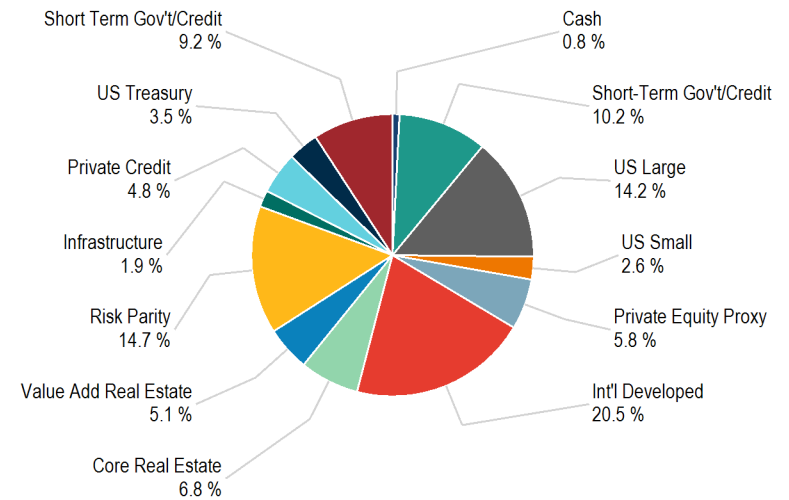


# Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2020

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>-13.4</b>	<b>-8.1</b>	<b>-5.3</b>	<b>2.8</b>	<b>3.7</b>	<b>6.9</b>
<i>Policy Index</i>	-12.4	-7.4	-4.7	2.7	3.6	6.5
<b>Liquidity Sub-Portfolio</b>	<b>-2.4</b>	<b>0.1</b>	<b>2.5</b>	<b>2.2</b>	<b>1.7</b>	<b>--</b>
<i>StanCERA Liquidity Blended BM</i>	1.6	2.9	4.3	2.5	1.8	--
<b>Cash</b>	<b>0.5</b>	<b>1.6</b>	<b>1.8</b>	<b>1.6</b>	<b>1.4</b>	<b>--</b>
<i>FTSE T-Bill 1 Month TR</i>	0.4	1.4	2.0	1.7	1.1	--
<b>Short-Term Gov't/Credit</b>	<b>-2.7</b>	<b>0.0</b>	<b>2.7</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>	1.7	3.0	4.5	--	--	--
<b>Growth Sub-Portfolio</b>	<b>-16.9</b>	<b>-11.0</b>	<b>-8.0</b>	<b>2.6</b>	<b>3.9</b>	<b>8.1</b>
<i>StanCERA Growth Blended BM</i>	-15.8	-9.9	-7.0	3.1	--	--
<b>Public Equities</b>	<b>-24.2</b>	<b>-16.5</b>	<b>-13.4</b>	<b>1.3</b>	<b>3.8</b>	<b>9.4</b>
<i>MSCI ACWI IMI NR</i>	-22.4	-15.6	-12.7	0.8	2.4	5.8
<b>US Large</b>	<b>-21.0</b>	<b>-12.3</b>	<b>-8.9</b>	<b>4.4</b>	<b>5.9</b>	<b>10.4</b>
<i>Russell 1000</i>	-20.2	-11.8	-8.0	4.6	6.2	10.4
<b>US Small</b>	<b>-37.6</b>	<b>-33.2</b>	<b>-30.9</b>	<b>-9.6</b>	<b>-3.9</b>	<b>5.7</b>
<i>Russell 2000</i>	-30.6	-25.5	-24.0	-4.6	-0.2	6.9
<b>Private Equity Proxy</b>	<b>-20.9</b>	<b>-12.7</b>	<b>-9.1</b>	<b>5.7</b>	<b>7.1</b>	<b>10.7</b>
<i>Russell 3000 +3%</i>	-19.7	-9.8	-6.1	7.0	8.8	13.2

Current Allocation



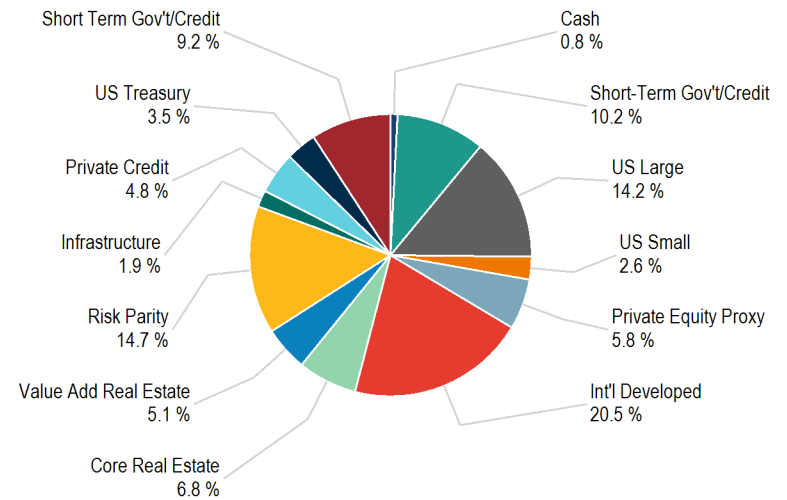


# Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2020

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Int'l Developed</b>	<b>-25.2</b>	<b>-19.1</b>	<b>-16.7</b>	<b>-2.8</b>	<b>-0.5</b>	<b>2.9</b>
MSCI ACWI ex USA	-23.4	-18.0	-15.6	-2.0	-0.6	2.1
<b>Core Real Estate</b>	<b>-5.0</b>	<b>-1.3</b>	<b>0.3</b>	<b>3.9</b>	<b>2.6</b>	<b>5.4</b>
NCREIF Property Index	N/A	3.0	4.5	6.2	7.5	10.1
<b>Value Add Real Estate</b>	<b>4.8</b>	<b>10.5</b>	<b>12.2</b>	<b>12.3</b>	<b>13.8</b>	<b>--</b>
NCREIF Property Index +2%	N/A	4.5	6.6	8.3	9.6	--
<b>Risk Parity</b>	<b>-9.8</b>	<b>-5.3</b>	<b>-0.3</b>	<b>--</b>	<b>--</b>	<b>--</b>
60% MSCI ACWI Net/40% BBgBarc Global Aggregate	-13.3	-8.2	-4.9	--	--	--
<b>Infrastructure</b>	<b>5.3</b>	<b>10.9</b>	<b>15.2</b>	<b>17.1</b>	<b>--</b>	<b>--</b>
CPI + 5%	1.7	4.5	6.6	7.0	--	--
<b>Private Credit</b>	<b>-4.9</b>	<b>-3.6</b>	<b>-2.0</b>	<b>2.4</b>	<b>2.9</b>	<b>--</b>
S&P/LSTA Leveraged Loan Index+2%	-12.6	-9.3	-7.3	1.2	3.2	--
<b>Risk-Diversifying Sub-Portfolio</b>	<b>2.2</b>	<b>3.9</b>	<b>6.0</b>	<b>4.0</b>	<b>3.5</b>	<b>4.4</b>
StanCERA Risk-Diversifying Blended BM	4.0	5.4	7.6	3.8	2.6	2.7
<b>US Treasury</b>	<b>9.7</b>	<b>11.7</b>	<b>15.4</b>	<b>7.2</b>	<b>5.4</b>	<b>5.4</b>
BBgBarc US Treasury 7-10 Yr TR	10.1	11.8	16.2	7.0	4.4	5.4
<b>Short-Term Gov't/Credit</b>	<b>-0.4</b>	<b>1.3</b>	<b>2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US Govt/Credit 1-3 Yr. TR	1.7	3.0	4.5	--	--	--

Current Allocation



NCREIF Property Index not available at time of production.



Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
<b>Total Fund</b>	<b>1,985,617,723</b>	<b>100.0</b>	<b>-13.4</b>	<b>-8.1</b>	<b>-5.3</b>	<b>2.8</b>	<b>3.7</b>	<b>6.9</b>	<b>17.8</b>	<b>-4.1</b>	<b>15.7</b>	<b>8.3</b>	<b>-0.2</b>	<b>8.6</b>	<b>Dec-94</b>
<i>Policy Index</i>			-12.4	-7.4	-4.7	2.7	3.6	6.5	16.9	-3.7	14.3	8.5	0.2	7.5	Dec-94
<b>Liquidity Sub-Portfolio</b>	<b>217,946,339</b>	<b>11.0</b>	<b>-2.4</b>	<b>0.1</b>	<b>2.5</b>	<b>2.2</b>	<b>1.7</b>	<b>--</b>	<b>7.9</b>	<b>0.9</b>	<b>0.5</b>	<b>1.5</b>	<b>1.0</b>	<b>9.0</b>	<b>Apr-11</b>
<i>StanCERA Liquidity Blended BM</i>			1.6	2.9	4.3	2.5	1.8	--	3.9	1.6	0.8	1.2	0.6	1.5	Apr-11
<b>Cash</b>	<b>15,074,021</b>	<b>0.8</b>	<b>0.5</b>	<b>1.6</b>	<b>1.8</b>	<b>1.6</b>	<b>1.4</b>	<b>--</b>	<b>1.7</b>	<b>1.7</b>	<b>1.1</b>	<b>1.5</b>	<b>1.0</b>	<b>8.8</b>	<b>Apr-11</b>
<i>FTSE T-Bill 1 Month TR</i>			0.4	1.4	2.0	1.7	1.1	--	2.2	1.8	0.8	0.2	0.0	0.6	Apr-11
<b>Short-Term Gov't/Credit</b>	<b>202,872,317</b>	<b>10.2</b>	<b>-2.7</b>	<b>0.0</b>	<b>2.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>8.7</b>	<b>0.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.6</b>	<b>Jun-17</b>
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jun-17
<i>Insight</i>	202,872,317	10.2	-2.7	0.0	2.7	--	--	--	8.7	0.7	--	--	--	2.6	Jun-17
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jun-17
<b>Growth Sub-Portfolio</b>	<b>1,515,339,166</b>	<b>76.3</b>	<b>-16.9</b>	<b>-11.0</b>	<b>-8.0</b>	<b>2.6</b>	<b>3.9</b>	<b>8.1</b>	<b>21.4</b>	<b>-5.8</b>	<b>19.7</b>	<b>9.5</b>	<b>-0.4</b>	<b>7.2</b>	<b>Dec-03</b>
<i>StanCERA Growth Blended BM</i>			-15.8	-9.9	-7.0	3.1	--	--	20.7	-4.9	19.1	8.1	--	--	Dec-03
<b>Public Equities</b>	<b>333,042,135</b>	<b>16.8</b>	<b>-24.2</b>	<b>-16.5</b>	<b>-13.4</b>	<b>1.3</b>	<b>3.8</b>	<b>9.4</b>	<b>29.7</b>	<b>-6.9</b>	<b>19.5</b>	<b>12.6</b>	<b>-0.4</b>	<b>7.8</b>	<b>Dec-03</b>
<i>MSCI ACWI IMI NR</i>			-22.4	-15.6	-12.7	0.8	2.4	5.8	26.4	-10.1	23.9	8.4	-2.2	5.8	Dec-03
<b>US Large</b>	<b>281,086,379</b>	<b>14.2</b>	<b>-21.0</b>	<b>-12.3</b>	<b>-8.9</b>	<b>4.4</b>	<b>5.9</b>	<b>10.4</b>	<b>30.7</b>	<b>-3.9</b>	<b>21.3</b>	<b>11.0</b>	<b>0.7</b>	<b>11.6</b>	<b>Dec-94</b>
<i>Russell 1000</i>			-20.2	-11.8	-8.0	4.6	6.2	10.4	31.4	-4.8	21.7	12.1	0.9	9.2	Dec-94
<i>BlackRock Russell 1000 Growth</i>	147,201,980	7.4	-14.1	-3.5	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.2	5.7	14.2	Jul-10
<i>Russell 1000 Growth</i>			-14.1	-3.6	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.1	5.7	14.1	Jul-10
<i>BlackRock Russell 1000 Value</i>	67,281,388	3.4	-26.6	-20.1	-17.0	-2.0	2.0	7.8	26.7	-8.1	13.8	17.3	-3.6	9.3	Jul-09
<i>Russell 1000 Value</i>			-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8	9.2	Jul-09
<i>Dodge &amp; Cox-Equity</i>	66,603,012	3.4	-29.0	-21.8	-19.8	-2.6	2.7	8.3	24.2	-6.3	17.1	21.4	-3.9	10.6	Dec-94
<i>Russell 1000 Value</i>			-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8	8.6	Dec-94
<b>US Small</b>	<b>51,955,756</b>	<b>2.6</b>	<b>-37.6</b>	<b>-33.2</b>	<b>-30.9</b>	<b>-9.6</b>	<b>-3.9</b>	<b>5.7</b>	<b>26.0</b>	<b>-16.1</b>	<b>15.7</b>	<b>17.1</b>	<b>-3.9</b>	<b>8.5</b>	<b>Dec-08</b>
<i>Russell 2000</i>			-30.6	-25.5	-24.0	-4.6	-0.2	6.9	25.5	-11.0	14.6	21.3	-4.4	9.2	Dec-08
<i>Capital Prospects</i>	51,955,756	2.6	-37.6	-33.2	-30.9	-9.3	-2.6	6.0	26.0	-16.1	15.5	28.1	-7.0	8.7	Dec-08
<i>Russell 2000 Value</i>			-35.7	-30.6	-29.6	-9.5	-2.4	4.8	22.4	-12.9	7.8	31.7	-7.5	6.9	Dec-08
<b>Private Equity Proxy</b>	<b>115,300,878</b>	<b>5.8</b>	<b>-20.9</b>	<b>-12.7</b>	<b>-9.1</b>	<b>5.7</b>	<b>7.1</b>	<b>10.7</b>	<b>31.1</b>	<b>-0.2</b>	<b>21.2</b>	<b>11.8</b>	<b>1.4</b>	<b>8.0</b>	<b>Nov-03</b>
<i>Russell 3000 +3%</i>			-19.7	-9.8	-6.1	7.0	8.8	13.2	34.0	-2.2	24.1	15.7	3.5	10.8	Nov-03
<i>Northern Trust Russell 3000</i>	115,300,878	5.8	-20.9	-12.7	-9.1	--	--	--	31.1	--	--	--	--	3.0	Dec-18
<i>Russell 3000</i>			-20.9	-12.7	-9.1	--	--	--	31.0	--	--	--	--	2.9	Dec-18



# Total Fund Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
<b>Int'l Developed</b>	<b>406,215,177</b>	<b>20.5</b>	<b>-25.2</b>	<b>-19.1</b>	<b>-16.7</b>	<b>-2.8</b>	<b>-0.5</b>	<b>2.9</b>	<b>22.3</b>	<b>-15.5</b>	<b>27.9</b>	<b>6.0</b>	<b>-3.4</b>	<b>5.0</b>	<b>Sep-04</b>
MSCI ACWI ex USA			-23.4	-18.0	-15.6	-2.0	-0.6	2.1	21.5	-14.2	27.2	4.5	-5.7	4.2	Sep-04
LSV Asset Mgt	198,671,008	10.0	-27.4	-20.5	-18.9	-4.4	-1.3	2.5	21.5	-16.4	28.2	8.8	-5.1	4.6	Sep-04
MSCI ACWI ex USA			-23.4	-18.0	-15.6	-2.0	-0.6	2.1	21.5	-14.2	27.2	4.5	-5.7	4.2	Sep-04
Fidelity	207,544,170	10.5	-22.9	-17.7	-14.5	-1.3	-0.1	3.1	23.1	-14.5	27.3	2.4	-2.0	2.4	Apr-06
MSCI ACWI ex USA			-23.4	-18.0	-15.6	-2.0	-0.6	2.1	21.5	-14.2	27.2	4.5	-5.7	1.5	Apr-06
<b>Core Real Estate</b>	<b>134,066,213</b>	<b>6.8</b>	<b>-5.0</b>	<b>-1.3</b>	<b>0.3</b>	<b>3.9</b>	<b>2.6</b>	<b>5.4</b>	<b>10.7</b>	<b>1.9</b>	<b>5.5</b>	<b>5.8</b>	<b>-0.5</b>	<b>2.6</b>	<b>Mar-08</b>
NCREIF Property Index			N/A	3.0	4.5	6.2	7.5	10.1	6.4	6.7	7.0	8.0	13.3	6.0	Mar-08
Prime Property Fund	59,298,963	3.0	0.9	4.5	6.7	8.3	--	--	7.4	9.1	9.9	10.4	--	9.1	Sep-15
NCREIF-ODCE			1.0	3.8	4.9	6.8	--	--	5.3	8.3	7.6	8.8	--	7.7	Sep-15
BlackRock US Real Estate	16,422,629	0.8	-28.5	-24.5	-23.9	-4.2	-1.4	--	23.1	-4.1	3.8	6.6	4.4	3.9	Sep-12
DJ US Select RESI TR USD			-28.5	-24.6	-24.0	-4.3	-1.4	--	23.1	-4.2	3.8	6.6	4.5	3.9	Sep-12
PGIM Real Estate US Debt Fund	58,344,620	2.9	1.1	4.2	5.8	--	--	--	6.4	--	--	--	--	5.9	Sep-18
BBgBarc CMBS IG TR USD			0.5	2.1	5.4	--	--	--	8.3	--	--	--	--	6.3	Sep-18
<b>Value Add Real Estate</b>	<b>101,285,755</b>	<b>5.1</b>	<b>4.8</b>	<b>10.5</b>	<b>12.2</b>	<b>12.3</b>	<b>13.8</b>	<b>--</b>	<b>10.1</b>	<b>12.9</b>	<b>13.5</b>	<b>10.3</b>	<b>21.7</b>	<b>12.9</b>	<b>Jul-14</b>
NCREIF Property Index +2%			N/A	4.5	6.6	8.3	9.6	--	8.5	8.8	9.1	10.1	15.6	10.5	Jul-14
American Strategic Value Realty	67,630,097	3.4	N/A	4.8	6.7	9.2	11.7	--	9.6	10.2	11.5	13.1	21.4	12.4	Dec-14
NCREIF Property Index			N/A	3.0	4.5	6.2	7.5	--	6.4	6.7	7.0	8.0	13.3	7.8	Dec-14
Greenfield Gap VII	10,698,152	0.5	7.0	18.9	19.8	16.4	16.4	--	16.8	14.6	16.5	7.7	22.0	15.3	Jul-14
NCREIF ODCE + 1%			1.2	4.6	5.9	7.9	9.5	--	6.4	9.4	8.7	9.8	16.2	10.4	Jul-14
Greenfield Gap VIII	22,957,506	1.2	18.1	23.1	24.4	--	--	--	7.6	--	--	--	--	23.5	Apr-18
NCREIF ODCE + 1%			1.2	4.6	5.9	--	--	--	6.4	--	--	--	--	7.2	Apr-18
<b>Risk Parity</b>	<b>292,272,805</b>	<b>14.7</b>	<b>-9.8</b>	<b>-5.3</b>	<b>-0.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>22.4</b>	<b>-6.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.9</b>	<b>Nov-17</b>
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			-13.3	-8.2	-4.9	--	--	--	18.6	-6.0	--	--	--	-1.0	Nov-17
AQR Global Risk Premium - EL	147,900,082	7.4	-9.9	-4.8	0.1	--	--	--	22.3	--	--	--	--	3.1	Mar-18
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			-13.3	-8.2	-4.9	--	--	--	18.6	--	--	--	--	-1.8	Mar-18
PanAgora Risk Parity Multi Asset	144,372,723	7.3	-9.6	-5.9	-0.7	--	--	--	22.6	-7.3	--	--	--	1.7	Nov-17
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			-13.3	-8.2	-4.9	--	--	--	18.6	-6.0	--	--	--	-1.0	Nov-17

American Strategic Value Realty market value as of 12/31/2019, adjusted for any cash flows. NCREIF Property Index not available at time of production.



Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

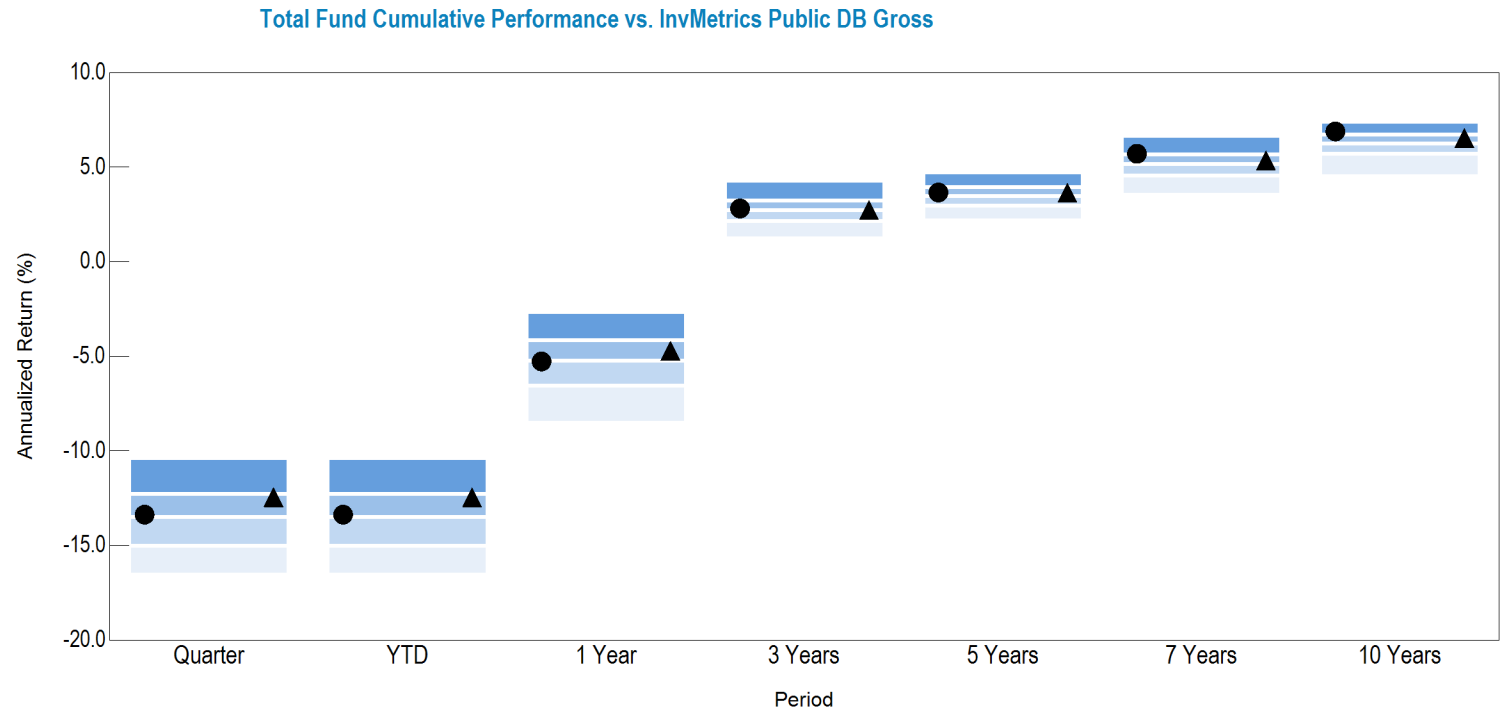
	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
<b>Infrastructure</b>	<b>38,711,962</b>	<b>1.9</b>	<b>5.3</b>	<b>10.9</b>	<b>15.2</b>	<b>17.1</b>	<b>--</b>	<b>--</b>	<b>13.1</b>	<b>8.3</b>	<b>20.9</b>	<b>12.8</b>	<b>--</b>	<b>11.0</b>	<b>May-15</b>
CPI + 5%			1.7	4.5	6.6	7.0	--	--	7.4	7.0	7.2	7.2	--	6.8	May-15
MS Infrastructure Partners II	38,711,962	1.9	5.3	10.9	15.2	17.1	--	--	13.1	8.3	20.9	12.8	--	11.0	May-15
CPI + 5%			1.7	4.2	6.2	6.9	--	--	7.0	7.0	7.2	7.2	--	6.7	May-15
<b>Private Credit</b>	<b>94,444,241</b>	<b>4.8</b>	<b>-4.9</b>	<b>-3.6</b>	<b>-2.0</b>	<b>2.4</b>	<b>2.9</b>	<b>--</b>	<b>5.3</b>	<b>4.9</b>	<b>0.4</b>	<b>3.9</b>	<b>6.6</b>	<b>6.0</b>	<b>May-13</b>
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.7	May-13
Medley Capital	10,177,631	0.5	-3.1	-13.3	-16.1	-9.2	-3.4	--	-13.4	-11.9	4.5	4.4	6.5	1.1	May-13
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.7	May-13
Owl Rock First Lien Fund	5,019,972	0.3	0.0	--	--	--	--	--	--	--	--	--	--	0.2	Oct-19
S&P/LSTA Leveraged Loan Index+2%			-12.6	--	--	--	--	--	--	--	--	--	--	-10.6	Oct-19
Raven Capital	7,944,078	0.4	-44.6	-42.7	-41.5	-13.4	-9.7	--	8.3	5.3	-6.1	-2.1	2.7	-6.2	May-13
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.7	May-13
Raven Opportunity III	44,724,086	2.3	3.8	7.2	10.3	9.3	--	--	9.9	11.0	-7.4	5.6	--	6.4	Jul-15
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	--	--	10.8	2.4	6.2	12.3	--	3.1	Jul-15
White Oak Pinnacle	26,578,475	1.3	2.2	6.4	8.7	7.5	7.6	--	8.1	10.0	3.6	6.8	9.3	13.9	Aug-13
S&P/LSTA Leveraged Loan Index+2%			-12.6	-9.3	-7.3	1.2	3.2	--	10.8	2.4	6.2	12.3	1.3	3.8	Aug-13
<b>Risk-Diversifying Sub-Portfolio</b>	<b>252,332,218</b>	<b>12.7</b>	<b>2.2</b>	<b>3.9</b>	<b>6.0</b>	<b>4.0</b>	<b>3.5</b>	<b>4.4</b>	<b>6.0</b>	<b>1.2</b>	<b>4.0</b>	<b>5.4</b>	<b>0.3</b>	<b>5.0</b>	<b>Nov-03</b>
StanCERA Risk-Diversifying Blended BM			4.0	5.4	7.6	3.8	2.6	2.7	5.3	1.4	1.3	1.3	0.9	--	Nov-03
<b>US Treasury</b>	<b>69,706,578</b>	<b>3.5</b>	<b>9.7</b>	<b>11.7</b>	<b>15.4</b>	<b>7.2</b>	<b>5.4</b>	<b>5.4</b>	<b>7.7</b>	<b>0.7</b>	<b>5.1</b>	<b>5.4</b>	<b>0.3</b>	<b>5.6</b>	<b>Nov-03</b>
BBgBarc US Treasury 7-10 Yr TR			10.1	11.8	16.2	7.0	4.4	5.4	8.5	0.9	2.6	1.1	1.6	5.3	Nov-03
Northern Trust Intermediate Gov't Bond	48,940,355	2.5	5.3	6.6	9.1	--	--	--	5.3	1.5	--	--	--	4.4	Jul-17
BBgBarc US Govt Int TR			5.2	6.4	8.9	--	--	--	5.2	1.4	--	--	--	4.3	Jul-17
Northern Trust Long Term Gov't Bond	20,766,223	1.0	21.5	25.8	33.3	--	--	--	14.8	-1.7	--	--	--	14.1	Jul-17
BBgBarc US Govt Long TR			20.6	24.8	32.3	--	--	--	14.7	-1.8	--	--	--	13.7	Jul-17
<b>Short-Term Gov't/Credit</b>	<b>182,625,640</b>	<b>9.2</b>	<b>-0.4</b>	<b>1.3</b>	<b>2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.5</b>	<b>1.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.4</b>	<b>Jul-17</b>
BBgBarc US Govt/Credit 1-3 Yr. TR			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jul-17
DFA	182,625,640	9.2	-0.4	1.3	2.9	--	--	--	5.5	1.3	--	--	--	2.4	Jul-17
BBgBarc US Govt/Credit 1-3 Yr. TR			1.7	3.0	4.5	--	--	--	4.0	1.6	--	--	--	2.7	Jul-17



# Total Fund

## Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: March 31, 2020



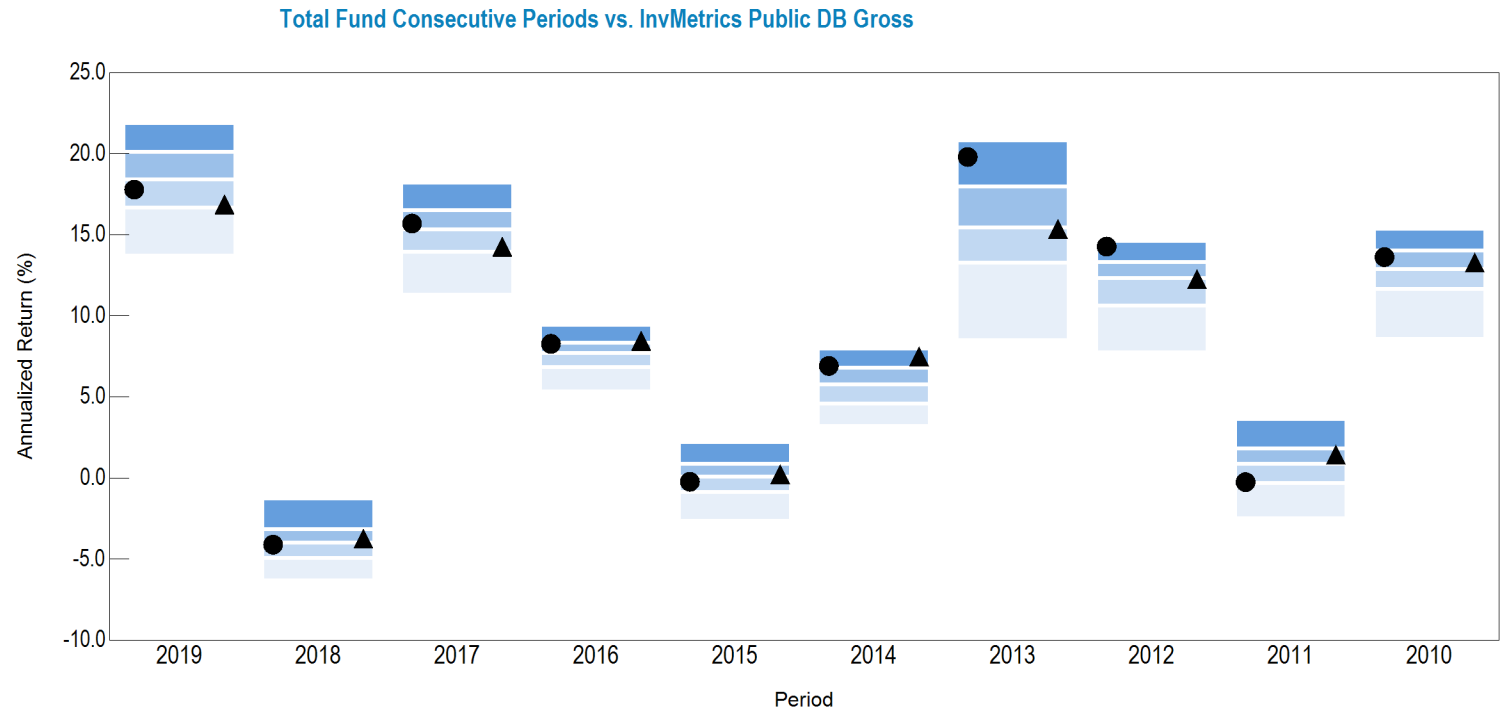
	Return (Rank)											
5th Percentile	-10.4		-10.4		-2.7		4.3		4.7		6.6	
25th Percentile	-12.3		-12.3		-4.1		3.3		4.0		5.7	
Median	-13.5		-13.5		-5.2		2.7		3.5		5.2	
75th Percentile	-15.0		-15.0		-6.5		2.2		3.0		4.6	
95th Percentile	-16.5		-16.5		-8.5		1.3		2.2		3.6	
# of Portfolios	169		169		167		160		158		148	
● Total Fund	-13.4	(48)	-13.4	(48)	-5.3	(52)	2.8	(48)	3.7	(42)	5.7	(25)
▲ Policy Index	-12.4	(31)	-12.4	(31)	-4.7	(42)	2.7	(51)	3.6	(43)	5.4	(41)
											6.9	(17)
											6.5	(37)



# Total Fund

## Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	21.9	-1.3	18.2	9.4	2.2	8.0	20.8	14.6	3.6	15.4
25th Percentile	20.1	-3.1	16.5	8.4	0.9	6.8	18.0	13.4	1.9	14.0
Median	18.4	-4.0	15.3	7.7	0.1	5.8	15.5	12.4	0.9	12.9
75th Percentile	16.7	-4.9	14.0	6.9	-0.9	4.6	13.3	10.7	-0.3	11.7
95th Percentile	13.7	-6.3	11.3	5.3	-2.6	3.2	8.5	7.8	-2.5	8.6
# of Portfolios	330	319	304	305	316	248	231	236	206	188
● Total Fund	17.8 (60)	-4.1 (53)	15.7 (43)	8.3 (29)	-0.2 (60)	6.9 (23)	19.8 (12)	14.3 (10)	-0.3 (75)	13.6 (35)
▲ Policy Index	16.9 (72)	-3.7 (43)	14.3 (71)	8.5 (23)	0.2 (46)	7.5 (12)	15.4 (52)	12.3 (53)	1.4 (35)	13.3 (42)



# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as:  $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$ .

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as:  $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$ .

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.



## Glossary

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**Long-Nickels ICM:** IRR-based methodology developed by Austin Long and Craig Nickels that makes meaningful comparisons between private capital investments and indexes like the S&P 500 Total Return; known as Index Comparison Method (ICM), or Public Market Equivalent (PME). The methodology assumes buying and selling the index according to the timing and size of the cash flows between the investor and the private investment.

The direct opportunity cost comparison of how net funds invested in the private investment would have performed had they been invested in the stated index over the life of the particular investment. In calculation of the IRRICM, the private capital valuation is ignored and substituted instead with a ValuationICM. ValuationICM is essentially a sum of private capital contributions and distributions grown to the analysis date using the respective index values; contributions are treated as purchases into the index and are used to increase the ValuationICM, while distributions are treated as sales and are applied to reduce ValuationICM; the IRRICM then becomes a standard IRR calculation, using the original private capital transactions and ValuationICM substituted for the original private capital valuation.



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