



Meeting Date  
**05/26/2021**  
Agenda Item  
**#6**

**Memorandum**

Date: May 26, 2021  
To: CCCERA Board of Retirement Trustees  
From: Timothy Price, Chief Investment Officer  
Subject: Investment Staff Report – Q1 2021

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**Overview**

On a quarterly basis CCCERA's Board receives a report which details critical elements of CCCERA's Functionally Focused Portfolio's sub-portfolios. The purpose of the report is to highlight elements of the sub-portfolios which are good indicators to the Board of the program's efficient and effective operation.

**Summary**

CCCERA's Total Fund is performing as expected, exhibiting returns above expectations for the amount of risk taken. This is measured by the Sharpe Ratio (risk-adjusted return), and a comparison to the Simple Target Index. The Simple Target Index is the most basic index which could replicate CCCERA's Total Fund, and is made up of 68.5% MSCI ACWI, 25% Bloomberg 1-3 Year Gov/Credit, and 6.5% 3-Month Treasury Bills (please see the Total Fund pages in the appendix for additional details). CCCERA's portfolio is much more complex, especially as it relates to allocations to private equity, private credit, and real estate.

CCCERA has been rewarded for implementing a more complex portfolio, and has outperformed the Simple Target Index over the trailing ten years, while experiencing less risk (volatility). Details on performance relative to this index are included in the appendix. It is worth noting that CCCERA's Total Fund return is an aggregate of the performance of the Liquidity, Growth, and Risk Diversifying sub-portfolios.

### **1) Liquidity**

The purpose of the liquidity program is to match four years of benefit payments with high credit quality, low duration assets. We will transition to targeting three years of benefit payments in the liquidity program over the second and third quarters of 2021. The liquidity sub-portfolio is made up of three fixed income managers, all of whom pursue a high quality, low duration investment approach. In the first quarter of 2021, all managers held high quality (as measured by credit ratings), low duration portfolios. The average credit quality for the entire liquidity program is AA- (AAA is the highest rating), and the duration is 1.7 years, which is considered short.

### **2) Growth**

The Growth portfolio is designed to take advantage of capital appreciation and income opportunities globally. To achieve this, the Growth portfolio includes a variety of assets, from stocks and growth-oriented bonds to private equity, real estate, and private credit.

For the trailing five-year period ending March 31, 2021, the Growth portfolio returned 10.8% relative to the index return of 13.2%, for a relative underperformance of 2.4%. During the first quarter of 2021, the public markets remained strong, with the MSCI ACWI Index returning 4.6% relative to CCCERA's Growth sub-portfolio return of 4%. The relative underperformance of CCCERA's sub-portfolio in 2021 is largely due to a lower risk profile, a significant allocation to private markets (in particular real estate) and the sharp underperformance of value strategies relative to growth and momentum strategies, though this latter factor began to reverse itself in late 2020 and continues into 2021.

### **3) Risk Diversifying**

The Risk Diversifying mandate holds assets that are expected to diversify the growth portfolio's volatility while offering moderate growth. The mandate as a whole seeks to be highly liquid, have a low beta to the growth market, and produce positive real returns. In the first quarter, the Risk Diversifying mandate fulfilled two of these goals. The entire mandate can be liquidated within 90 days, meeting the requirement of high liquidity. The correlation of the mandate to growth markets is 0.7, which shows elevated, but not increasing, diversification compared to 0.7 correlation as of December 2020. However, trailing real (net of inflation) returns over the past five years is -0.7%, an improvement from -0.8% and -1.1% from the two previous quarters, but remains below expectations. We continue to actively underwrite a number of strategies to further build out this allocation.

The Liquidity and Growth sub-portfolios are largely functioning well and within expectations. We are in the midst of restructuring the Risk Diversifying sub-portfolio to address performance concerns. By and large, the product teams and asset managers across all managers are stable, and we have no significant organizational concerns with our investment managers. CCCERA's Total Fund in aggregate is performing in line with expectations, having a similar or higher risk-adjusted return but a lower level of volatility compared to the Simple Target Index. Enclosed are additional details on CCCERA's Total Fund, sub-portfolios, and individual investment strategies.

### CCCERA Portfolio Report Card

Below we have itemized those elements of each of CCCERA’s sub-portfolios and Total Fund which we believe the Board should pay particular attention to. Additional details on each of the sub-portfolios are available in the appendix. All CCCERA performance is stated on a net of fees basis.

#### Liquidity

Objective	Measurement	Current Period Data	Status
High Quality	Credit Quality	AA-	Meeting Expectations
Low Risk	Duration	1.7 years	Meeting Expectations
Appropriately Sized	Months of Benefit Payments Invested	38 Months	Meeting Expectations

#### Growth

Objective	Measurement	Current Period Data	Status
Growth of Plan Assets	Absolute Returns	Trailing 5 yr return: 10.8%	Meeting Expectations
	Benchmark Relative Returns	-2.4% relative to ACWI over trailing 5 years	Below Expectations
Efficient Capital Deployment	Sharpe Ratio	CCCERA: 0.9 MSCI ACWI: 0.7 (over trailing 5 years)	Meeting Expectations

#### Risk Diversifying

Objective	Measurement	Current Period Data	Status
Offset Volatility in Growth Portfolio	Correlation	0.7 over trailing 5 years	Below Expectations
Positive Real Returns	Returns	Trailing 5 yr real return of -0.7%	Below Expectations
High Liquidity	% of Portfolio that can be liquidated within 90 days	100%	Meeting Expectations

#### Total Fund

Objective	Component/Measurement	Status
Store 4 Years of Benefit Payments	Liquidity Sub-portfolio	Meeting Expectations
Participate in Growth Opportunities	Growth Sub-portfolio	Meeting Expectations
Provide an offset to Growth volatility	Risk Diversifying Sub-portfolio	Below Expectations
Produce superior risk adjusted returns	Total Fund Sharpe Ratio	Meeting Expectations

**Appendix – Liquidity Sub-Portfolio**

**Manager Reviews**

**Organizational Stability**

	Portfolio Management Assessment	1 Year Product Asset Growth	1 Year Firm Asset Growth	Regulatory Action in Last Year?
Insight	Good	-3%	16%	N
Sit	Good	14%	17%	N
DFA	Good	13%	40%	N

**Performance**

	Portfolio Average Credit Quality	Portfolio Average Duration	Portfolio Average Yield	1 Year Total Return
Insight	A	1.5	0.7	1.3%
Sit	AAA	2.1	1.4	1.5%
DFA	A+	1.7	0.8	3.3%

**Manager Notes:**

All three Liquidity managers performed in line with expectations over the prior year, with DFA in particular showing a sharp rebound in its composite performance.

**Manager Theses:**

The Liquidity Portfolio is a combination of three managers which work together to match four years of CCCERA’s liabilities. The portfolio is refreshed every year during the annual funding plan.

Insight: Insight plays a completion role in the liquidity program, matching out liabilities with short duration government and corporate fixed income securities.

DFA: Dimensional Fund Advisors runs a strategy that focuses on obtaining fixed income exposures via the most liquid securities available. DFA contributes to the Liquidity Program by selling securities at regular intervals to pay a portion of CCCERA’s monthly benefit payment.

Sit: Sit invests in high yielding government backed mortgages. The cash flow from these securities is harvested monthly to make up a portion of CCCERA’s monthly benefit payment.

## Appendix – Growth Sub-Portfolio

### Manager Reviews

#### Organizational Stability

	Portfolio Management Assessment	1 Year Product Asset Growth	1 Year Firm Asset Growth	Regulatory Action in Last Year?
Boston Partners	Good	27%	47%	N
Jackson Square	Good	-20%	13%	N
BlackRock Index Fund	Good	43%	39%	N
Emerald Advisors	Good	69%	69%	N
Ceredex	Good	59%	16%	N
Pyrford (BMO)	Good	38%	24%	N
William Blair	Good	28%	49%	N
First Eagle	Good	20%	16%	N
Artisan Global	Good	54%	71%	N
PIMCO/RAE EM	Good	-13%	21%	N
TT EM	Good	122%	55%	N
Adelante	Good	-13%	2%	N
Allianz	Good	26%	26%	N
AQR	Good	19%	-2%	N
PanAgora	Good	46%	30%	N
Private Equity	Good	--	--	N
Private Credit	Good	--	--	N
Real Estate	Good	--	--	N

### Performance

	Trailing 1 Year Return	Trailing 5 Year Return	Performance in Line with Expectations?
Boston Partners	66%	13%	Y
Jackson Square	61%	18%	Y
BlackRock Index Fund	61%	17%	Y
Emerald Advisors	85%	19%	Y
Ceredex	76%	11%	Y
Pyrford (BMO)	32%	7%	Y
William Blair	62%	13%	Y
First Eagle	40%	9%	Y
Artisan Global	58%	19%	Y
PIMCO/RAE EM	68%	11%	Y
TT EM	74%	16%	Y
Adelante	35%	6%	N
Allianz	17%	6%	Y
AQR	16%	7%	Y
PanAgora	22%	8%	Y
	1Yr Premium	5 Year Premium	
Private Equity	-37%	-1%	N
Private Credit	-51%	-6%	N
Real Estate	-56%	-8%	N

#### Manager Notes:

The relative underperformance of small capitalization, non-US and value strategies that I highlighted during 2020 has reversed and these strategies outperformed significantly in the first quarter of 2021. With this recovery in value-oriented strategies, most managers have performed exceedingly well over the past year. The value strategies will need continued outperformance in order to close the gap with growth strategies experienced over the past five years. All private markets strategies lagged their public market counterparts for the one and five-year periods ending March 31, 2021. Much of this is due to the valuation lag on these strategies, but we will continue to closely monitor the public vs. private performance differential in the coming year.

Jackson Square showed a 20% decline in strategy assets over the past year due to Vanguard removing the firm as a sub-advisor to their mutual fund lineup.

#### Manager Theses:

The growth portfolio includes all managers in public and private equity, real estate, and private credit. These managers grow CCCERA's assets for future benefit payments (beyond the four years already covered by the Liquidity program).

**Boston Partners:** Large cap domestic equity which follows a value discipline. Boston Partners will buy out of favor companies and sell them when their intrinsic values are reflected in the market. Expected to outperform in flat to falling markets.

**Jackson Square:** Domestic equity large cap growth portfolio concentrated in companies with sustainable long-term growth characteristics. This portfolio should outperform in rapidly rising markets.

**BlackRock Index Fund:** Large cap domestic equity portfolio which should follow the Russell 1000 Index.

**Emerald Advisors:** Small cap growth equity seeking companies with high growth rates. Expected to produce strong returns in rising markets, and weak returns in falling markets.

**Ceredex:** Domestic equity small cap value portfolio of companies with dividend yields and low valuations. This portfolio should outperform flat markets.

**Pyrford (BMO):** International equity value portfolio of non-US companies with low valuations at the country and stock level. This portfolio should outperform in flat markets.

**William Blair:** International equity growth portfolio of non-US companies with high growth rates constructed from the security level. This portfolio should outperform in rapidly rising markets.

**First Eagle:** Global equity portfolio that is benchmark agnostic comprised of companies with low valuations.

**Artisan Global Opportunities:** Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation.

**PIMCO/RAE Emerging Markets:** Quantitative equity with a value orientation. This portfolio follows the fundamental indexing approach (ranking companies by metrics other than market capitalization), resulting in a diversified, low turnover portfolio. This portfolio underperforms in momentum driven markets.

**TT International Emerging Markets:** Concentrated, growth oriented manager which invests in small and mid-cap emerging market companies. TT employs both a top-down and a bottom-up research approach, and seeks to outperform by identifying companies that have a catalyst to drive future growth.

**Adelante:** Diversified portfolio of U.S. REITs with a focus on the underlying real estate assets. Adelante is a public market proxy of the core real estate market.

**Allianz High Yield Fixed Income:** Domestic high yield fixed income portfolio with a focus on security selection. Allianz will focus on the higher quality segment of the high yield universe. Allianz should provide a steady income stream, and provide downside protection in falling markets.

**Private Equity:** CCCERA invests in private equity to generate returns above those available in the public equity markets.

**Private Credit:** CCCERA invests in private credit to generate cash flow streams above those available in the public debt markets.

**Real Estate:** CCCERA invests in value-add, distressed, and opportunistic real estate to generate returns from the capital appreciation and cash flow associated with commercial real estate investment.

**Risk Parity:** Multi-asset approach that strives for balanced contributions to total portfolio risk from multiple asset classes.



## Appendix – Risk Diversifying Sub-Portfolio

### Organizational Stability

	Portfolio Management Assessment	1 Year Product Asset Growth	1 Year Firm Asset Growth	Regulatory Action in Last Year?
AFL-CIO	Good	8%	8%	N
Parametric	Good	-37%	40%	N
Acadian	Good	250%	40%	N

### Performance

	Trailing 1 Year Correlation to Growth	Trailing 3 Year Correlation to Growth	1 Year Return	5 Year Return	% of Portfolio Liquid in 90 Days
AFL-CIO	0.8	-0.3	0%	3%	100%
Parametric	-0.8	---	8%	N/A	100%
Acadian	-0.6	-0.4	-2%	N/A	100%

### Manager Notes:

Parametric is owned by Eaton Vance, which is being acquired by Morgan Stanley. In conjunction with this transaction, the firm announced that Jay Strohmaier, Portfolio Manager of the strategy employed by CCCERA, would retire on March 31, 2021. He has been succeeded by Alex Zweber. The decline in Parametric's VRP strategy assets over the past year reflects our partial redemption in late 2020.

During the first quarter, the Board approved a defensive strategy with Sit Fixed Income. This strategy was funded in early April and will be shown in the second quarter report.

### Manager Theses:

Managers in the risk diversifying allocation seek to have a low correlation with the growth portfolio, positive returns in flat and falling equity markets, and a high degree of liquidity. These managers work together to offset some of the risks in the growth portfolio.

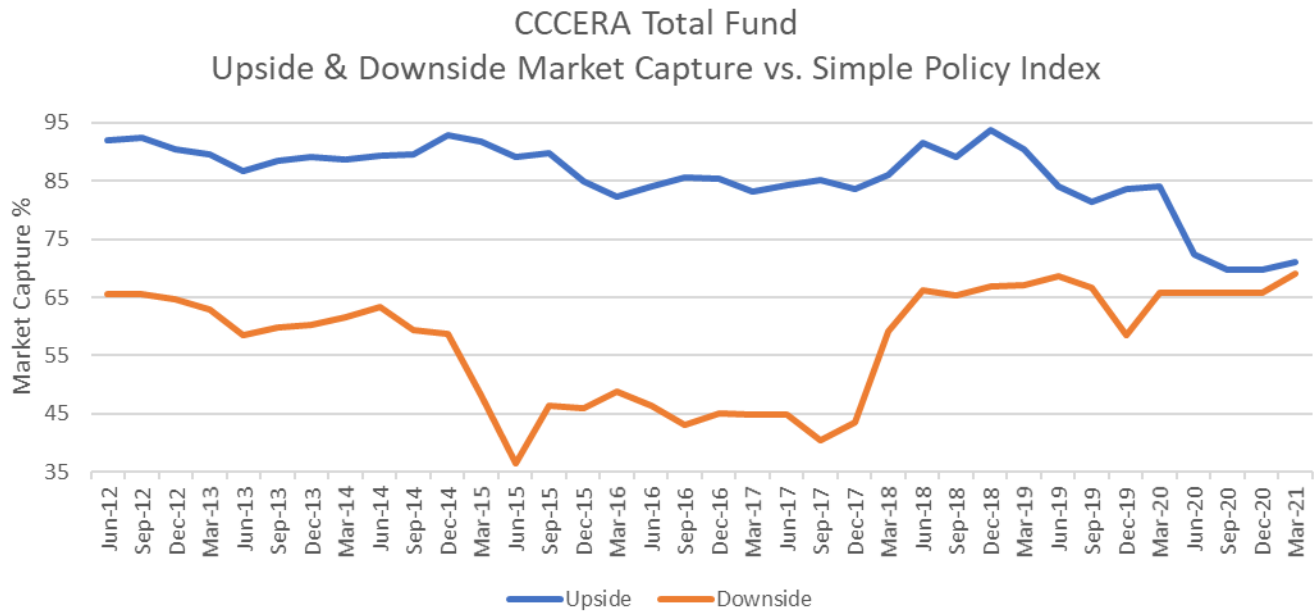
**AFL-CIO:** Portfolio of domestic, high quality fixed income securities which are backed by commercial and residential mortgages.

**Parametric:** Portfolio of paired options selling intended to collect insurance premiums by selling puts and calls on the S&P 500 with collateral invested in US Treasury portfolio.

**Acadian:** Quantitatively managed multi-asset absolute return strategy that uses various models to capture pricing dislocations.

**Appendix Data – Total Fund**

**Rolling 3-Year Total Fund Upside/Downside Market Capture**



\*The composition of the Simple Target Index has mirrored changes in CCCERA’s asset allocation over time: from 2008 to 2012 the benchmark was 73% MSCI ACWI, 23% Bloomberg 1-3 Year Gov/Credit, and 4% 3-Month Treasury Bills. From 2012 to 2016 the composition was 74% MSCI ACWI, 18% Bloomberg 1-3 Year Gov/Credit, and 9% 3-Month Treasury Bills. From 2016 to 2017 the composition was 63% MSCI ACWI, 25% Bloomberg 1-3 Year Gov/Credit, and 12% 3-Month Treasury Bills, from 2017 to September 2018 the composition was 61% MSCI ACWI, 27% Bloomberg 1-3 Year Gov/Credit, and 12% 3-Month Treasury Bills, from July 2018 to September 2019 the composition is 69% MSCI ACWI, 23% Bloomberg 1-3 Year Gov/Credit, and 8% 3-Month Treasury Bills, from July 2019 to September 2020 the composition is 68% MSCI ACWI, 24% Bloomberg 1-3 Year Gov/Credit, and 8% 3-Month Treasury Bills, and from July 2020 to the present the composition is 68.5% MSCI ACWI, 25% Bloomberg 1-3 Year Gov/Credit, and 6.5% 3-Month Treasury Bills.

## Total Fund Quarterly Attribution

	CCCERA Total Fund			Simple Target Index			Analysis		
	Allocation	Return	Return Contribution	Allocation	Return	Return Contribution	Allocation Difference	Return Difference	Total Effect
Liquidity	23.9%	-0.1%	0.0%	25.0%	0.0%	0.0%	-1.1%	0.0%	0.0%
Growth	71.1%	4.0%	2.8%	68.5%	4.6%	3.1%	2.6%	-0.6%	-0.3%
Risk Diversifying	5.0%	-0.4%	0.0%	6.5%	0.0%	0.0%	-1.5%	-0.5%	0.0%
Total Fund	100%		2.8%	100%		3.1%	-0.1%		-0.3%

## CCCERA Total Fund Performance vs. Simple Target Index

	One Year		Three Years		Five Years		Ten Years	
	CCCERA	STI	CCCERA	STI	CCCERA	STI	CCCERA	STI
Return	24.1	36.0	7.8	9.6	8.6	9.5	8.0	6.8
Volatility	5.3	9.1	10.2	15.3	8.0	11.8	7.7	10.8
Sharpe	<b>4.5</b>	<b>3.9</b>	<b>0.6</b>	<b>0.5</b>	<b>0.9</b>	<b>0.7</b>	<b>1.0</b>	<b>0.6</b>

The Simple Target Index is made up of 68.5% MSCI ACWI, 25% Bloomberg 1-3 Year Gov/Credit, and 6.5% 3-Month Treasury Bill. This purpose of this index is to examine whether CCCERA is being rewarded for pursuing a more nuanced portfolio versus a very simple representative portfolio.

CCCERA's Total Fund has produced strong risk adjusted and absolute returns over the trailing five and ten-year periods. Additionally, the CCCERA Portfolio has exceeded the STI over the trailing ten-year period, though it has lagged in more recent periods. This would indicate that CCCERA has been rewarded over time for engaging in more complex investments which target outperformance versus investing passively in the publicly traded market even though these more complex structures have lagged the public markets sharply in the past year which is a drag on short and medium-term performance.

The Sharpe ratio is a measure of risk adjusted returns which shows the amount of return a portfolio earns above the risk free rate per unit of volatility. The Total Fund has exceeded the Sharpe ratio of the Simple Target Index over all trailing time periods, indicating that CCCERA is being favorably rewarded for the level of risk taken in the portfolio.