



**AGENDA
CITY OF CREVE COEUR
EMPLOYEE PENSION BOARD OF
TRUSTEES
ONLINE MEETING
OCTOBER 18, 2022
3:00 PM**

Zoom Meeting Information

1. Due to extreme circumstances regarding the COVID-19 pandemic, this meeting will be held online only. Members of the public may access live audio and/or video at the following link:

<https://us02web.zoom.us/j/83204790214>

Meeting ID:832 0479 0214 Phone: +1 312 626 6799

Call to Order

Public Comments

Approve Agenda

Approve Minutes

2. Approval of July 19, 2022 Employee Pension Board of Trustees Meeting Minutes

Reports

3. Third Quarter Report-Commerce (Report Only)
4. Third Quarter Report-Sunpointe (Presenting)

New Business

5. Elect Chair/Vice
6. Board Term Limits & 2023 Calendar
7. Actuarial Reports
Summary:

1. Actuarial Valuation Report as of 7-1-22
2. GASB 67-68 Report
3. GASB 75 OPEB Report
4. Future Projection Graph



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CITY OF CREVE COEUR
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8. COLA for Legacy Plan Discussion

Old Business

Retirement Activity

9. Retirement Activity

Summary: 2 Retired Employees: Patrick Burke (Community Development - Building Dept.) - October 1, 2022 and Pamela Viehland (Police Clerk) - October 1, 2022.

Invoices

10. Mapers Conference

Adjournment

Posted by: _____

Date/Time posted: _____

If you need special accommodations to attend a meeting, services may be arranged by contacting the Office of the City Administrator in advance.



**Employee Pension Board of Trustees
Pension Board Meeting Minutes
July 19, 2022
3:00 PM
Online**

Zoom Meeting Information

Due to extreme circumstances regarding the COVID-19 pandemic, this meeting will be held online only. Members of the public may access live audio and/or video at the following link:

<https://us02web.zoom.us/j/86726473086>

Meeting ID: 867 2647 3086 Phone: +1 312 626 6799

Call to Order

Rhonda O'Brien	Board Member	
Joseph Martinich	Council Liaison	(Absent)
Michael Karasick	Chair	
Ted Armstrong	Board Member	
Carol Lippman	Board Member	
Brad Holmes	Employee Representative	
Michael Breitenstein	Employee Representative	
Lori Obermoeller	Director of Finance	
Jack Dwyer		
Lee Boudouris		
John Bascio		
Matt McCarty		

Public Comments

Approve Agenda

Motion to Approve the Agenda

RESULT:	APPROVED [UNANIMOUS]
AYES:	O'Brien, Karasick, Armstrong, Lippman, Holmes, Breitenstein
ABSENT:	Martinich

Approve Minutes

Approval of April 19, 2022 Employee Pension Board of Trustees Pension Board Meeting Minutes

Ted made a motion to approve the corrected minutes, which was changing lost to low on page 3, section P. 31, last sentence. Carol seconded the motion and all were in favor.



Employee Pension Board of Trustees
Pension Board Meeting Minutes
July 19, 2022
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Online

RESULT:	ACCEPTED AS AMENDED [UNANIMOUS]
MOVER:	Ted Armstrong, Board Member
SECONDER:	Carol Lippman, Board Member
AYES:	O'Brien, Karasick, Armstrong, Lippman, Holmes, Breitenstein
ABSENT:	Martinich

Reports

Second Quarter Report-Commerce Presenting

John Bascio stated that the Creve Coeur Plan had 100% participation in ACH benefit payments instead of check payments, where a lot of their other Plans aren't and they are having issues.

Matt McCarty went over the 2nd Quarter Report. He stated that the market for the year has been a challenging time, but they continue to move forward with overweight in Corporates. YTM was almost 4% as a result of the rising rates. Commerce will continue to shorten duration. Large portion in A rated. Performance YTD is down 10%. Unusual to have negative returns going out 3 years.

Ted Armstrong asked if there were any radical changes at this time? "No" per Matt.

Ted asked why Commerce's portfolio doesn't match exactly with Sunpointe's? Jack stated it was due to accrued interest which is included in Sunpointe's. Ted asked that Commerce and Sunpointe get together and work it out so they are the same.

Second Quarter Report-Sunpointe Presenting

Jack Dwyer went over Sunpointe's 2nd Quarterly Report. S&P 500 was down 20%. Commend the Board on moving to the 60/40 structure. CPI/Inflation is high causing equity and bond prices to fall. Jack thinks alternatives still make sense. Jack will add duration if Treasury continues to go up.

Portfolio is down in Risky Assets. After the last meeting, Equities were overweight so Sunpointe trimmed equities by \$500K and added to Commerce. In May Sunpointe rebalanced again, trimming bonds by \$320K and investing \$160K each into Vanguard Small Cap ETF and GS GQG International. Then on 5/16/22, Sunpointe redeemed \$200K from the Cliffwater Corporate Lending Fund because it had become more than 7% of the portfolio. Sunpointe then invested the proceeds into the Vanguard Total Bond ETF. On July 6th and 7th, the City made their 2022 contribution of \$645,267.85 to the plan.

Sunpointe will add a footnote to the report noting the fiscal year end date. Below is a summary provided by Jack Dwyer with Sunpointe Investments from the meeting on the quarterly performance report:

- a. While absolute performance has been difficult during the first half of the year, benchmark relative performance has been very good, aided by the alternative investments added over the past two years.
- b. The portfolio declined 9.6% during the second quarter as equity markets and bond markets both continued their historic declines.
- c. For the quarter, the portfolio outperformed the primary benchmark by 190 basis points.
 - i. The risk mitigation (bond) bucket outperformed the Bloomberg US Aggregate by 180 basis points (-2.9% vs. -4.7%). Cliffwater and Variant



**Employee Pension Board of Trustees
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- were the main contributors to relative performance.
- ii. The risky asset (equity) bucket outperformed MSCI ACWI IMI by 210 basis points (-13.7% vs. -15.8%). The portfolio's quality, value, and infrastructure exposure were helpful, and GQG International Equity outperformed.
- d. For the trailing one-year period, the portfolio outperformed the primary benchmark by 340 basis points.

P.45, Ted asked what the expense ratio was for Thaler. 75 basis points. Ted is still troubled by expense ratio and thinks we should keep the expense ratio low, and Thaler is not the way to go right now. All agreed.

P. 35, Risk mitigation is over weight 1.1%. Sunpointe will be trimming PIMCO and adding Vanguard.

Ted thanked Brad for his summary report from the MAPERS conference. Private Equity not suited for our portfolio, but all good comments. Carol Lippman said that she would like the notes from Brad's conference to be shared with the City Council, specifically the part about a COLA. Lori Obermoeller said she would relay the message to Council Member Joe Martinich to see if he wants to pass on the message during his report to the City Council.

Carol thanked Sunpointe and Commerce for their great work.

New Business

Brad asked if we could go back to In-Person meetings. Because 100% of the group could not agree to In-Person, the meetings will stay as zoom for now.

Old Business

Retirement Activity

1 Vested Terminated Employee Brian Stitch (Golf Division) effective April 1, 2022

Invoices

Milliman Invoice

Adjournment

Motion to Adjourn

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Carol Lippman, Board Member
SECONDER:	Ted Armstrong, Board Member
AYES:	O'Brien, Karasick, Armstrong, Lippman, Holmes, Breitenstein
ABSENT:	Martinich

CITY OF CREVE COEUR PENSION (FIXED INCOME)

As of September 30, 2022

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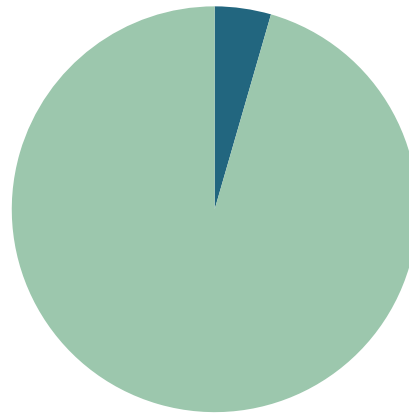
- Sector of Limitations Analysis
- Bond Portfolio Holdings
- Portfolio Holdings

Appendix

ASSET ALLOCATION SUMMARY

as of September 30, 2022

Actual Allocation



■ Cash Equivalents 5.3%
■ Fixed Income 94.7%

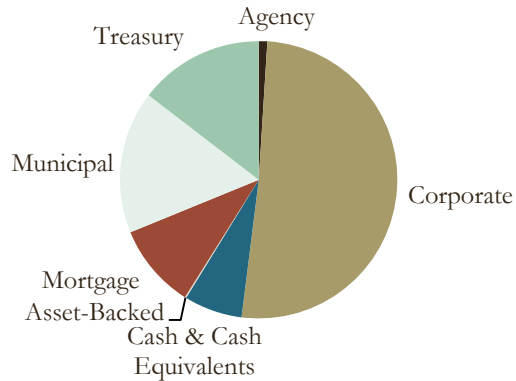
	% of Portfolio	Market Value	Total Cost	Est. Annual Income	Yield
Cash Equivalents	5.32%	\$267,511	\$267,511	\$7,790	2.91%
Fixed Income Investments	94.68%	\$4,762,777	\$5,392,038	\$160,474	4.80%
Domestic	94.68%	\$4,762,777	\$5,392,038	\$160,474	4.80%
GRAND TOTAL	100.00%	\$5,030,288	\$5,659,549	\$168,264	4.70%

**Market Values reflected do not include accrued income.*

PORTFOLIO VS. BENCHMARK COMPARISON

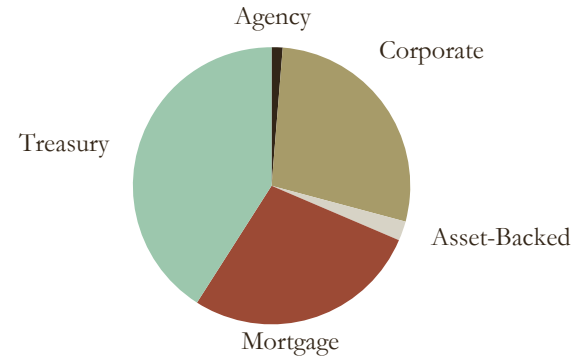
as of September 30, 2022

City of Creve Coeur (MV: \$5.0MM)



Asset Class	%
Treasury	14.57
Agency	1.01
Corporate	50.99
Asset-Backed	0.17
Mortgage	9.86
Municipal	16.62
Cash & Cash Equivalents	6.78

Bloomberg Aggregate



Asset Class	%
Treasury	40.96
Agency	1.28
Corporate	27.87
Asset-Backed	2.28
Mortgage	27.61

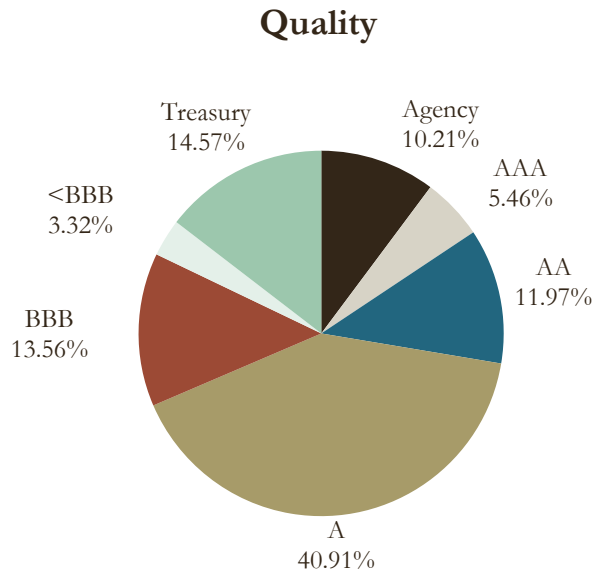
Total 100.00

Total 100.00

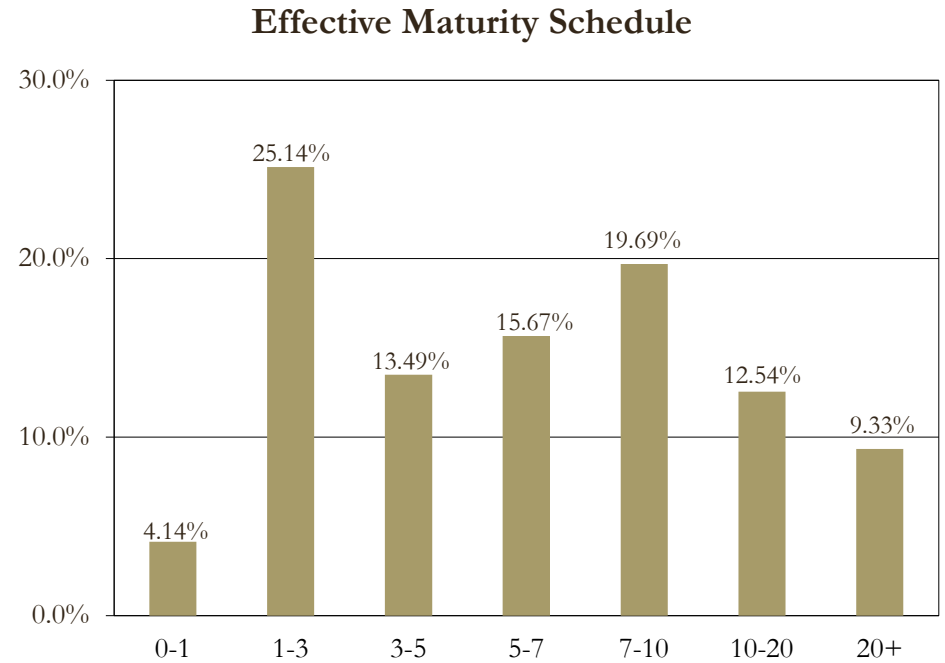
4.92%	YTM	4.75%
7.73	Maturity (yrs)	8.52
5.69	Duration (yrs)	6.20
A+	Quality	AA

BOND PORTFOLIO CHARACTERISTICS

as of September 30, 2022



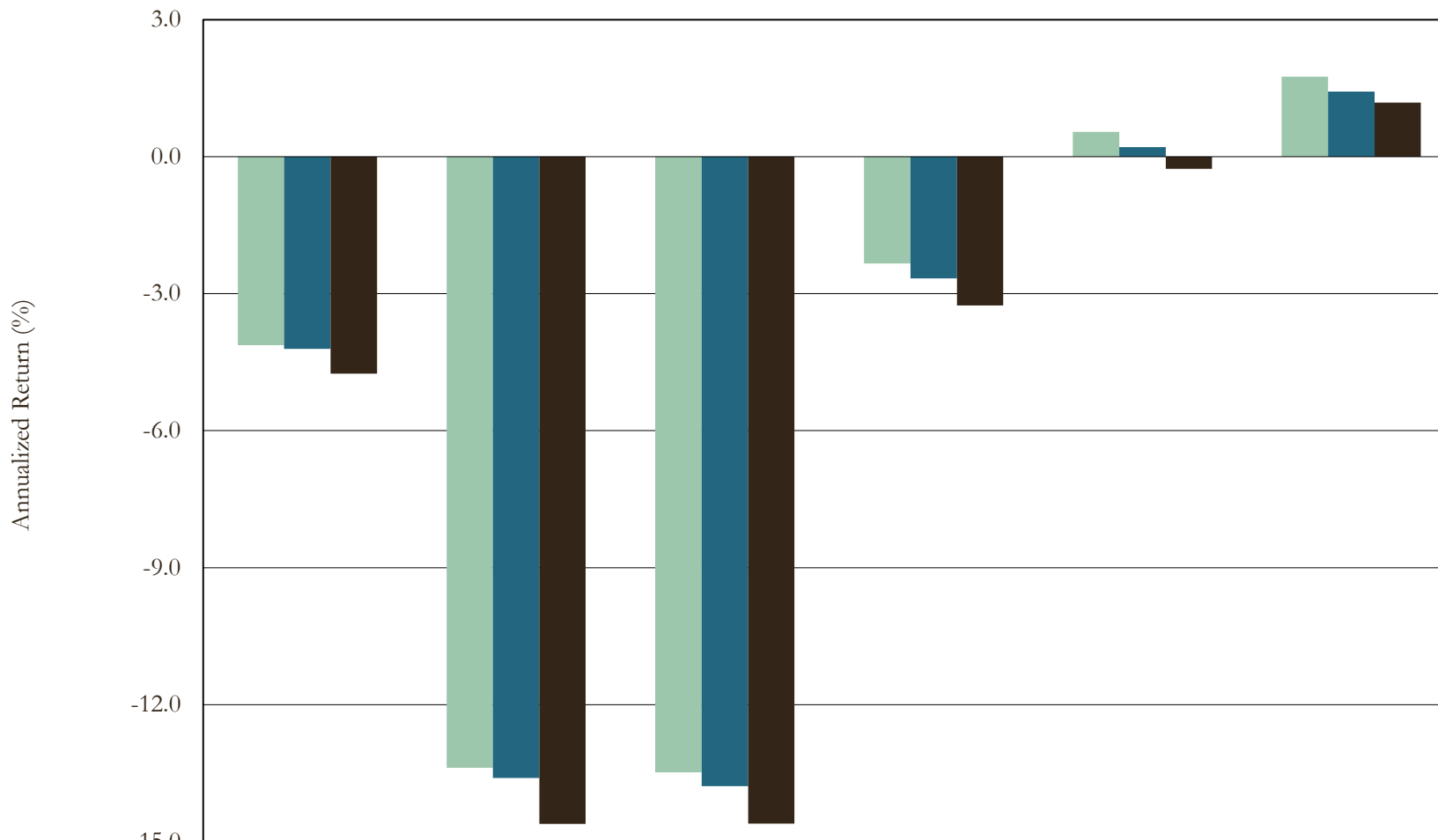
Average Quality = A+



Average Life = 7.73 years

FIXED INCOME PERFORMANCE COMPARISON

as of September 30, 2022

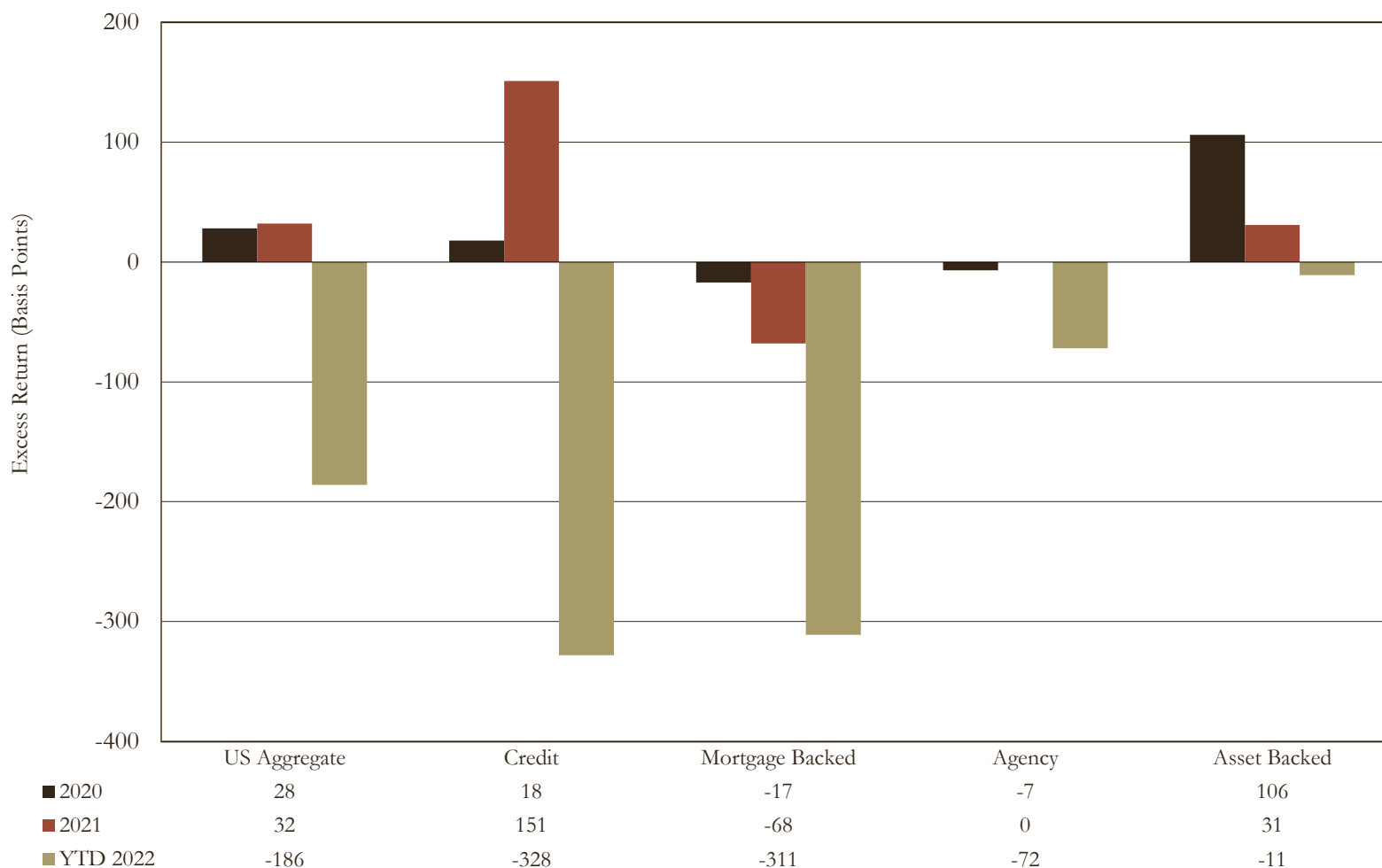


	Quarter	YTD	1 Year	3 Year*	5 Year*	Inception* (9/30/13)
■ City of Creve Coeur (Gross of Fees)	-4.13	-13.38	-13.48	-2.34	0.54	1.75
■ City of Creve Coeur (Net of Fees)	-4.21	-13.60	-13.78	-2.67	0.21	1.42
■ Bloomberg Aggregate	-4.75	-14.61	-14.60	-3.26	-0.27	1.18

*Returns for periods greater than one year are annualized, performance is gross of fees

DURATION-ADJUSTED EXCESS RETURNS*

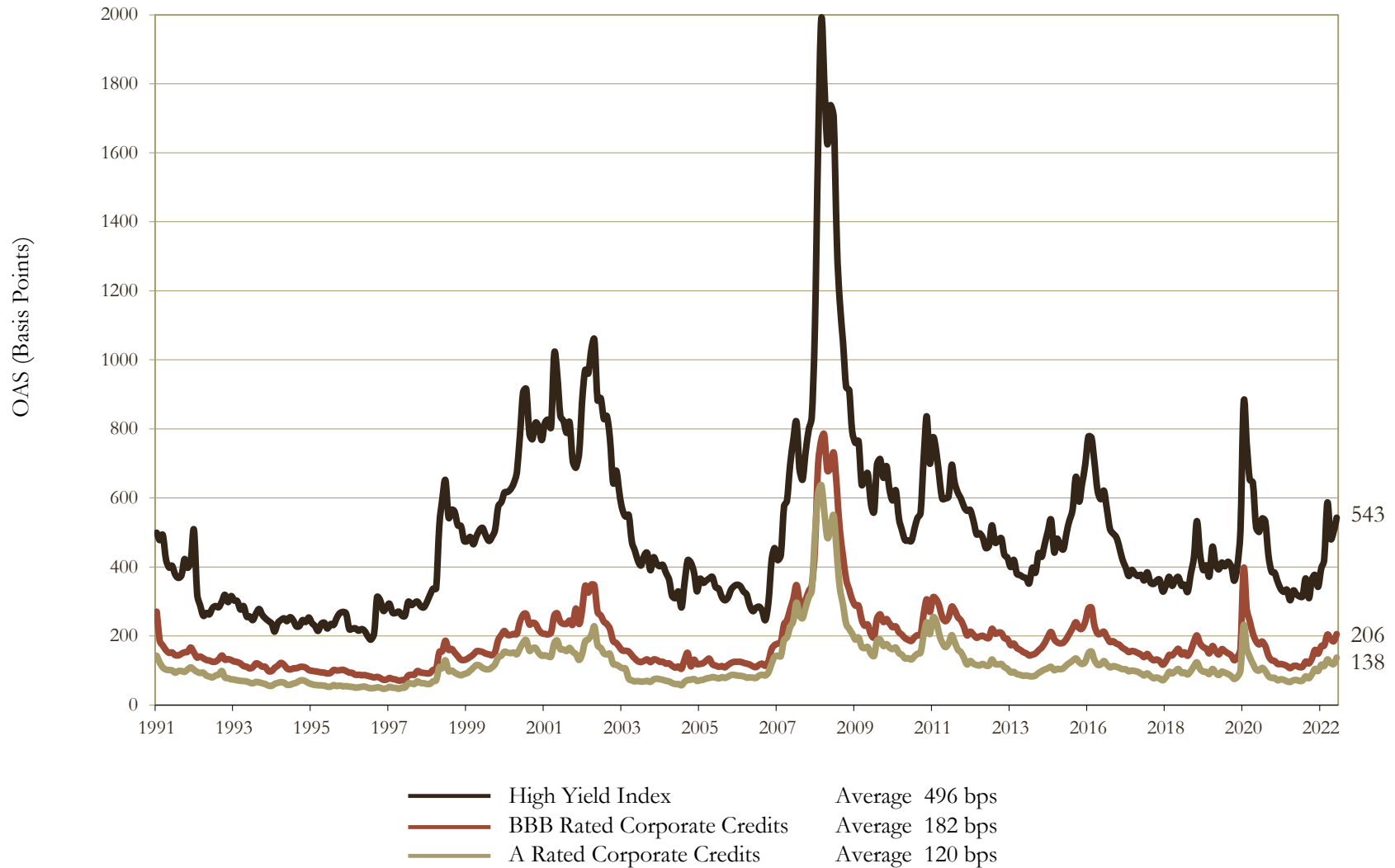
as of 09/30/22



*versus U.S. Treasuries

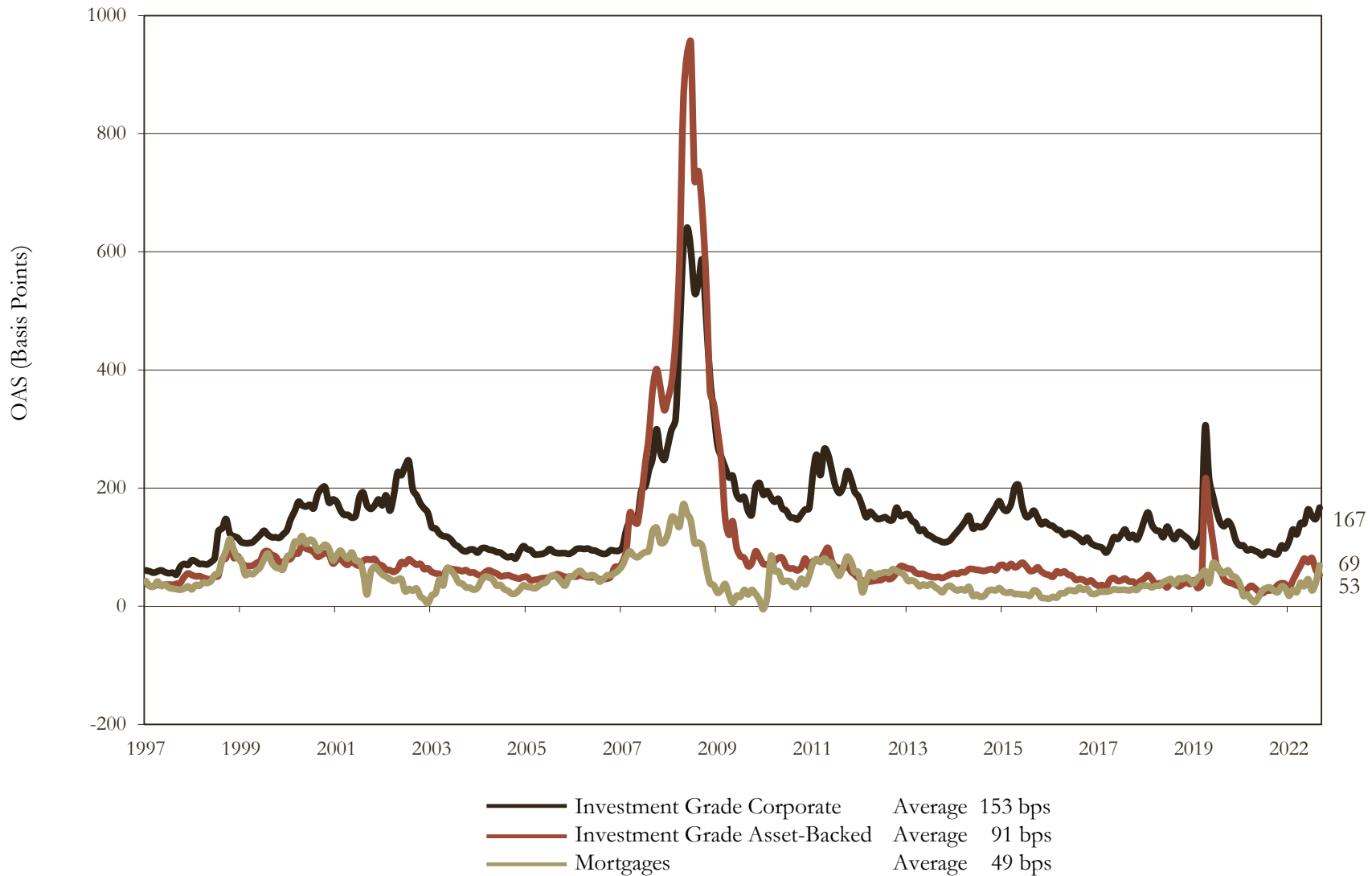
Source: Bloomberg

CORPORATE CREDIT SPREADS – 1/31/91 through 09/30/22



Source: Bloomberg, ICE BofA ML

SECTOR CREDIT SPREADS – 1/31/97 through 09/30/22



Source: Bloomberg, ICE BofA ML

BOND MARKET TOTAL RETURNS

Market	2020	2021	2022 1Q	2022 2Q	2022 3Q	Sept.	YTD
Master Index	7.64%	-1.62%	-6.10%	-4.62%	-4.92%	-4.47%	-14.85%
Corporate	9.81%	-0.95%	-7.74%	-6.71%	-5.11%	-5.31%	-18.33%
Treasuries	8.22%	-2.38%	-5.56%	-3.85%	-4.72%	-3.75%	-13.48%
Agencies	5.75%	-1.15%	-4.25%	-1.98%	-3.07%	-2.37%	-9.03%
Mortgages	4.09%	-1.21%	-5.05%	-3.91%	-5.38%	-5.12%	-13.67%
Asset-Backed	3.48%	0.50%	-2.32%	-1.21%	-0.98%	-1.04%	-4.45%
High-Yield	6.21%	5.29%	-4.53%	-9.92%	-0.69%	-4.01%	-14.58%
Municipal	5.26%	1.83%	-6.18%	-3.30%	-3.62%	-3.72%	-12.56%
2 Yr Treasury	3.03%	-0.53%	-2.50%	-0.50%	-1.70%	-1.17%	-4.63%
10 Yr Treasury	10.58%	-3.68%	-6.75%	-4.92%	-6.19%	-5.29%	-16.83%
30 Yr Treasury	18.65%	-4.68%	-11.41%	-12.95%	-11.19%	-9.09%	-31.51%
TIPS	10.99%	5.96%	-3.02%	-6.08%	-5.14%	-6.62%	-13.61%

Source: Bloomberg, ICE BofA ML

THE ECONOMY TODAY

AS OF 09/20/2022

GROWTH

While US “real” GDP grew by 5.7% last year (our highest annual growth rate since 1984), this year’s first half growth (adjusted for inflation) has been slightly negative as Covid-related stimulus fades, financial conditions tightened, and inflation more than entirely offset nominal growth. With real growth negative for two consecutive quarters and Europe likely tipping into a second half recession, we’ve lowered the cumulative growth for 2022 to zero. Unfortunately, the probability of a US recession continues to grow as the Fed fights intransigent inflation with ever higher interest rates that have tightened financial conditions, lowered stock prices, reduced consumer confidence and pushed the unemployment rate higher. We believe the odds of a recession are higher than the odds of a soft landing.

JOBS

Unemployment last year fell remarkably fast (from 6.7% to 3.9%) as 6.65 million jobs were created. Unemployment fell this year to near record lows, but employment growth has slowed somewhat as workers grew increasingly hard to find. Workforce participation is rising as we move past the surge in “Covid boomer” retirements and unpredictable school schedules that pulled parents (particularly moms) out of the workforce. We expect unemployment to remain low this year as job growth continues (we’ve created 3.25 million jobs this year) since job openings as measured by the JOLTS, NFIB and Manpower surveys remain elevated. While “Help wanted” was the recovery’s initial mantra (now it’s “let’s fight inflation”) employment is still a positive economic driving force, making it even tougher for the Fed to control the attendant wage price pressures that push inflation along.

INTEREST RATES

Accommodative monetary policy gently and slowly began to reverse this past spring as the Fed finally nudged short rates up in March and mapped out a gradual reversal of quantitative easing. As inflation continued to accelerate rather than “transition”, the Fed began to more rapidly reverse pivot and raised rates another 2.75% through September. Fortunately, the July/August CPI reports reversed this year’s rising pattern and the CPI fell to (only) 8.3% down from June’s 9.1% recovery high. Unfortunately, core inflation continued along with an upward bias pushing treasury interest rates to new yearly highs. We expect no less than two 50 bps rate hike in November and December (taking the Fed fund rate above 4% by year end. While a “soft landing” remains possible, the inverted yield curve is pointing rather convincingly toward a very dramatic slowdown in growth sometime next year. More ominously, if cash rates rise above ten-year Treasury rates (not yet but perhaps before the end of the year) recessions have typically followed within 12 months.

MARKETS

The S&P 500 finished up 27% in 2021, providing the fastest “doubling” ever from its recessionary market bottom (March 2020). This year, major stock market indexes both here and abroad are down approximately 20% through mid-September hovering close to their yearly lows. While corporate earnings have surpassed lowered expectations, and an oversold market showed signs of a corrective rebound in July and August, the incessant rise in interest rates to combat inflation is the primary lever pushing stock prices lower. With the odds of a US recession growing ever higher (recognizing stock prices on average fall about 35% during a recession), we grew more defensive in terms of our equity exposure as we trimmed stocks in late July taking advantage of the very strong but temporary bear market rally. International assets continue to underperform as we expected as the US economy is performing better than a recessionary Europe and a stalling Japan. And while value stocks initially outperformed growth stocks early in the recovery, we evened out our initial value bias, adding back to growth sectors that tend to outperform as the economy slows.

OUTLOOK

As inflation remains more persistent than expected and the Fed’s forcible reaction pressures and inverts interest rates along the curve, it is difficult to suggest one become more “offensively” minded. As such, we have allocated a portion of most balance portfolios to cash for capital preservation while we wait for an opportunity to add back to riskier assets. While we remain underweight core bonds and short duration in general, in an ever more defensive move we’ve recommend minimal to no high yield exposure. We also continue to emphasize domestic assets relative to international, particularly as the dollar strengthens. Since stocks typically underperform once the Fed begins to raise rates and the probability of a recession not only remains elevated but continues to grow, we are in no hurry to add near term additional risk expecting much better opportunities either late this year or in 2023.

Source: Commerce Trust Company

City of Creve Coeur Retirement Analysis of Sector Limitations September 30, 2022

Sector Type	Normal Unit Commitment (% Portfolio)	Max Exposure Per Credit (% Portfolio)	Max Sector Exposure (% Portfolio)	Current (% Portfolio)	Additional Constraints	Constraint	Current
					Average Credit Quality	>=A-	A+
U.S. Treasury Securities	Unlimited	Unlimited	Unlimited	14.6%	Duration	±30% of index	-8.2%
Federal Agency Securities	Unlimited	Unlimited	Unlimited	1.0%	BBB Credits	<=20%	13.6%
Agency Passthroughs/CMOs/Other MBS	2%	5%	60%	9.9%	144A Issues	<=10%	0.0%
Asset Backed Securities	2%	5%	25%	0.2%	Below Investment Grade**	<=5%	3.3%
Corporate Securities	2%	5%	75%	51.0%			
Municipal Securities	2%	5%	20%	16.6%			
Cash & Equivalents	2%	10%	10%	6.8%			

* Index = Bloomberg Aggregate

** No below investment grade security may be purchased. Securities downgraded to below the BBB range (up to 5% of the portfolio value) may be held at the manager's discretion - amounts over 5% must be sold within 90 days.

Portfolio Position Report

Portfolio: CITY OF CREVE C 8016

Currency: USD

Pricing Date: 09/30/2022

Representative:

Sector 1	CUSIP9	Par (000)	Mkt Val (000)	% Held (MV)	Issuer Name	Coupon	Maturity	Quality	Mdys	S&P	YTM	Avg Life	Eff Dur	Conv (Par)	OAS
CASH		88	88	1.799		3.080	0.085	Aaa	Aaa	AAA	3.080	0.083	0.084	0.000	0
	000000CM9	88	88	1.799	CASH & EQUIVALENTS	3.080	10/31/2022	Aaa	Aaa	AAA	3.080	0.083	0.084	0.000	0
TSY		880	712	14.565		1.251	8.950	Aa1	Aa1	AA+	3.978	8.987	7.891	0.429	-1
	91282CDG3	110	98	2.005	UNITED STATES TREAS NTS	1.125	10/31/2026	Aa1	TSY	TSY	4.160	4.083	3.892	0.086	0
	912828YB0	265	229	4.685	UNITED STATES TREAS NTS	1.625	08/15/2029	Aa1	TSY	TSY	3.923	6.917	6.332	0.224	-3
	912828ZQ6	330	261	5.332	UNITED STATES TREAS NTS	0.625	05/15/2030	Aa1	TSY	TSY	3.862	7.667	7.228	0.284	-5
	912810TA6	150	103	2.104	UNITED STATES TREAS BDS	1.750	08/15/2041	Aa1	TSY	TSY	4.188	18.917	15.319	1.361	9
	912810RH3	25	21	0.439	UNITED STATES TREAS BDS	3.125	08/15/2044	Aa1	TSY	TSY	4.139	21.917	15.240	1.471	8
AGY		50	50	1.013		2.920	1.626	Aa1	Aaa	AA+	4.209	1.667	1.498	-0.028	-4
	3133ENWL0	50	50	1.013	FEDERAL FARM CR BKS	2.920	05/16/2024	Aa1	AGY	AA+	4.209	1.667	1.498	-0.028	-4
OGVT		790	753	15.391		3.352	4.300	Aa3	Aa2	AA-	4.806	4.305	3.389	0.011	61
	64972C3H4	75	75	1.541	NEW YORK N Y CITY HSG DEV C	3.467	11/01/2023	Aa2	Aa2	AA+	4.342	1.083	1.039	0.008	15
	56052AG67	75	75	1.535	MAINE ST TAXABLE GO BDS 202	3.875	06/01/2024	Aa2	Aa2	AA	4.216	1.667	1.589	0.017	-4
	033167CH8	75	74	1.507	ANCHORAGE ALASKA CTFS PARTN	3.058	07/01/2024	Aa2	N/A	AA	4.556	1.750	1.669	0.018	30
	20772KEV7	65	64	1.303	CONNECTICUT ST TAXABLE GO B	3.693	09/15/2024	A1	Aa3	A+	4.829	2.000	1.861	0.022	54
	613741KQ9	75	71	1.451	MONTGOMERY CNTY VA ECONOMIC	2.342	06/01/2025	Aa3	Aa2	AA-	4.814	2.667	2.520	0.039	57
	650009S20	100	94	1.912	NEW YORK ST TWY AUTH GEN RE	2.406	01/01/2026	A2	A1	A	4.777	3.250	3.054	0.055	56
	45506DK53	75	70	1.438	INDIANA ST FIN AUTH REV TAX	3.300	02/01/2026	A3	N/A	A-	5.546	3.333	3.081	0.056	133
	974450N87	75	73	1.497	WINNEBAGO CNTY ILL TAXABLE	4.150	12/30/2027	Aa3	Aa3	N/A	4.893	5.250	4.259	0.004	74
	60374Y8A8	50	48	0.987	MINNEAPOLIS MINN TAXABLE GO	4.379	03/01/2034	Aa1	Aa1	AAA	4.882	9.583	4.618	-0.742	52
	207743WY7	50	47	0.966	CONNECTICUT ST HIGHER ED SU	4.668	11/15/2034	Aa3	Aa3	N/A	5.600	9.667	6.996	0.210	161
	56052FUM5	75	61	1.254	MAINE ST HSG AUTH MTG PUR T	2.674	11/15/2035	Aa1	Aa1	AA+	4.784	12.167	9.223	0.285	81
IND		1,411	1,288	26.339		3.981	8.589	A3	A3	A-	5.456	8.612	6.222	0.345	139
	30219GAQ1	40	40	0.810	EXPRESS SCRIPTS HLDG CO	3.000	07/15/2023	A3	NR	A-	5.119	0.833	0.761	0.005	109
	61945CAC7	25	25	0.515	MOSAIC CO	4.250	11/15/2023	Baa2	Baa2	BBB	4.968	1.167	1.038	-0.016	77
	546268AG8	45	47	0.962	LOUISIANA LD & EXPL CO	7.650	12/01/2023	A3	A2	A-	5.837	1.167	1.084	0.009	164
	84756NAD1	30	30	0.611	SPECTRA ENERGY PARTNERS LP	4.750	03/15/2024	Baa1	Baa1	BBB+	5.136	1.500	1.313	-0.031	89
	37045XBW5	35	35	0.711	GENERAL MTRS FINL CO INC	3.950	04/13/2024	Baa3	Baa3	BBB	5.633	1.500	1.430	0.008	140
	377372AM9	75	74	1.512	GLAXOSMITHKLINE CAP INC	3.625	05/15/2025	A2	A2	A	4.744	2.667	2.433	0.037	50
	718337AC2	30	32	0.663	KONINKLIJKE PHILIPS N V	7.750	05/15/2025	Baa1	Baa1	BBB+	5.569	2.667	2.302	0.034	133
	426767AA7	60	57	1.166	HENRY J KAISER FAMILY FNDTN	3.356	12/01/2025	Aaa	N/A	AAA	5.460	3.167	2.915	0.051	124
	920355AK0	30	29	0.586	VALSPAR CORP	3.950	01/15/2026	Baa2	NR	BBB	5.710	3.333	2.973	0.037	149
	74834LAZ3	40	38	0.779	QUEST DIAGNOSTICS INC	3.450	06/01/2026	Baa2	Baa2	BBB+	5.220	3.667	3.308	0.048	103
	05565QDN5	70	64	1.313	BP CAP MKTS P L C	3.279	09/19/2027	A3	A2	A-	5.199	5.000	4.441	0.097	109
	12541WAA8	40	38	0.777	C H ROBINSON WORLDWIDE IN	4.200	04/15/2028	Baa2	Baa2	BBB+	5.678	5.583	4.676	0.111	160
	801060AD6	50	47	0.960	SANOFI	3.625	06/19/2028	A1	A1	AA	5.060	5.750	4.940	0.123	100
	28176EAD0	40	38	0.775	EDWARDS LIFESCIENCES CORP	4.300	06/15/2028	Baa2	Baa2	BBB	5.639	5.750	4.822	0.118	157
	007944AF8	100	87	1.788	ADVENTIST HEALTH SYS WEST	2.952	03/01/2029	A2	N/A	A	5.331	6.417	5.626	0.168	133
	89352LAG5	25	28	0.566	TRANSCANADA PIPELINE STRIP	7.700	06/15/2029	Baa1	Baa1	BBB+	6.150	6.750	5.143	0.165	216
	05723KAG5	55	47	0.968	BAKER HUGHES A GE CO LLC / B	3.138	11/07/2029	A3	A3	A-	5.767	7.083	6.032	0.202	181
	806854AJ4	75	63	1.285	SCHLUMBERGER INVT SA	2.650	06/26/2030	A2	A2	A	5.337	7.750	6.669	0.247	141

Portfolio Position Report

Portfolio: CITY OF CREVE C 8016

Currency: USD

Pricing Date: 09/30/2022

Representative:

Sector 1	CUSIP9	Par (000)	Mkt Val (000)	% Held (MV)	Issuer Name	Coupon	Maturity	Quality	Mdys	S&P	YTM	Avg Life	Eff Dur	Conv (Par)	OAS
	231021AT3	65	50	1.025	CUMMINS INC	1.500	09/01/2030	A2	A2	A+	5.063	7.917	7.176	0.281	116
	717081FB4	65	51	1.039	PFIZER INC	1.750	08/18/2031	A2	A2	A+	4.823	8.917	7.879	0.340	95
	097023AG0	36	42	0.855	BOEING CO	8.625	11/15/2031	Baa3	Baa2	BBB-	6.706	9.167	6.255	0.257	280
	898384AQ5	60	57	1.173	TRUSTEES UNION COLLEGE	4.877	07/01/2035	A1	A1	N/A	5.495	12.750	9.178	0.529	158
	92343VFT6	50	33	0.676	VERIZON COMMUNICATIONS INC	2.650	11/20/2040	Baa1	Baa1	BBB+	5.771	18.167	13.024	1.053	171
	038222AG0	40	42	0.866	APPLIED MATLS INC	5.850	06/15/2041	A2	A2	A	5.490	18.750	11.390	0.887	144
	12189LAG6	40	37	0.759	BURLINGTON NORTHN SANTA FE C	4.950	09/15/2041	A3	A3	AA-	5.588	19.000	11.942	0.936	151
	13645RAQ7	25	24	0.497	CANADIAN PAC RY CO NEW	5.750	01/15/2042	Baa2	Baa2	BBB+	6.102	19.333	11.378	0.899	204
	035242AB2	55	43	0.880	ANHEUSER BUSCH INBEV FIN INC	4.000	01/17/2043	Baa1	Baa1	BBB+	5.919	20.333	12.786	1.099	183
	384802AB0	40	37	0.748	GRAINGER W W INC	4.600	06/15/2045	A3	A3	A+	5.351	22.750	13.305	1.219	131
	655844BQ0	35	30	0.605	NORFOLK SOUTHN CORP	4.450	06/15/2045	Baa1	Baa1	BBB+	5.787	22.750	13.103	1.195	175
	0778FPAH2	35	23	0.467	BELL TEL CO CDA-BELL	3.200	02/15/2052	Baa1	Baa1	BBB+	5.663	29.417	15.911	1.818	179
FIN		920	843	17.239		3.478	7.438	A3	A2	A-	5.483	7.446	5.143	0.291	137
	828807DD6	75	75	1.529	SIMON PPTY GROUP LP	2.750	06/01/2023	A3	A3	A-	4.584	0.667	0.646	0.003	62
	59523UAA5	25	25	0.517	MID-AMERICA APTS LP	4.300	10/15/2023	Baa1	Baa1	A-	5.026	1.083	0.962	-0.013	84
	42217KBC9	25	25	0.511	WELLTOWER INC	4.500	01/15/2024	Baa1	Baa1	BBB+	5.207	1.333	1.182	-0.023	98
	064159E1	55	51	1.040	BANK NOVA SCOTIA B C	0.650	07/31/2024	A3	A2	A-	5.057	1.833	1.779	0.020	78
	00912XBA1	35	33	0.672	AIR LEASE CORP	3.250	03/01/2025	Baa2	N/A	BBB	6.099	2.417	2.264	0.029	184
	03076CAK2	60	58	1.190	AMERIPRISE FINL INC	3.000	04/02/2025	A3	A3	A-	4.932	2.500	2.329	0.030	68
	38141GWQ3	50	48	0.974	GOLDMAN SACHS GROUP INC	3.272	09/29/2025	Baa1	A2	BBB+	5.508	3.000	1.919	0.021	120
	78016EZQ3	60	53	1.074	ROYAL BK CDA	1.200	04/27/2026	A2	A1	A	5.205	3.583	3.392	0.066	102
	49327V2A1	45	42	0.864	KEYBANK NATIONAL ASSOCIATION	3.400	05/20/2026	Baa1	Baa1	BBB+	5.651	3.667	3.303	0.065	147
	254709AM0	30	28	0.568	DISCOVER FINL SVCS	4.100	02/09/2027	Baa3	Baa3	BBB-	6.228	4.333	3.846	0.074	208
	06051GKP3	45	43	0.879	BK OF AMERICA CORP FXFLT	4.376	04/27/2027	A3	A2	A-	5.963	4.583	3.971	0.093	184
	95000U2F9	35	32	0.657	WELLS FARGO & CO	3.196	06/17/2027	Baa1	A1	BBB+	5.723	4.750	3.422	0.063	148
	172967KU4	30	27	0.558	CITIGROUP INC	4.125	07/25/2028	Baa2	Baa2	BBB	6.139	5.833	4.986	0.145	210
	025816CW7	40	37	0.764	AMERICAN EXPRESS CO	4.050	05/03/2029	Baa1	A2	BBB+	5.560	6.583	5.493	0.168	157
	6174468G7	55	51	1.043	MORGAN STANLEY	4.431	01/23/2030	A3	A1	A-	5.909	7.333	5.417	0.162	184
	857477BU6	55	53	1.084	STATE STREET CORP V/R	4.421	05/13/2033	A2	A1	A	5.072	10.583	7.889	0.324	117
	46625HHV5	55	53	1.083	JPMORGAN CHASE & CO	5.500	10/15/2040	A3	A1	A-	6.068	18.083	10.918	0.823	203
	743315AQ6	55	42	0.861	PROGRESSIVE CORP	3.700	01/26/2045	A2	A2	A	5.602	22.333	13.841	1.298	156
	89417EAK5	55	46	0.946	TRAVELERS COMPANIES INC	4.300	08/25/2045	A2	A2	A	5.566	22.917	13.547	1.255	153
	361448BH5	35	21	0.424	GATX CORP	3.100	06/01/2051	Baa2	Baa2	BBB	6.256	28.667	15.085	1.675	236
UTIL		440	362	7.410		3.622	16.210	A2	A2	A	5.378	16.229	9.500	0.865	132
	68233JAZ7	75	73	1.487	ONCOR ELEC DELIVERY CO LLC	2.950	04/01/2025	A2	A2	A+	4.862	2.500	2.315	0.020	60
	63743HFE7	50	49	1.001	NATIONAL RURAL UTILS COOP FI	3.450	06/15/2025	A3	A2	A-	4.845	2.750	2.509	0.039	60
	744448CW9	50	47	0.958	PUBLIC SERVICE CO COLO	4.100	06/01/2032	A2	A1	A	5.131	9.667	7.500	0.312	125
	595620AL9	50	45	0.921	MIDAMERICAN ENERGY COMPANY	4.800	09/15/2043	A1	Aa2	A+	5.627	21.000	12.661	1.079	154
	842400FZ1	50	42	0.864	SOUTHERN CALIF EDISON CO	4.650	10/01/2043	A3	A3	A-	6.176	21.000	12.132	1.030	210
	66765RCH7	40	29	0.589	NORTHWEST NAT GAS CO	3.869	06/15/2049	A2	A2	AA-	6.085	26.750	14.195	1.468	214
	29364WBD9	75	48	0.972	ENTERGY LA LLC	2.900	03/15/2051	A2	A2	A	5.459	28.500	16.375	1.866	157

Portfolio Position Report

Portfolio: CITY OF CREVE C 8016

Currency: USD

Pricing Date: 09/30/2022

Representative:

Sector 1	CUSIP9	Par (000)	Mkt Val (000)	% Held (MV)	Issuer Name	Coupon	Maturity	Quality	Mdys	S&P	YTM	Avg Life	Eff Dur	Conv (Par)	OAS
	209111FZ1	50	30	0.618	CONSOLIDATED EDISON CO N Y I	3.000	12/01/2060	Baa1	Baa1	A-	5.573	38.167	17.539	2.399	172
PASS		150	134	2.741		2.990	7.850	Aa1	Aaa	AA+	4.894	7.850	5.449	0.000	79
	3138X6NG6	9	8	0.170	FNMA POOL - AU6690	2.500	09/01/2028	Aa1	AGY	AGY	6.039	2.417	2.178	0.039	186
	3138EPA46	9	8	0.170	FNMA POOL - AL6326	2.500	01/01/2030	Aa1	AGY	AGY	5.770	2.667	2.385	0.047	161
	3140Q87E9	15	15	0.299	FNMA UMBS POOL - CA1792	4.500	03/01/2038	Aa1	AGY	AGY	5.136	5.583	3.897	-0.147	99
	3132J7YK2	31	28	0.571	FHLMC GOLD POOL - Q16613	3.000	03/01/2043	Aa1	AGY	AGY	4.808	7.250	5.489	0.064	77
	3138WD2G5	22	20	0.415	FNMA UMBS POOL - AS4374	3.500	02/01/2045	Aa1	AGY	AGY	4.770	8.500	5.715	-0.103	69
	31418CWM2	11	10	0.195	FNMA POOL - MA3351	3.000	04/01/2048	Aa1	AGY	AGY	5.030	9.083	6.201	-0.016	97
	3140HP7C5	9	9	0.185	FNMA UMBS POOL - BK9890	5.000	08/01/2048	Aa1	AGY	AGY	4.953	9.500	4.344	-0.490	42
	3140XBHD5	44	36	0.735	FNMA UMBS POOL - FM7427	2.000	05/01/2051	Aa1	AGY	AGY	4.414	10.583	7.442	0.178	38
CMO		400	348	7.120		2.245	7.558	Aa1	Aaa	AA+	4.412	7.558	6.046	0.043	28
	3137B6B34	3	3	0.059	FHLMC 4272- DG	3.000	04/15/2043	Aa1	AGY	AGY	4.368	2.583	2.443	-0.101	-1
	3136A9KS6	11	10	0.206	FNMA 2012-114- ND	2.000	10/25/2041	Aa1	AGY	AGY	4.577	3.750	3.502	0.020	32
	3136AMQD4	12	11	0.226	FNMA 2015-002- PA	2.250	03/25/2044	Aa1	AGY	AGY	4.511	4.000	3.626	-0.030	23
	35564CAN7	34	33	0.665	FHLMC SLSTT 2018-002- A1	3.500	11/25/2028	N/A	N/A	N/A	4.342	6.167	5.455	0.172	28
	3137H23T9	58	50	1.024	FHLMC 5140- H	2.000	08/25/2046	Aa1	AGY	AGY	4.627	6.417	5.396	0.070	48
	3136BGD99	62	53	1.074	FNMA 2021-060- ND	1.500	09/25/2051	Aa1	AGY	AGY	4.133	7.167	6.083	0.145	1
	3136A2JE4	21	20	0.407	FNMA 2011-111- ME	4.000	11/25/2041	Aa1	AGY	AGY	4.962	7.500	5.261	-0.029	80
	3136BGTH4	59	49	1.010	FNMA 2021-051- JB	2.000	08/25/2051	Aa1	AGY	AGY	4.597	8.167	6.355	0.036	48
	3137FWYV6	80	67	1.370	FHLMC 5020- KW	2.000	09/25/2045	Aa1	AGY	AGY	4.378	8.417	7.203	0.050	31
	3136B6K36	60	53	1.079	FNMA 2019-068- KP	2.500	11/25/2049	Aa1	AGY	AGY	4.144	10.000	6.720	-0.112	-5
ABS		9	8	0.171		3.831	3.547	N/A	N/A	N/A	5.947	3.547	0.101	0.067	144
	45254NQR1	1	1	0.020	IMPAC CMB TR 2005-006- 2A2	3.884	10/25/2035	N/A	N/A	NR	5.729	2.000	0.086	-0.001	148
	45254NLP0	8	7	0.151	IMPAC SEC 2004-010- 4A1	3.824	03/25/2035	N/A	N/A	NR	5.976	3.750	0.103	0.075	144
MUNI		70	60	1.231		2.750	10.676	Aa3	Aa3	AA-	4.525	10.667	8.607	0.199	110
	76804ADA0	70	60	1.231	RIVER CITY INC KY PKG AUTH	2.750	12/01/2033	Aa3	Aa3	AA-	4.525	10.667	8.607	0.199	110
MM		260	244	4.983		0.650	1.867	Aaa	Aaa	AAA	4.213	1.867	1.819	0.021	-6
	38149MXZ1	130	122	2.485	GOLDMAN SACHS BK USA	0.600	08/12/2024	N/A	N/A	N/A	4.289	1.867	1.819	0.021	2
	795451AL7	130	122	2.497	SALLIE MAE BANK CD	0.700	08/12/2024	Aaa	Aaa	AAA	4.137	1.867	1.819	0.021	-13
Total:		5,468	4,891	100.000		2.985	7.713	A1	Aa3	A+	4.922	7.728	5.693	0.276	85

PORTFOLIO HOLDINGS

CITY OF CREVE COEUR EMP RETIREMENT | 910048016 | as of 09/30/2022

	TICKER	% OF PORTFOLIO	QUANTITY	PRICE	MARKET VALUE	UNIT COST	TOTAL COST	EST. ANNUAL INCOME	YIELD
Cash Equivalents									
Cash Equivalents									
FINANCIAL SQUARE TR GOVERNMENT INSTITUTIONAL CLASS FD #465	FGTXX	5.32%	267,511	1.00	\$267,511	1.00	\$267,511	\$7,790	2.91%
Total for Cash Equivalents		5.32%			\$267,511		\$267,511	\$7,790	2.91%
TOTAL FOR CASH EQUIVALENTS		5.32%			\$267,511		\$267,511	\$7,790	2.91%
Fixed Income Investments									
Agencies									
FFCB NT 2.92% 5/16/24		0.97%	50,000	97.97	\$48,987	100.00	\$50,000	\$1,460	4.22%
GOLDMAN SACHS BK MKT CD 0.6% 8/12/24 FDIC #33124		2.41%	130,000	93.44	\$121,467	100.00	\$130,000	\$780	4.29%
SALLIE MAE MKT CD 0.7% 8/12/24 FDIC #58177		2.42%	130,000	93.62	\$121,700	100.00	\$130,000	\$910	4.29%
Total for Agencies		5.81%			\$292,153		\$310,000	\$3,150	4.28%
Credit									
SIMON PPTY NT 2.75% 6/1/23		1.47%	75,000	98.80	\$74,101	99.82	\$74,864	\$2,063	4.58%
EXPRESS SCRIPTS NT 3% 7/15/23		0.78%	40,000	98.35	\$39,340	101.76	\$40,704	\$1,200	5.15%
MID AMERICA APT LP NT 4.3% 10/15/23		0.49%	25,000	99.27	\$24,818	99.05	\$24,762	\$1,075	5.03%
MOSAIC CO NT 4.25% 11/15/23		0.49%	25,000	99.18	\$24,795	99.79	\$24,948	\$1,063	5.00%
LA LAND & EXPL NT 7.65% 12/1/23		0.91%	45,000	101.99	\$45,896	129.94	\$58,473	\$3,443	5.85%
HEALTH CARE REIT NT 4.5% 1/15/24		0.49%	25,000	99.10	\$24,776	98.96	\$24,740	\$1,125	5.22%
SPECTRA ENERGY NT 4.75% 3/15/24		0.59%	30,000	99.44	\$29,832	99.77	\$29,930	\$1,425	5.15%
GENERAL MOTORS FIN NT 3.95% 4/13/24		0.68%	35,000	97.53	\$34,137	99.83	\$34,941	\$1,383	5.65%
BANK OF NOVA SCOTIA NT 0.65% 7/31/24		1.01%	55,000	92.35	\$50,793	99.91	\$54,951	\$358	5.07%
AIR LEASE NT 3.25% 3/1/25		0.65%	35,000	93.67	\$32,783	102.06	\$35,720	\$1,138	6.11%
ONCOR ELEC NT 2.95% 4/1/25		1.42%	75,000	95.53	\$71,649	95.39	\$71,544	\$2,213	4.87%
AMERIPRISE FINANCIAL NT 3% 4/2/25		1.14%	60,000	95.49	\$57,291	107.11	\$64,263	\$1,800	4.94%
GLAXOSMITHKLINE NT 3.625% 5/15/25		1.45%	75,000	97.25	\$72,938	112.76	\$84,569	\$2,719	4.75%
KONINKLIJKE PHILIPS NT 7.75% 5/15/25		0.63%	30,000	105.24	\$31,571	127.27	\$38,180	\$2,325	5.53%

Bond Yield is Market Yield

PORTFOLIO HOLDINGS

CITY OF CREVE COEUR EMP RETIREMENT | 910048016 | as of 09/30/2022

TICKER	% OF PORTFOLIO	QUANTITY	PRICE	MARKET VALUE	UNIT COST	TOTAL COST	EST. ANNUAL INCOME	YIELD
NATIONAL RURAL UTIL NT 3.45% 6/15/25	0.96%	50,000	96.47	\$48,237	99.97	\$49,987	\$1,725	4.85%
GOLDMAN SACHS NT V/R 9/29/25	0.95%	50,000	95.25	\$47,627	100.00	\$50,000	\$1,636	5.00%
HENRY J KAISER FMY NT 3.356% 12/1/25	1.12%	60,000	93.93	\$56,359	100.00	\$60,000	\$2,014	5.47%
VALSPAR CORP NT 3.95% 1/15/26	0.57%	30,000	94.75	\$28,425	99.56	\$29,868	\$1,185	5.72%
ROYAL BK OF CANADA NT 1.2% 4/27/26	1.04%	60,000	87.06	\$52,233	100.14	\$60,085	\$720	5.22%
KEY BANK NT 3.4% 5/20/26	0.83%	45,000	92.55	\$41,649	111.63	\$50,233	\$1,530	5.69%
QUEST DIAGNOSTICS NT 3.45% 6/1/26	0.75%	40,000	94.12	\$37,648	94.87	\$37,949	\$1,380	5.23%
DISCOVER FINANCIAL NT 4.1% 2/9/27	0.55%	30,000	91.94	\$27,583	112.60	\$33,780	\$1,230	6.24%
BANK OF AMERICA NT V/R 4/27/28	0.84%	45,000	93.70	\$42,167	100.00	\$45,000	\$1,969	5.71%
WELLS FARGO NT V/R 6/17/27	0.63%	35,000	91.06	\$31,870	100.00	\$35,000	\$1,119	5.37%
BP CAPITAL MARKETS NT 3.279% 9/19/27	1.28%	70,000	91.64	\$64,149	100.00	\$70,000	\$2,295	5.21%
CH ROBINSON NT 4.2% 4/15/28	0.74%	40,000	93.01	\$37,203	115.65	\$46,258	\$1,680	5.69%
EDWARDS LIFESCIENCES NT 4.3% 6/15/28	0.74%	40,000	93.48	\$37,394	99.77	\$39,907	\$1,720	5.65%
SANOFI NT 3.625% 6/19/28	0.92%	50,000	92.89	\$46,447	99.27	\$49,635	\$1,813	5.08%
CITIGROUP INC NT 4.125% 7/25/28	0.54%	30,000	90.21	\$27,063	99.69	\$29,907	\$1,238	6.15%
ADVENT HLTH SYST 2.952% 3/1/29	1.73%	100,000	87.24	\$87,238	100.00	\$100,000	\$2,952	5.33%
AMERICAN EXPRESS NT 4.05% 5/3/29	0.73%	40,000	92.04	\$36,814	99.81	\$39,925	\$1,620	5.51%
TRANSCANADA NT 7.7% 6/15/29	0.54%	25,000	108.43	\$27,109	139.41	\$34,853	\$1,925	6.14%
BAKER HUGHES NT 3.138% 11/7/29	0.93%	55,000	84.87	\$46,677	108.55	\$59,701	\$1,726	5.76%
MORGAN STANLEY NT V/R 1/23/30	1.01%	55,000	91.93	\$50,559	99.21	\$54,566	\$2,437	5.80%
SCHLUMBERGER INV NT 2.65% 6/26/30	1.24%	75,000	83.18	\$62,383	99.61	\$74,706	\$1,988	4.82%
CUMMINS INC NT 1.5% 9/1/30	1.00%	65,000	77.02	\$50,064	97.90	\$63,633	\$975	5.06%
PFIZER INC NT 1.75% 8/18/31	1.01%	65,000	78.04	\$50,727	99.66	\$64,781	\$1,138	4.82%
BOEING CO NT 8.625% 11/15/31	0.81%	36,000	112.97	\$40,670	146.71	\$52,815	\$3,105	6.70%
PUBLIC SERVICE NT 4.1% 6/1/32	0.92%	50,000	92.32	\$46,159	99.37	\$49,686	\$2,050	5.12%
STATE STREET CORP NT V/R 5/13/33	1.01%	55,000	92.26	\$50,745	100.00	\$55,000	\$2,432	5.39%
TRUSTEES OF UN CLG NT 4.877% 7/7/35	1.13%	60,000	94.48	\$56,688	100.00	\$60,000	\$2,926	5.48%
JPMORGAN CHASE NT 5.5% 10/15/40	1.03%	55,000	93.81	\$51,593	107.34	\$59,034	\$3,025	6.07%
VERIZON COMMN NT 2.65% 11/20/40	0.65%	50,000	65.18	\$32,588	99.91	\$49,954	\$1,325	5.77%

Bond Yield is Market Yield

PORTFOLIO HOLDINGS

CITY OF CREVE COEUR EMP RETIREMENT | 910048016 | as of 09/30/2022

TICKER	% OF PORTFOLIO	QUANTITY	PRICE	MARKET VALUE	UNIT COST	TOTAL COST	EST. ANNUAL INCOME	YIELD
APPLIED MATERIALS NT 5.85% 6/15/41	0.83%	40,000	104.15	\$41,658	120.39	\$48,156	\$2,340	5.49%
BURLINGTON NORTH NT 4.95% 9/15/41	0.74%	40,000	92.66	\$37,065	104.25	\$41,701	\$1,980	5.58%
CANADIAN PAC RR NT 5.75% 1/15/42	0.48%	25,000	96.31	\$24,077	124.17	\$31,042	\$1,438	6.08%
ANHEUSER-BUSCH NT 4% 1/17/43	0.85%	55,000	77.43	\$42,588	89.98	\$49,488	\$2,200	5.93%
MIDAMERICAN ENERGY NT 4.8% 9/15/43	0.89%	50,000	89.88	\$44,940	99.53	\$49,764	\$2,400	5.63%
SOUTHERN CAL EDISON NT 4.65% 10/1/43	0.82%	50,000	82.16	\$41,082	99.51	\$49,756	\$2,325	6.18%
PROGRESSIVE CORP NT 3.7% 1/26/45	0.83%	55,000	75.92	\$41,758	98.05	\$53,926	\$2,035	5.60%
NORFOLK SOUTHERN NT 4.45% 6/15/45	0.58%	35,000	83.26	\$29,141	107.85	\$37,747	\$1,558	5.78%
WW GRAINGER NT 4.6% 6/15/45	0.72%	40,000	90.17	\$36,068	109.64	\$43,855	\$1,840	5.35%
TRAVELERS COS INC NT 4.3% 8/25/45	0.92%	55,000	83.70	\$46,035	99.22	\$54,569	\$2,365	5.57%
NW NATURAL GAS NT 3.869% 6/15/49	0.56%	40,000	70.92	\$28,366	100.00	\$40,000	\$1,548	6.09%
ENTERGY LA NT 2.9% 3/15/51	0.94%	75,000	63.26	\$47,448	104.41	\$78,310	\$2,175	5.46%
GATX CORP NT 3.1% 6/1/51	0.40%	35,000	58.16	\$20,356	99.94	\$34,980	\$1,085	6.26%
BELL CANADA NT 3.2% 2/15/52	0.45%	35,000	64.90	\$22,715	99.96	\$34,986	\$1,120	5.67%
CON EDISON NT 3% 12/1/60	0.59%	50,000	59.48	\$29,742	99.40	\$49,699	\$1,500	5.57%
Total for Credit	48.98%			\$2,463,825		\$2,866,825	\$104,109	5.43%
Mortgage								
FNMA POOL # AU6690 2.5% 9/1/28	0.17%	9,487	92.25	\$8,751	102.25	\$9,700	\$237	3.97%
SLST 2018-2 CL A1 3.5% 11/25/28	0.64%	33,868	95.40	\$32,312	98.66	\$33,416	\$1,185	4.35%
FNMA POOL # AL6326 2.5% 8/1/28	0.16%	8,947	92.13	\$8,243	102.00	\$9,126	\$224	4.01%
IMM 2004-10 CL 4A1 V/R 3/25/35	0.15%	8,316	92.25	\$7,672	98.00	\$8,149	\$265	0.99%
IMM 2005-6 CL 2A2 V/R 10/25/35	0.02%	840	96.84	\$814	95.50	\$803	\$27	1.25%
FNMA POOL # CA1792 4.5% 3/1/38	0.29%	15,242	97.01	\$14,787	103.63	\$15,795	\$686	4.77%
FNR 2012-114 CL ND 2% 10/25/41	0.19%	10,730	91.31	\$9,798	95.00	\$10,194	\$215	2.58%
FNR 2011-111 CL ME 4% 11/25/41	0.40%	21,072	94.42	\$19,896	102.41	\$21,579	\$843	4.43%
FHLMC POOL # Q16613 3% 3/1/43	0.56%	31,326	89.80	\$28,130	101.36	\$31,752	\$940	3.71%
FHR 4272 CL DG 3% 4/15/43	0.06%	3,151	96.64	\$3,045	101.75	\$3,206	\$95	3.22%
FNR 2015-2 CL PA 2.25% 3/25/44	0.21%	11,550	92.04	\$10,631	101.23	\$11,692	\$260	2.74%

Bond Yield is Market Yield

PORTFOLIO HOLDINGS

CITY OF CREVE COEUR EMP RETIREMENT | 910048016 | as of 09/30/2022

TICKER	% OF PORTFOLIO	QUANTITY	PRICE	MARKET VALUE	UNIT COST	TOTAL COST	EST. ANNUAL INCOME	YIELD
FNMA POOL #AS4374 3.5% 2/1/45	0.41%	22,248	91.89	\$20,443	103.05	\$22,926	\$779	4.05%
FHR 5020 CL KW 2% 9/25/45	1.33%	80,000	83.57	\$66,852	103.62	\$82,894	\$1,600	2.99%
FHR 2021-5140 CL H 2% 8/25/46	1.00%	58,335	86.19	\$50,280	102.44	\$59,757	\$1,167	2.79%
FNMA POOL #MA3351 3% 4/1/48	0.18%	10,708	86.51	\$9,264	100.47	\$10,759	\$321	3.83%
FNMA POOL # BK9890 5% 8/1/48	0.19%	9,340	100.21	\$9,360	105.62	\$9,865	\$467	4.99%
FNR 2019-68 CL KP 2.5% 11/25/49	1.05%	60,241	87.74	\$52,856	99.31	\$59,827	\$1,506	3.17%
FN UMBS POOL #FM7427 2% 5/1/51	0.71%	43,831	81.53	\$35,736	102.53	\$44,941	\$877	2.96%
FNR 2021-51 CL JB 2% 8/25/51	0.98%	58,938	83.53	\$49,232	101.95	\$60,090	\$1,179	2.84%
FNR 2021-60 CL ND 1.5% 9/25/51	1.04%	61,781	84.60	\$52,265	100.39	\$62,020	\$927	2.22%
Total for Mortgage	9.75%			\$490,364		\$568,489	\$13,798	3.22%
Tax Exempt Revenue								
RIVER CITY INC KY 2.75% 12/1/33	1.18%	70,000	85.11	\$59,575	84.73	\$59,312	\$1,925	4.46%
Total for Tax Exempt Revenue	1.18%			\$59,575		\$59,312	\$1,925	4.46%
Taxable Muni Bonds								
NEW YORK CITY NY TXBL 3.467% 11/1/23	1.48%	75,000	99.08	\$74,309	100.00	\$75,000	\$2,600	4.34%
ME ST TXBL GO 3.875% 6/1/24	1.48%	75,000	99.46	\$74,591	100.98	\$75,734	\$2,906	4.21%
ANCHORAGE AK TXBL COPS 3.058% 7/1/24	1.45%	75,000	97.50	\$73,125	100.00	\$75,000	\$2,294	4.56%
CT ST TXBL GO 3.693% 9/15/24	1.27%	65,000	97.90	\$63,635	100.00	\$65,000	\$2,400	4.83%
MONTGOMERY VA TXBL 2.342% 6/1/25	1.40%	75,000	93.87	\$70,404	100.00	\$75,000	\$1,757	4.82%
NY ST TXBL 2.406% 1/1/26	1.85%	100,000	92.93	\$92,932	100.00	\$100,000	\$2,406	4.78%
IN ST TXBL UNIV 3.3% 2/1/26	1.39%	75,000	93.24	\$69,929	100.00	\$75,000	\$2,475	5.55%
WINNEBAGO IL TXBL GO 4.15% 12/30/27	1.44%	75,000	96.59	\$72,443	100.00	\$75,000	\$3,113	4.89%
MINNEAPOLIS MN TXBL GO 4.379% 3/1/34	0.96%	50,000	96.20	\$48,100	100.00	\$50,000	\$2,190	4.82%
CT ST EDU TXBL 4.668% 11/15/34	0.93%	50,000	93.16	\$46,579	100.00	\$50,000	\$2,334	5.45%
ME ST HSG TXBL 2.674% 11/15/35	1.20%	75,000	80.76	\$60,569	100.00	\$75,000	\$2,006	4.65%
Total for Taxable Muni Bonds	14.84%			\$746,615		\$790,734	\$26,479	4.78%

Bond Yield is Market Yield

PORTFOLIO HOLDINGS

CITY OF CREVE COEUR EMP RETIREMENT | 910048016 | as of 09/30/2022

	TICKER	% OF PORTFOLIO	QUANTITY	PRICE	MARKET VALUE	UNIT COST	TOTAL COST	EST. ANNUAL INCOME	YIELD
Treasury									
	US TREASURY NT 1.125% 10/31/26	1.94%	110,000	88.68	\$97,552	99.73	\$109,708	\$1,238	4.17%
	US TREASURY NT 1.625% 8/15/29	4.54%	265,000	86.26	\$228,594	101.29	\$268,416	\$4,306	3.92%
	US TREASURY NT 0.625% 5/15/30	5.17%	330,000	78.81	\$260,057	83.54	\$275,693	\$2,063	3.86%
	US TREASURY BD 1.75% 8/15/41	2.04%	150,000	68.44	\$102,654	76.50	\$114,756	\$2,625	4.19%
	US TREASURY BOND 3.125% 8/15/44	0.43%	25,000	85.55	\$21,388	112.42	\$28,105	\$781	4.13%
	Total for Treasury	14.12%			\$710,245		\$796,677	\$11,013	3.98%
TOTAL FOR FIXED INCOME INVESTMENTS		94.68%			\$4,762,777		\$5,392,038	\$160,474	4.80%
Grand Total		100.00%			\$5,030,288		\$5,659,549	\$168,264	4.70%

Creve Coeur Employee Retirement Plan

Quarterly Performance Report

Period Ending: 09-30-2022

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Markets tried to bounce back at the start of the third quarter, but difficult markets in August and September resulted in the third straight quarter in which both stocks and bonds fell in value. All major equity indices are now in a bear market, down more than 20% from their previous peak. Non-U.S. developed market equities outperformed the U.S. in local terms, but when factoring in the strong U.S. dollar, both developed and emerging markets trailed US based indexes. Growth stocks outperformed value during the quarter, but value still appears relatively attractive compared to growth.

Persistent inflation and the reaction of the Federal Reserve are driving much of the selloff. The Fed raised rates by another 75 basis points at its September meeting, bringing the target range to 3.00-3.25%. With rates already moving higher by 3% this year, the Fed sees rates at 4.4% by year-end and the terminal rate at 4.6% in 2023. During the quarter, the yield on the 10-year US Treasury bond increased from near 3% to 3.83%, leading to sharp losses in core fixed income.

Inflation, as measured by CPI, appears to have peaked at 9.1% in June and fell to 8.2% year-on-year for August. We expect inflation to continue to fall over the next year, but some components, including shelter, will likely persist for several quarters.

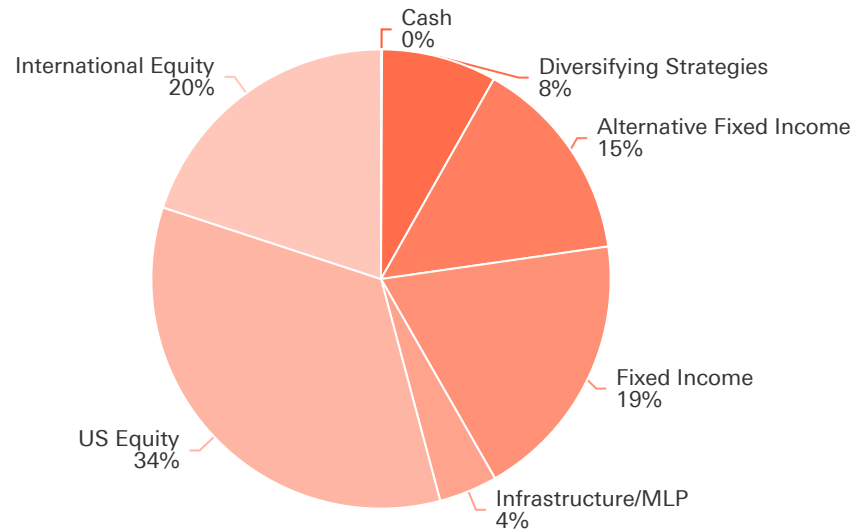
US real GDP contracted by 0.6% in the second quarter following a 1.6% decline in the first quarter. The Atlanta Fed's GDPNow forecasts third quarter GDP growth of 2.3%. If we do experience an official recession, the current employment picture is much better than during a typical recession.

While the first three quarters of investment returns have been difficult, from an investment standpoint, forward looking returns on bonds and stocks are now both more attractive. We believe it is important to stick to long-term targets and rebalance, when possible, to benefit from selling investments that are relatively more expensive and investing in those that are less expensive.

Market Returns

INDEX	3MO (%)	YTD (%)	1YR (%)	3YR (%)	5YR (%)	7YR (%)	10YR (%)
<i>FTSE USBIG Treasury Bill 3M</i>	0.4%	0.6%	0.6%	0.6%	1.1%	0.9%	0.7%
<i>Bloomberg US Aggregate (Total Return)</i>	(4.8%)	(14.6%)	(14.6%)	(3.3%)	(0.3%)	0.5%	0.9%
<i>HFRI Equity Hedge (Total Return)</i>	(2.3%)	(13.8%)	(13.2%)	6.2%	4.4%	5.5%	5.3%
<i>Bloomberg US Corporate High Yield (Total Return)</i>	(0.6%)	(14.7%)	(14.1%)	(0.5%)	1.6%	4.1%	3.9%
<i>CRSP US Total Market (Total Return)</i>	(4.4%)	(24.9%)	(18.0%)	7.6%	8.6%	10.8%	11.3%
<i>MSCI All Country World IMI (Net Return)</i>	(6.6%)	(25.7%)	(21.2%)	3.6%	4.2%	7.3%	7.2%
<i>S&P 500 (Total Return)</i>	(4.9%)	(23.9%)	(15.5%)	8.2%	9.2%	11.4%	11.7%
<i>CRSP US Mid Capital (Total Return)</i>	(4.1%)	(25.4%)	(19.5%)	5.5%	6.7%	8.7%	10.5%
<i>CRSP US Small Cap (Total Return)</i>	(2.6%)	(23.7%)	(20.8%)	5.0%	5.3%	8.3%	9.6%
<i>FTSE EPRA/NAREIT Global</i>	(12.4%)	(30.9%)	(25.1%)	(9.7%)	(4.4%)	(1.5%)	(0.4%)
<i>FTSE Developed Ex US (USD) (Total Return)</i>	(9.5%)	(26.7%)	(24.6%)	(0.7%)	0.0%	3.8%	4.1%
<i>FTSE Emerging (USD) (Total Return)</i>	(10.1%)	(23.5%)	(24.2%)	(0.4%)	(0.2%)	4.9%	2.1%
<i>Bloomberg Commodity Index</i>	(4.1%)	13.6%	11.8%	13.4%	7.0%	4.5%	(2.1%)
<i>S&P Global Infrastructure (Total Return)</i>	(9.6%)	(10.1%)	(6.0%)	(0.1%)	2.1%	5.3%	5.7%

Actual %



Market Value History



CC MASTER ASSET CLASS	% PORTFOLIO	VALUE (USD)	QTD TWR
Cash	0.1%	\$21,113	0.0%
Diversifying Strategies	8.1%	\$2,243,688	(1.6%)
Alternative Fixed Income	14.6%	\$4,028,303	2.0%
Fixed Income	19.0%	\$5,258,610	(4.1%)
Infrastructure/MLP	4.1%	\$1,138,979	(12.9%)
US Equity	34.2%	\$9,467,333	(4.6%)
International Equity	20.0%	\$5,523,426	(10.8%)
Total	100.0%	\$27,681,452	(5.1%)

Cash Flows

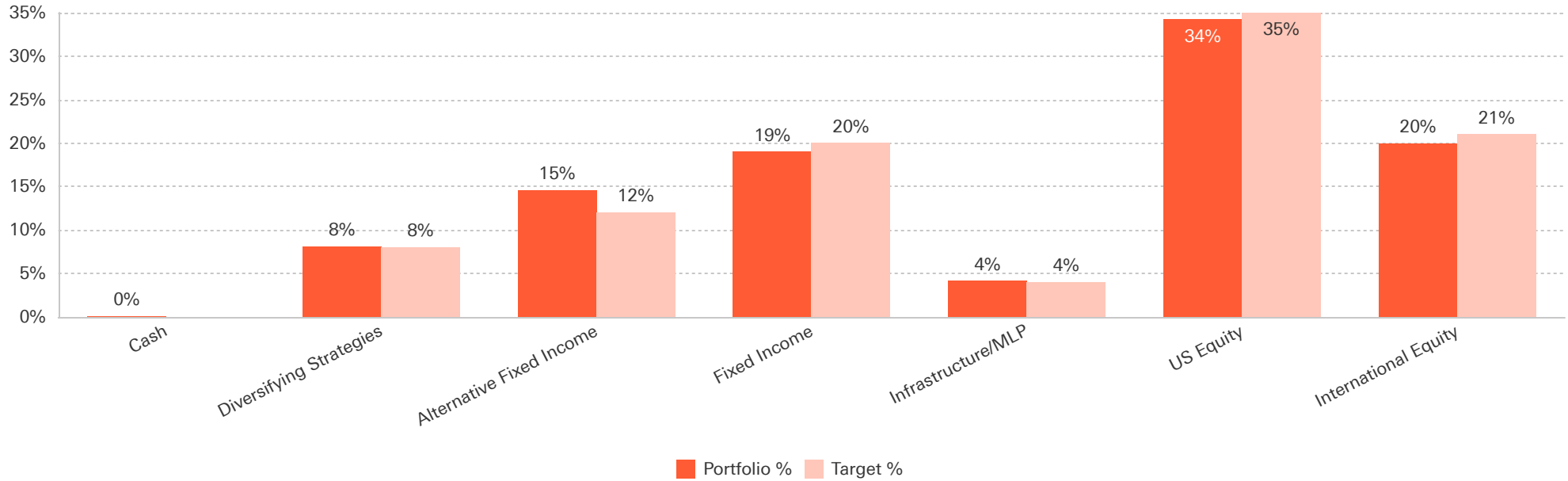
	QTD	YTD
Starting Value	\$29,035,619	\$34,576,174
Gain/Loss	(\$1,683,509)	(\$6,581,917)
Net Income	\$186,481	\$538,016
Net Cash Flow	\$137,488	(\$852,352)
Change In Accrued Income (USD)	\$5,374	\$1,532
Ending Value	\$27,681,452	\$27,681,452

Performance Review (Fiscal Year End: June 30)

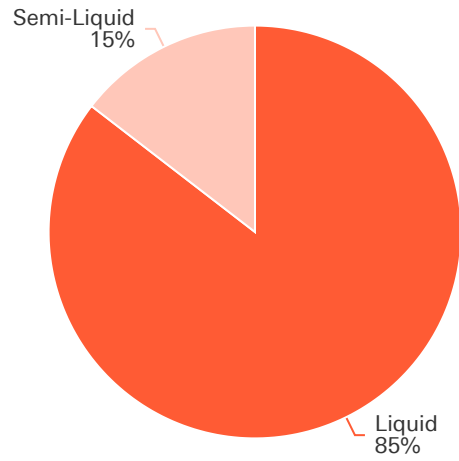
	MARKET VALUE	PORTFOLIO	3MO	FYTD	YTD	1YR	3YR	5YR	7YR	10YR	10 YR STDV
Total	27,681,452	100.0%	(5.1%)	(5.1%)	(17.9%)	(14.1%)	3.3%	4.2%	6.3%	6.5%	10.0%
<i>CCERP Primary Policy Index (60/40 spliced)</i>			<i>(5.8%)</i>	<i>(5.8%)</i>	<i>(21.5%)</i>	<i>(18.1%)</i>	2.3%	3.4%	5.6%	5.6%	10.2%
<i>CCERP Secondary Blended Benchmark</i>			<i>(5.4%)</i>	<i>(5.4%)</i>	<i>(20.0%)</i>	<i>(16.5%)</i>	1.9%	3.2%	5.3%	5.5%	10.1%
<i>CCERP Actuarial Target (6.0%)</i>			1.5%	1.5%	4.5%	6.0%	6.4%	6.6%	6.7%	6.9%	0.1%
Risk Mitigation Asset	11,551,714	41.7%	(1.6%)	(1.6%)	(7.3%)	(7.1%)					
Defensive	5,279,723	19.1%	(4.1%)	(4.1%)	(13.7%)	(13.9%)					
Cash	21,113	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>FTSE USBIG Treasury Bill 3M</i>			<i>0.4%</i>	<i>0.4%</i>	<i>0.6%</i>	<i>0.6%</i>	<i>0.6%</i>	<i>1.1%</i>	<i>0.9%</i>	<i>0.7%</i>	
USD	21,113	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
US Fixed Income	5,258,610	19.0%	(4.1%)	(4.1%)	(13.7%)	(13.9%)					
<i>Bloomberg US Aggregate (Total Return)</i>			<i>(4.8%)</i>	<i>(4.8%)</i>	<i>(14.6%)</i>	<i>(14.6%)</i>	<i>(3.3%)</i>	<i>(0.3%)</i>	<i>0.5%</i>	<i>0.9%</i>	
Creve Coeur Commerce Core Bond Account	5,069,942	18.3%	(4.1%)	(4.1%)	(13.5%)	(13.7%)	(2.6%)	0.3%	1.0%	2.5%	
Vanguard Total Bond ETF	188,668	0.7%	(4.6%)	(4.6%)							
	6,271,992	22.7%	0.7%	0.7%	(0.8%)	0.6%					
Diversifying Strategies	2,243,688	8.1%	(1.6%)	(1.6%)	(10.1%)	(9.9%)					
<i>Bloomberg US Aggregate (Total Return)</i>			<i>(4.8%)</i>	<i>(4.8%)</i>	<i>(14.6%)</i>	<i>(14.6%)</i>					
PIMCO Income Fund	1,096,093	4.0%	(1.8%)	(1.8%)	(10.8%)	(10.7%)					
<i>HFRI Equity Hedge (Total Return)</i>			<i>(2.3%)</i>	<i>(2.3%)</i>							
AB Select US Long/Short Fund Advisor	1,147,596	4.1%	(1.3%)	(1.3%)							
Credit Strategies	4,028,303	14.6%	2.0%	2.0%	5.3%	7.8%					
<i>Bloomberg US Credit Corporate 5-10 Year</i>			<i>(2.6%)</i>	<i>(2.6%)</i>	<i>(9.9%)</i>	<i>(10.6%)</i>					
Cliffwater Corp Lending FD I	1,965,108	7.1%	1.8%	1.8%	4.4%	6.8%					
Variant Alternative Income Fund	2,063,195	7.5%	2.2%	2.2%							
Risky Asset	16,129,738	58.3%	(7.4%)	(7.4%)	(23.9%)	(19.0%)					
Growth	14,990,759	54.2%	(7.0%)	(7.0%)	(24.4%)	(19.6%)					
US Large Core Equity	7,988,503	28.9%	(4.7%)	(4.7%)	(24.6%)	(17.3%)					
<i>CRSP US Total Market (Total Return)</i>			<i>(4.4%)</i>	<i>(4.4%)</i>	<i>(24.9%)</i>	<i>(18.0%)</i>					
iShares MSCI USA Quality	670,101	2.4%	(6.5%)	(6.5%)	(27.8%)	(20.0%)					
Vanguard Dividend Appreciation	954,094	3.4%	(5.3%)	(5.3%)	(20.2%)	(10.4%)					
Vanguard Total Stock Market	6,364,307	23.0%	(4.4%)	(4.4%)	(24.8%)	(18.0%)					
US Large Cap Value	595,542	2.2%	(5.8%)	(5.8%)	(14.5%)	(6.5%)					
<i>CRSP US Large Capital Value (Total Return)</i>			<i>(5.7%)</i>	<i>(5.7%)</i>	<i>(14.6%)</i>	<i>(6.6%)</i>	<i>6.2%</i>	<i>7.1%</i>	<i>9.8%</i>	<i>10.5%</i>	
Vanguard Value ETF	595,542	2.2%	(5.8%)	(5.8%)	(14.5%)	(6.5%)	6.2%	7.1%	9.9%	10.5%	

RISK LEVEL	MARKET VALUE	PORTFOLIO	3MO	FYTD	YTD	1YR	3YR	5YR	7YR	10YR
US Small Cap Value Equity	401,564	1.5%	(3.8%)	(3.8%)	(19.0%)	(13.8%)				
<i>CRSP US Small Cap Value (Total Return)</i>			<i>(3.9%)</i>	<i>(3.9%)</i>	<i>(18.7%)</i>	<i>(13.5%)</i>	5.7%	4.4%	7.9%	9.8%
Vanguard Small Cap Value ETF IV	401,564	1.5%	(3.8%)	(3.8%)	(19.0%)	(13.8%)	5.2%	4.1%	7.7%	9.3%
US Small Cap Equity	481,724	1.7%	(2.6%)	(2.6%)	(24.3%)	(21.4%)				
<i>CRSP US Small Cap (Total Return)</i>			<i>(2.6%)</i>	<i>(2.6%)</i>	<i>(23.7%)</i>	<i>(20.8%)</i>	5.0%	5.3%	8.3%	9.6%
Vanguard Small Cap ETF	481,724	1.7%	(2.6%)	(2.6%)	(24.3%)	(21.4%)	4.7%	5.2%	8.2%	9.5%
International All Cap/Large Cap Equity	3,625,382	13.1%	(10.6%)	(10.6%)	(25.9%)	(24.0%)				
<i>FTSE Developed Ex US (USD) (Total Return)</i>			<i>(9.5%)</i>	<i>(9.5%)</i>	<i>(26.7%)</i>	<i>(24.6%)</i>	<i>(0.7%)</i>	<i>0.0%</i>	3.8%	4.1%
Vanguard FTSE Developed Markets ETF	2,338,674	8.4%	(10.6%)	(10.6%)	(27.5%)	(25.6%)	(1.3%)	(0.6%)	3.2%	4.0%
<i>MSCI EAFE (USD) (Net Return)</i>			<i>(9.4%)</i>	<i>(9.4%)</i>	<i>(27.1%)</i>	<i>(25.1%)</i>	<i>(1.8%)</i>	<i>(0.8%)</i>	2.8%	3.7%
Goldman Sachs GQG Partners Intl Oppty Inst	1,286,709	4.6%	(10.8%)	(10.8%)	(22.0%)	(20.3%)				
International Large Cap Value Equity	429,346	1.6%	(11.2%)	(11.2%)	(21.1%)	(20.0%)				
<i>MSCI EAFE Value (Net Return)</i>			<i>(10.2%)</i>	<i>(10.2%)</i>	<i>(21.1%)</i>	<i>(20.2%)</i>	<i>(2.8%)</i>	<i>(2.7%)</i>	1.4%	2.4%
iShares MSCI EAFE Value ETF	429,346	1.6%	(11.2%)	(11.2%)	(21.1%)	(20.0%)	(3.0%)	(2.9%)	1.2%	2.2%
Emerging Market Equity	1,468,698	5.3%	(11.2%)	(11.2%)	(24.4%)	(24.5%)				
<i>FTSE Emerging (USD) (Total Return)</i>			<i>(10.1%)</i>	<i>(10.1%)</i>	<i>(23.5%)</i>	<i>(24.2%)</i>	<i>(0.4%)</i>	<i>(0.2%)</i>	4.9%	2.1%
Vanguard EM Equity Fund	1,468,698	5.3%	(11.2%)	(11.2%)	(24.4%)	(24.5%)	(0.5%)	(0.8%)	4.1%	1.4%
Hybrid/Income	1,138,979	4.1%	(12.9%)	(12.9%)	(17.5%)	(10.4%)	(4.3%)	(0.4%)	1.1%	2.3%
Infrastructure/MLP	1,138,979	4.1%	(12.9%)	(12.9%)	(17.5%)	(10.4%)				
<i>S&P Global Infrastructure (Total Return)</i>			<i>(9.6%)</i>	<i>(9.6%)</i>	<i>(10.1%)</i>	<i>(6.0%)</i>				
Frontier MFG Select Infrastructure	1,138,979	4.1%	(12.9%)	(12.9%)	(17.5%)	(10.4%)				

Actual % VS Target %



Liquidity



Expenses and Fees

ROLLED UP ACCOUNT	SUNPOINTE ASSET CLASS	TICKER SYMBOL	VALUE (USD)	EXPENSE RATIO	ANNUAL COST
Creve Coeur Commerce Core Bond Account	US Fixed Income	-	\$5,069,942	0.30	\$15,210
AB Select US Long/Short Fund Advisor	Diversifying Strategies	ASYLX	\$1,147,596	1.63	\$18,706
Cliffwater Corp Lending FD I	Credit Strategies	CCLFX	\$1,965,108	1.64	\$32,228
Frontier MFG Select Infrastructure	Infrastructure/MLP	FMSSX	\$1,138,979	0.95	\$10,820
Goldman Sachs GQG Partners Intl Oppty Inst	International All Cap/Large Cap Equity	GSIMX	\$1,286,709	0.77	\$9,908
iShares MSCI EAFE Value ETF	International Large Cap Value Equity	EFV	\$429,346	0.35	\$1,503
iShares MSCI USA Quality	US Large Core Equity	QUAL	\$670,101	0.15	\$1,005
PIMCO Income Fund	Diversifying Strategies	PIMIX	\$1,096,093	0.51	\$5,590
Vanguard Dividend Appreciation	US Large Core Equity	VIG	\$954,094	0.06	\$572
Vanguard EM Equity Fund	Emerging Market Equity	VWO	\$1,468,698	0.08	\$1,175
Vanguard FTSE Developed Markets ETF	International All Cap/Large Cap Equity	VEA	\$2,338,674	0.05	\$1,169
Vanguard Small Cap ETF	US Small Cap Equity	VB	\$481,724	0.05	\$241
Vanguard Small Cap Value ETF IV	US Small Cap Value Equity	VBR	\$401,564	0.07	\$281
Vanguard Total Bond ETF	US Fixed Income	BND	\$188,668	0.03	\$57
Vanguard Total Stock Market	US Large Core Equity	VTI	\$6,364,307	0.03	\$1,909
Vanguard Value ETF	US Large Cap Value	VTV	\$595,542	0.04	\$238
Variant Alternative Income Fund	Credit Strategies	NICHX	\$2,063,195	1.63	\$33,630
Total			\$27,660,339	0.49	\$134,242

Fees Paid

TRADE DATE	ACCOUNT NAME	TYPE	VALUE
09-15-2022	Creve Coeur Commerce Core Bond Account	Account Fee	(\$1,351.95)
09-15-2022	Creve Coeur Commerce Core Bond Account	Account Fee	(\$181.00)
08-15-2022	Creve Coeur Commerce Core Bond Account	Account Fee	(\$1,427.34)
08-15-2022	Creve Coeur Commerce Core Bond Account	Account Fee	(\$179.00)
07-15-2022	Creve Coeur Commerce Core Bond Account	Account Fee	(\$1,279.55)
07-15-2022	Creve Coeur Commerce Core Bond Account	Account Fee	(\$178.00)
07-05-2022	Creve Coeur Schwab Account	Account Fee (Management)	(\$10,000.00)

Creve Coeur Employee Retirement Plan Blended Benchmark

Bloomberg US Aggregate (Total Return) 24%
Bloomberg US Credit Corporate 5-10 Year 12%
HFRI Equity Hedge (Total Return) 4%
CRSP US Total Market (Total Return) 35%
FTSE Developed Ex US (USD) (Total Return) 15%
FTSE Emerging (USD) (Total Return) 6%
S&P Global Infrastructure (Total Return) 4%

*Monthly performance data prior to 7/1/2013 is gross returns (before fees) as reported by Commerce
Data since 7/1/13 is net of fees. Monthly performance from 7/1/13-10/1/20 provided by Fiduciary Advisors*

CCERP Actuarial Target benchmark - 7.5% prior to 7.31.2015; 7.0% from 8/01/2015 until 6/30/2018; 6.75% from 7/01/2018 until 6/30/2021; 6.0% thereafter

Creve Coeur Employee Retirement Plan Blended Benchmark: MSCI US Mid Cap 450 6%, MSCI US Prime Market Value 5%, MSCI All Country World Ex US (Net Return), 14%, Barclays US Aggregate (Total Return) 30%, S&P 500 (Total Return) 25%, MSCI US Small Cap 1750 8%, MSCI ACWI ex USA Small Cap 4%, MSCI US Small Cap Value 1%, MSCI US REITS (Total Return) 4%, S&P Goldman Sachs Commodity Index (Total Return) 3% until 5/31/2018; S&P Goldman Sachs Commodity Index (Total Return) 3%, MSCI ACWI ex USA Small Cap 6%, MSCI All Country World Ex US (Net Return) 17%, MSCI US Small Cap Value 1%, MSCI US Small Cap 1750 8%, MSCI US Mid Cap 450 5%, MSCI US Prime Market Value 4%, MSCI US REITS (Total Return) 4%, Barclays US Aggregate (Total Return) 30%, S&P 500 (Total Return) 22% thereafter until 7/31/2019; MSCI US REITS (Total Return) 4%, MSCI Emerging Markets (Net Return) 5%, S&P 500 (Total Return) 22%, MSCI US Small Cap 1750 8%, Barclays US Aggregate (Total Return) 30%, MSCI US Mid Cap 450 5%, MSCI EAFE Value (Net Return) 3%, MSCI US Prime Market Value 4%, MSCI US Small Cap Value 1%, MSCI EAFE Small Cap (Net Return) 5%, MSCI EAFE (USD) (Net Return) 13% thereafter until current allocation above.

Important Information

This document is for your private and confidential use only, and not intended for broad usage or dissemination. Past performance is no guarantee of future returns. The performance presented reflects the deduction of the advisory fees. This report is for purposes of presenting the performance of your accounts and investments only and is not intended to be relied upon as a forecast, research or investment advice. Although this material is based upon information the advisor considers reliable and endeavors to keep current, the advisor does not assure that this material is accurate, current or complete, and it should not be relied upon as such. Please contact your existing custodian for your actual historical returns, as well as the reporting of all balances and securities transactions. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. All investments include a risk of loss that clients should be prepared to bear. The principal risks of the advisor's investment services are disclosed in the publicly available Form ADV Part 2A.

Sunpointe, LLC ("Sunpointe") is a registered investment advisor. Advisory services are only offered to clients or prospective clients where Sunpointe and its representatives are properly licensed or exempt from licensure.

If you have any questions regarding this performance report, please contact us at (314) 880-0821.

Values are provided by the Custodian as of the date of the report. We believe the sources to be reliable, however, the accuracy and completeness of the information is not guaranteed. In the event of a discrepancy, the Custodian's valuation shall prevail.

Data reflected within this report may reflect data held at various Custodians and may not be covered under SIPC. Certain other reported entities may be SIPC members that provide coverage for assets held there. You should contact your financial representative, or the other entity, or refer to the other entity's statement, regarding SIPC coverage. Assets reflected on this report are not held at the Firm on your behalf, but at the Custodian.

Performance data quoted represents past performance and does not guarantee future results. The investment return and principal of an investment will fluctuate so that an investor's shares when redeemed may be worth more or less than original cost. The values represented in this report may not reflect the true original cost of your initial investment.

**City of Creve Coeur Employee Pension Plan
10/10/2022
Implementation Plan**

	Ticker	Expense Ratio	Current Value	Current %	Current Policy	Transactions	Resulting Balance	Result %	Rec'd Policy
RISK MITIGATION ASSETS				41.1%	40.0%				40.0%
Defensive				18.4%	20.0%				20.0%
Cash	-		11,526	0.0%		6,140	17,665	0.1%	
Cash			\$ 11,526	0.0%	0.0%	\$ 6,140	\$ 17,665	0.1%	0.0%
Vanguard Total Bond ETF	BND	0.03%	186,763	0.7%		(186,763)	-	0.0%	
Creve Coeur Commerce Core Bond Account	-	0.30%	4,878,789	17.7%		319,936	5,198,725	18.6%	
US Fixed Income			\$ 5,065,553	18.3%	20.0%	\$ 133,173	\$ 5,198,725	18.6%	20.0%
Total Defensive			\$ 5,077,079	18.4%	20.0%	\$ 139,312	\$ 5,216,391	18.7%	20.0%
Flexible				22.8%	20.0%				20.0%
PIMCO Income Fund	PIMIX	0.51%	1,097,160	4.0%			1,097,160	3.9%	
AB Select US Long/Short Fund Advisor	ASYLX	1.63%	1,149,376	4.2%		(1,149,376)	-	0.0%	
Aptus Collared Income Opportunity	ACIO	0.79%	-	0.0%		1,100,000	1,100,000	3.9%	
Diversifying Strategies			\$ 2,246,536	8.1%	8.0%	\$ (49,376)	\$ 2,197,160	7.9%	8.0%
Cliffwater Corp Lending FD I	CCLFX	1.64%	1,971,298	7.1%			1,971,298	7.1%	
Variant Alternative Income Fund	NICHX	1.63%	2,068,280	7.5%			2,068,280	7.4%	
Credit Strategies			\$ 4,039,578	14.6%	12.0%	\$ -	\$ 4,039,578	14.5%	12.0%
Total Flexible			\$ 6,286,114	22.8%	20.0%	\$ (49,376)	\$ 6,236,738	22.3%	20.0%
TOTAL RISK MITIGATION			\$ 11,363,193	41.1%	40.0%	\$ 89,936	\$ 11,453,129	41.0%	40.0%

	Ticker	Expense Ratio	Current Value	Current %	Current Policy	Transactions	Resulting Balance	Result %	Rec'd Policy
RISKY ASSETS				58.9%	60.0%				60.0%
Growth				54.9%	56.0%				56.0%
iShares MSCI USA Quality	QUAL	0.15%	678,998	2.5%			678,998	2.4%	3.0%
Vanguard Dividend Appreciation	VIG	0.06%	962,495	3.5%			962,495	3.4%	3.0%
Vanguard Total Stock Market (Large Portion)	VTI	0.03%	4,427,585	16.0%			4,427,585	15.8%	24.0%
US Large Core Equity			\$ 6,069,078	22.0%	35.0%	\$ -	\$ 6,069,078	21.7%	35.0%
Vanguard Value ETF	VTV	0.04%	604,416	2.2%			604,416	2.2%	2.0%
US Large Cap Value			\$ 604,416	2.2%	0.0%	\$ -	\$ 604,416	2.2%	0.0%
Vanguard Total Stock Market (Mid Portion)	VTI	0.03%	1,283,358	4.6%			1,283,358	4.6%	
US Mid Cap Equity			\$ 1,283,358	4.6%	0.0%	\$ -	\$ 1,283,358	4.6%	0.0%
Vanguard Small Cap ETF	VB	0.05%	492,068	1.8%		230,000	722,068	2.6%	
Vanguard Total Stock Market (Small Portion)	VTI	0.03%	705,847	2.6%			705,847	2.5%	
US Small Cap Equity			\$ 1,197,915	4.3%	0.0%	\$ 230,000	\$ 1,427,915	5.1%	0.0%
Vanguard Small Cap Value ETF IV	VBR	0.07%	413,801	1.5%			413,801	1.5%	1.5%
US Small Cap Value Equity			\$ 413,801	1.5%	0.0%	\$ -	\$ 413,801	1.5%	0.0%
Vanguard FTSE Developed Markets ETF	VEA	0.05%	2,361,186	8.5%			2,361,186	8.4%	
Goldman Sachs GQG Partners Intl Oppty Inst	GSIMX	0.77%	1,315,265	4.8%			1,315,265	4.7%	
International All Cap/Large Cap Equity			\$ 3,676,450	13.3%	15.0%	\$ -	\$ 3,676,450	13.2%	15.0%
iShares MSCI EAFE Value ETF	EFV	0.35%	436,143	1.6%			436,143	1.6%	
International Large Cap Value Equity			\$ 436,143	1.6%	0.0%	\$ -	\$ 436,143	1.6%	0.0%
Vanguard EM Equity Fund	VWO	0.08%	1,474,332	5.3%			1,474,332	5.3%	
Emerging Market Equity			\$ 1,474,332	5.3%	6.0%	\$ -	\$ 1,474,332	5.3%	6.0%
Total Growth			\$ 15,155,495	54.9%	56.0%	\$ 230,000	\$ 15,385,495	55.1%	56.0%
				<i>United States</i>	<i>63.1%</i>			<i>63.7%</i>	<i>62.5%</i>
				<i>International Developed</i>	<i>27.1%</i>			<i>26.7%</i>	<i>26.8%</i>
				<i>Emerging Markets</i>	<i>9.7%</i>			<i>9.6%</i>	<i>10.7%</i>
Regional Exposure									
Hybrid/Income				4.0%	4.0%				4.0%
Frontier MFG Select Infrastructure Infrastructure/MLP	FMSSX	0.95%	1,107,840	4.0%			1,107,840	4.0%	4.0%
Infrastructure/MLP			\$ 1,107,840	4.0%	4.0%	\$ -	\$ 1,107,840	4.0%	4.0%
Total Hybrid/Income			\$ 1,107,840	4.0%	4.0%	\$ -	\$ 1,107,840	4.0%	4.0%
TOTAL RISKY ASSETS			\$ 16,263,335	58.9%	60.0%	\$ 230,000	\$ 16,493,335	59.0%	60.0%
			\$ 27,626,528	100%	100%	\$ 319,936	\$ 27,946,464	100%	100%

Sunpointe Investments

City of Creve Coeur Employee Pension Plan

October 18, 2022

Jack Dwyer CFA, CAIA
President

Lee Boudouris, CAIA, CIPM
Senior Associate



- Executive Summary
- Objectives and Monitoring
- Asset Allocation
- Manager Information
- Market Environment
- Research Report – Aptus Collared Income Opportunity

Today we plan to:

- Asset Allocation
 - In January, the committee approved reducing the target allocation to risky assets from 70% to 60%.
 - At the end of the third quarter, the portfolio was 58.3% risky assets and 41.7% risk mitigation assets.
- Review Portfolio Performance
 - While absolute performance has been difficult thus far in 2022, benchmark relative performance has been very good, aided by the alternative investments added over the past two years.
 - The portfolio declined 5.2% during the third quarter as equity markets and bond markets both continued their historic declines.
 - For the quarter, the portfolio outperformed the primary benchmark by 60 basis points.
 - The risk mitigation (bond) bucket outperformed the Bloomberg US Aggregate by 320 basis points (-1.6% vs. -4.8%). **Cliffwater** and **Variant** were the main contributors to relative performance, as both produced positive Q3 returns.
 - The risky asset (equity) bucket lagged MSCI ACWI IMI by 80 basis points (-7.4% vs. -6.6%). The portfolio's quality bias and underperformance from **Frontier MFG Select Infrastructure** and **GQG Partners Int'l Opportunity** detracted.

- Review Portfolio Performance (continued)
 - The portfolio also outperformed the secondary blended index by 30 basis points during the third quarter.
 - For the trailing one-year period, the portfolio outperformed the primary benchmark (70/30 until 1/21/22, 60/40 thereafter) by 400 basis points.
- Review Fund Performance
 - **Cliffwater** outperformed the Bloomberg US Corporate Credit and Bloomberg US Aggregate by wide margins in Q3. The fund's higher yielding credits and lower duration were benefits to the fund in the quarter.
 - **Variant Alternative Income** outperformed the Bloomberg US Corporate Credit and Bloomberg US Aggregate by a significant amount in the third quarter. Variant holds a diversified portfolio of income generating investments that have lower sensitivity to interest rate changes.
 - **Commerce** outperformed the Bloomberg US Aggregate index by 70 basis points in Q3. **PIMCO Income's** underweight to duration helped the fund outperform the Bloomberg US Aggregate by 300 basis points in Q3.
 - **GQG International Opportunity** lagged MSCI EAFE by 1.4 percentage points. Energy exposure helped performance, but semiconductor exposure detracted.
 - **Frontier MFG Global Infrastructure** lagged its benchmark by 3.3 percentage points in Q3. The fund does not invest in commodity price sensitive companies, which hurt performance in a quarter during which oil & gas companies performed relatively well.

- In Q3, the portfolio's passively managed international and emerging market equity funds (**Vanguard FTSE Developed Markets ETF**, **iShares MSCI EAFE Value ETF**, and **Vanguard Emerging Markets Equity**) each underperformed their respective benchmark by about one full percentage point.
- Generally, most index funds track their underlying benchmark very closely, with tracking error of only a few basis points (one basis point is 0.01%). Most of the difference is attributable to fair value pricing and fees.
- The SEC began requiring US funds to do fair value pricing following mutual fund timing scandals in the early 2000s.
- Fair value pricing is a process used to value holdings when the exchange on which the stock is listed is closed or deemed to be unreliable. Since foreign markets close start closing at 1am CT, but US markets do not close until 3pm CT, investment managers may need to adjust valuations based on market events. This adjustment is not made to index values.
- Fair value pricing tends to wash out over time, but in periods of sharp market moves such as what occurred on 8/31/22, index funds can outperform or underperform due to this process. Vanguard noted that fair value pricing detracted 93 basis points from the stated performance of the FTSE Developed Markets ETF for the third quarter. Similarly, BlackRock noted that fair value pricing lowered the performance of their flagship international equity ETF (EFA) by 96 basis points.
- The fair value pricing process would also impact actively managed funds with international equity exposure, including **GQG International Equity** and **Frontier MFG Select Infrastructure**.

- Update the progress of implementing portfolio changes
 - Following the last meeting, on 7/25/22, we trimmed fixed income by \$170,000 to rebalance into equities that had fallen below their target allocation.
 - A contribution from the City of \$319,936 is expected on 10/25/22.
 - We worked with Commerce and our reporting provider to examine why the portfolio value of the Commerce account did not match. Our reporting provider has fixed an issue related to our data feed from Commerce, and our values now match when accrued income is excluded.
- Recommend a manager change
 - We recommend replacing **AB Select US Long/Short Equity** with **Aptus Collared Income Opportunity**.
 - We have attached our research report on Aptus at the back of this report.

- Board Activity over the past year:
 - In October 2021, the board:
 - Confirmed guidance on the fixed income allocation
 - Discussed the plan’s funded status and actuarial valuations
 - In January 2022, the board:
 - Reduced the target allocation to risky assets from 70% to 60% in light of the plan’s improved funded status.
 - Reviewed and approved an updated Investment Policy Statement
 - Approved the use of **Variant Alternative Income**
 - Approved the use of **AllianceBernstein Select US Equity Long/Short Fund**
 - In April 2022, the board:
 - Reviewed and confirmed compliance with the new IPS constraints
 - In July 2022, the board:
 - Reviewed the geographic exposure of the equity portfolio
 - **As of September 30, 2022, the equity portfolio’s revenue exposure was 2.56% overweight to the US (47.84% vs. 45.28%; source: Morningstar).**
- As a reminder, Sunpointe has been delegated authority to manage the portfolio within the IPS guidelines, but the board has reserved the right to approve new active managers.

Retirement Plan for Employees of the City of Creve Coeur

“In establishing this Investment Policy, the Board has considered the fact that the Plan, together with social security, is the major retirement vehicle for most plan participants and has acted to discharge its fiduciary responsibility solely in the interests of such participants and their beneficiaries. The basic goal underlying the establishment of this policy is to provide that the assets of the Plan shall be invested in a prudent manner, and that together with expected contributions to the Plan they will be sufficient to meet the obligations of the Plan.”¹

Time Horizon:

The investment guidelines are based upon a 20-year investment horizon with the ability to pay current and future obligations. The time horizon should be reviewed at least annually to coincide with the actuarial forecast of gross and net distributions.

Spending:

The net distribution rate from the portfolio is expected to be less than 5% per year between 2021 and 2024, then 5-6% between 2025-2028. In 2029, net distributions are expected to jump to approximately 8% of the portfolio and grow steadily due to the closed nature of the plan.

Risk Tolerance:

The Board recognizes that some risk must be assumed in order to achieve the investment objectives of the Portfolio. In establishing the risk tolerances of the IPS, the ability to withstand short and intermediate term variability were considered. The Portfolio's long time horizon, current financial condition and other factors suggest collectively some interim fluctuations in market value and rates of return may be tolerated in order to achieve the longer term objectives.

Performance Expectations:

The desired investment objective is a rate of return on assets that, before fees, matches the policy index as defined later in this IPS.

¹ Source: INVESTMENT POLICY STATEMENT for the Retirement Plan for Employees of the City of Creve Coeur, revised January 2022

- We continually review the portfolio to ensure that the allocation remains within the IPS guidelines.
- Below, we summarize those constraints and how the portfolio compares to them.

Constraint	Current Status
US small and mid cap equities may not be more than 50% of the total US equity allocation	27.3%
The overweight to growth or value stocks may not be more than 20% relative to the core asset class benchmark ¹	Value +2.4%
Emerging market equities may not be more than 20% of the total equity allocation	9.3%
Cash may briefly exceed its upper limit (2%) as a result of recent contributions, investment transactions, or upcoming distributions.	0.1%

¹ Derived from underlying portfolio holdings using Morningstar Direct and based on total equity portfolio. Calculated as value weight in portfolio (26.87%) divided by the value weight in the ACWI IMI benchmark weight (26.23%).

	CCERP Blended Global Benchmark	Actual 9/30/2022 Allocation
Risk Mitigation		
Defensive		
Cash/Low Duration		0.1%
US Core Fixed Income	20.0%	19.0%
Total Defensive	20.0%	19.1%
Flexible		
Diversifying Strategies	8.0%	8.1%
Credit Strategies	12.0%	14.6%
Total Flexible	20.0%	22.7%
Total Risk Mitigation	40.0%	41.7%
Risky Asset		
Growth		
US All Cap/Large Cap Equity	35.0%	31.0%
US Small Cap Equity		3.2%
Intl All Cap/Large Cap Equity	15.0%	14.7%
Emerging Market Equity	6.0%	5.3%
Total Growth	56.0%	54.2%
Hybrid/Income		
Infrastructure	4.0%	4.1%
Total Hybrid/Income	4.0%	4.1%
Total Risky Asset	60.0%	58.3%
Total	100%	100%
Return		
10 Yr. Horizon Expected Return	6.0%	6.0%
Risk (Using 10-yr Horizon Returns)		
Standard Deviation (1 Yr.)	9.4%	9.4%
Standard Deviation (10 Yr.)	3.0%	3.0%
95% Confidence Return Range (1 Yr.)	-12.9% - 24.9%	-12.7% - 24.7%
95% Confidence Return Range (10 Yr.)	0% - 11.9%	0.1% - 11.9%
Probability of Loss Year	24.9%	24.7%
Probability of 10% or Worse Loss	4.1%	4.0%
Lowest Likely Return (1 Yr.)	-15.6%	-15.4%
Lowest Likely Return (10 Yr.)	-0.7%	-0.6%
Sharpe Ratio	0.47	0.48

- The table at left shows the portfolio's asset allocation as of September 30, 2022.
- At the end of the quarter, the portfolio was slightly overweight risk mitigation assets.
- Sunpointe adjusted the return and risk assumptions for most asset classes as of July 1, 2022. Forward-looking return assumptions have increased as valuations have returned closer to their long-term averages in several asset classes.

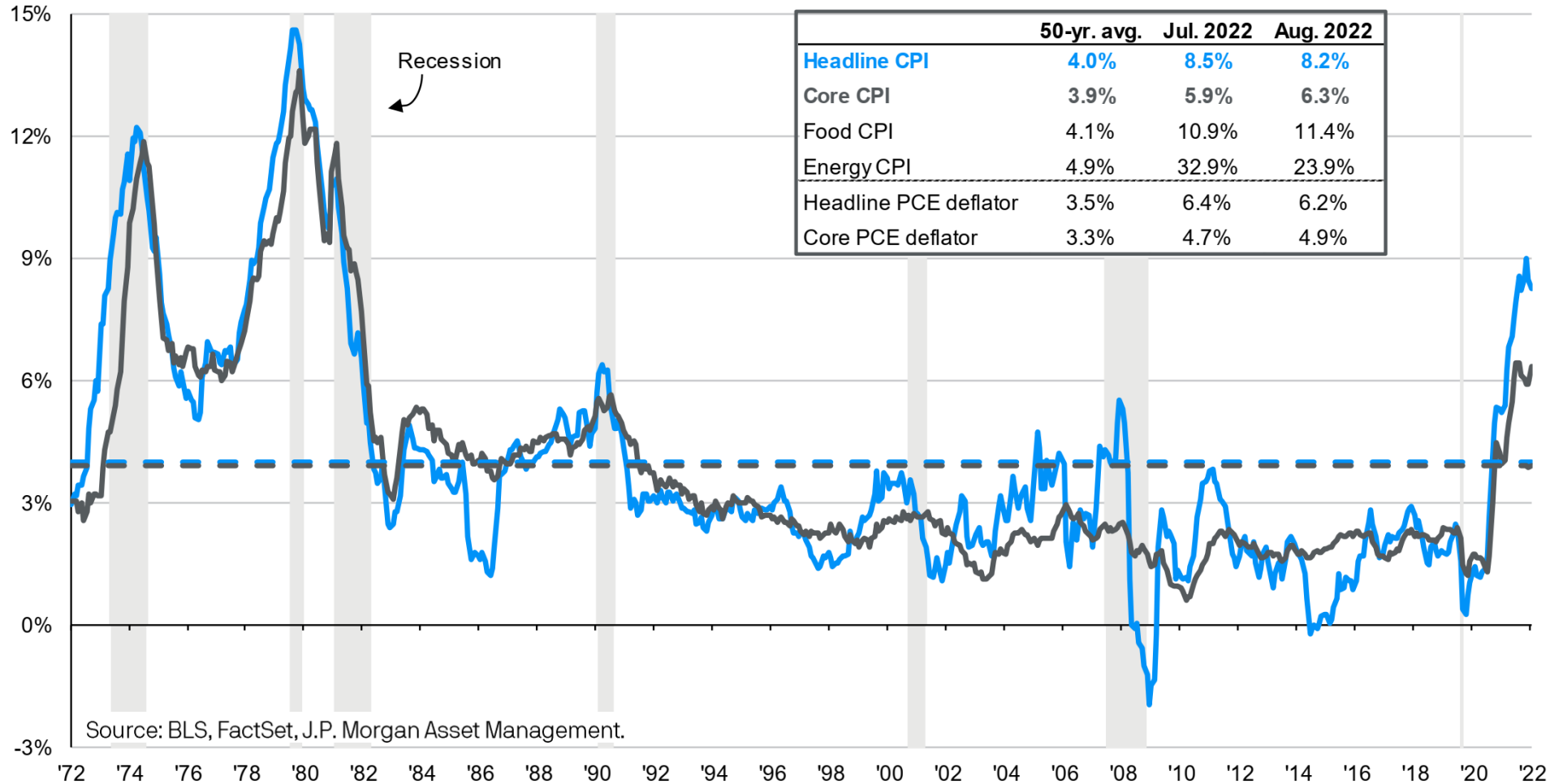
- **Aptus Collared Income Opportunity (ACIO)** is an option-based strategy that can add value in a variety of market environments. ACIO sells short-term call options on the individual stocks in the portfolio to generate income and uses a portion of that income to buy long put options on the S&P 500 to create downside protection. The actively managed portion of the equity portfolio is biased towards a “yield + growth” framework that results in a slightly higher quality equity portfolio than the S&P 500.
- **The target outcome of ACIO is upside potential with downside protection.** Aptus writes call options on individual stocks and buys hedges at the index level but can also use option spreads to subsidize costs. The team trades weekly options, rather than more traditional monthly options, to ensure active portfolio management. The team often adjusts the strike prices of both the covered call options and the long index put option to adjust for changing market conditions, even though all option positions are short-term in nature and call options in the portfolio expire within 30 days.
- While we still have confidence in **AB Select US Long/Short**, their investment “toolbox” is limited by the rules that govern mutual funds. The strategy makes a large number of very small short positions to provide downside protection while being mindful of what can happen if one of their short positions rises quickly in price; it is hard for any one short position to add significant value. AB’s primary defensive tactic is to move to cash, a move we could recommend ourselves without paying a management fee.
- **Further, ACIO has an expense ratio that is 84 basis points lower than AB, which provides an advantage to Aptus.**

Name	Ticker	Adj. Expense	Yield	3 Month Return	YTD Return	1 Year Return	3 Year Return
Aptus Collared Income Opportunity ETF	ACIO	0.79	0.78	-2.30	-13.35	-5.49	5.49
AB Select US Long/Short Advisor	ASYLX	1.63	0.00	-1.30	-11.23	-5.42	6.68
CBOE S&P 500 BuyWrite BXM PR USD				-7.59	-17.01	-11.21	0.48
S&P 500 TR USD				-4.88	-23.87	-15.47	8.16

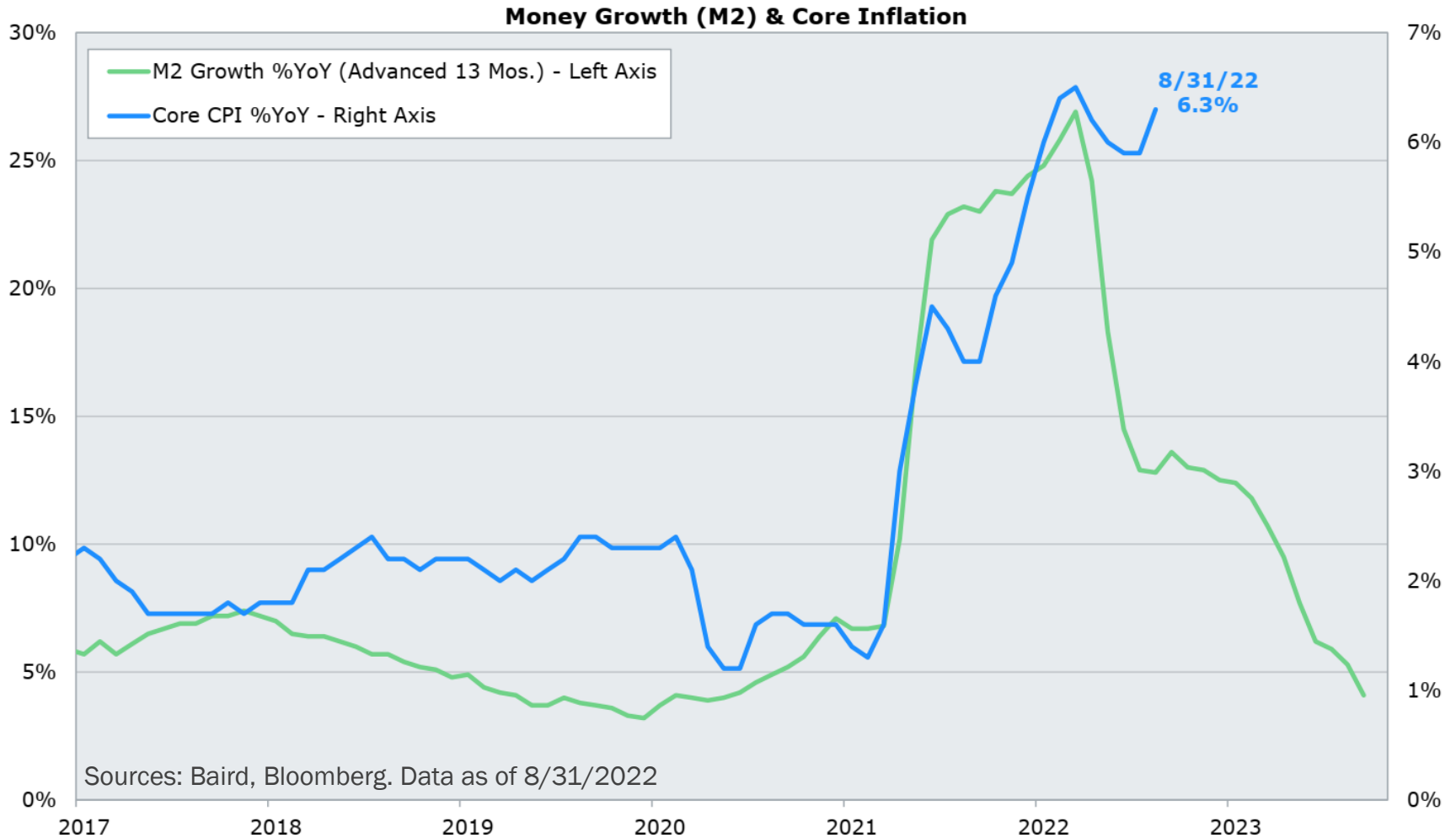
Source: Morningstar. Performance data are as of September 30, 2022 and are shown net of all fees. CBOE S&P 500 BuyWrite BXM is the most relevant benchmark for ACIO, but there are important differences. Please review the attached Research Report for a more detailed review.

CPI and core CPI

% change vs. prior year, seasonally adjusted



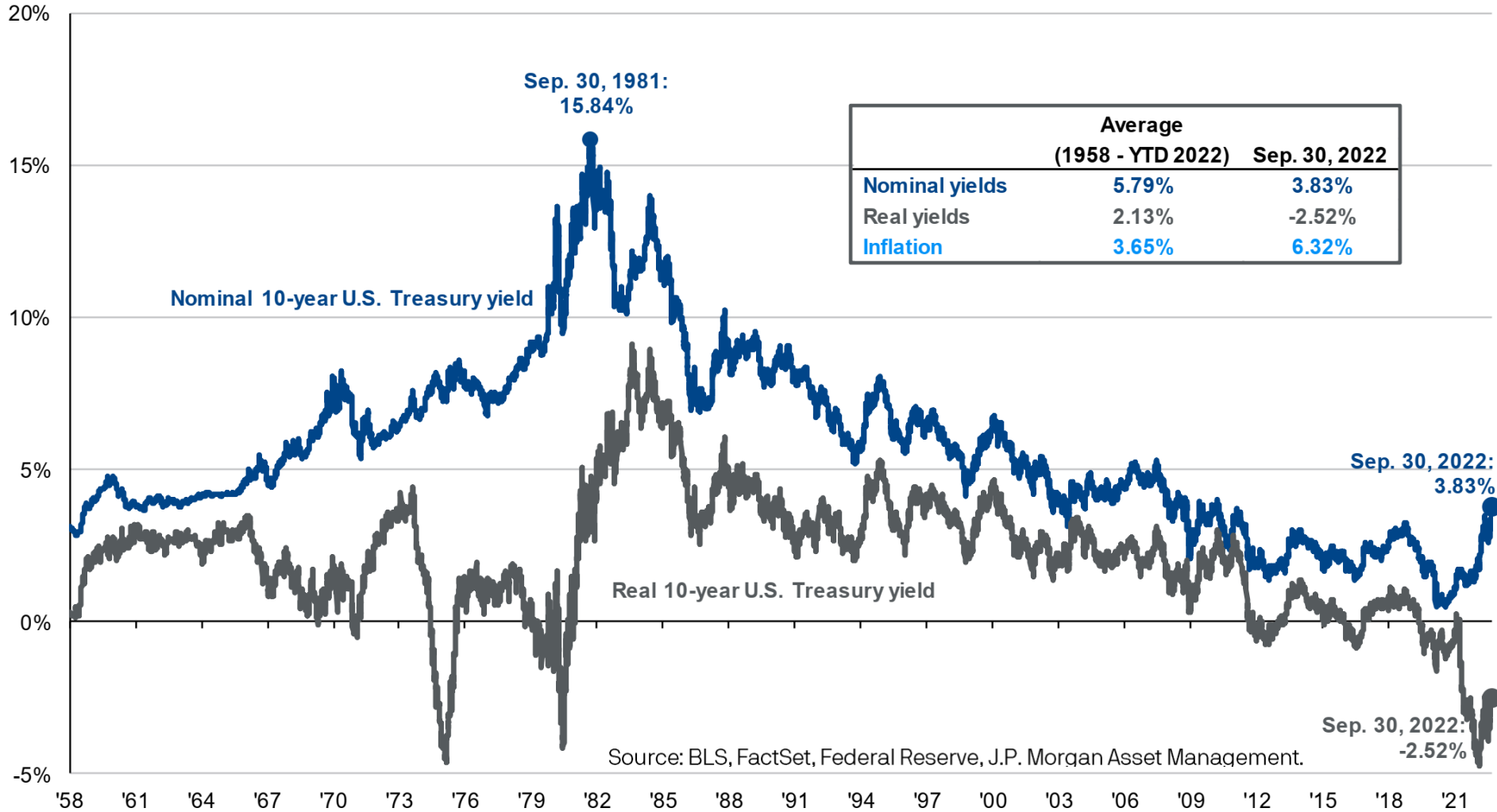
Inflation peaked in June at 9.3% but remains high. High oil prices have eased somewhat, but gas prices remain elevated. We anticipate supply chain issues to resolve themselves over time, but wage inflation may persist, and the Ukraine situation remains uncertain.



The historical relationship between the growth in the money supply (green line) and inflation (blue line) suggests that inflation should start to ease in the coming months. Price declines in oil, copper, lumber, and shipping also support a decline in inflation. Factors such as strong wage growth and low employment could keep upward pressure on inflation.

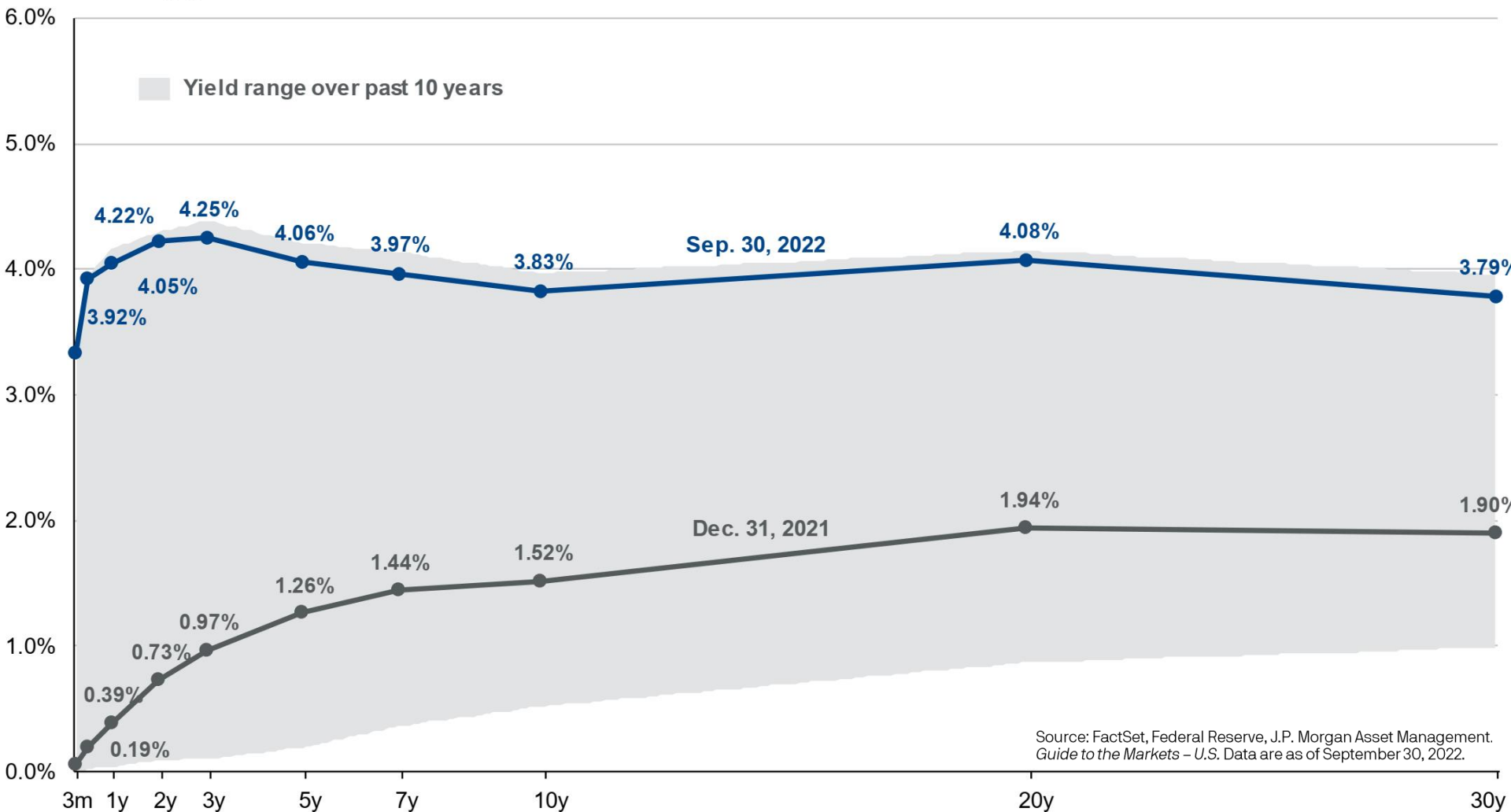
Nominal and real U.S. 10-year Treasury yields

For the current month, we use the prior month's core CPI figures until the latest data is available.



Nominal yields spiked as the Federal Reserve raised interest rates by 75 basis points in September after hikes in May and June. However, with persistently high inflation, real interest rates remain negative.

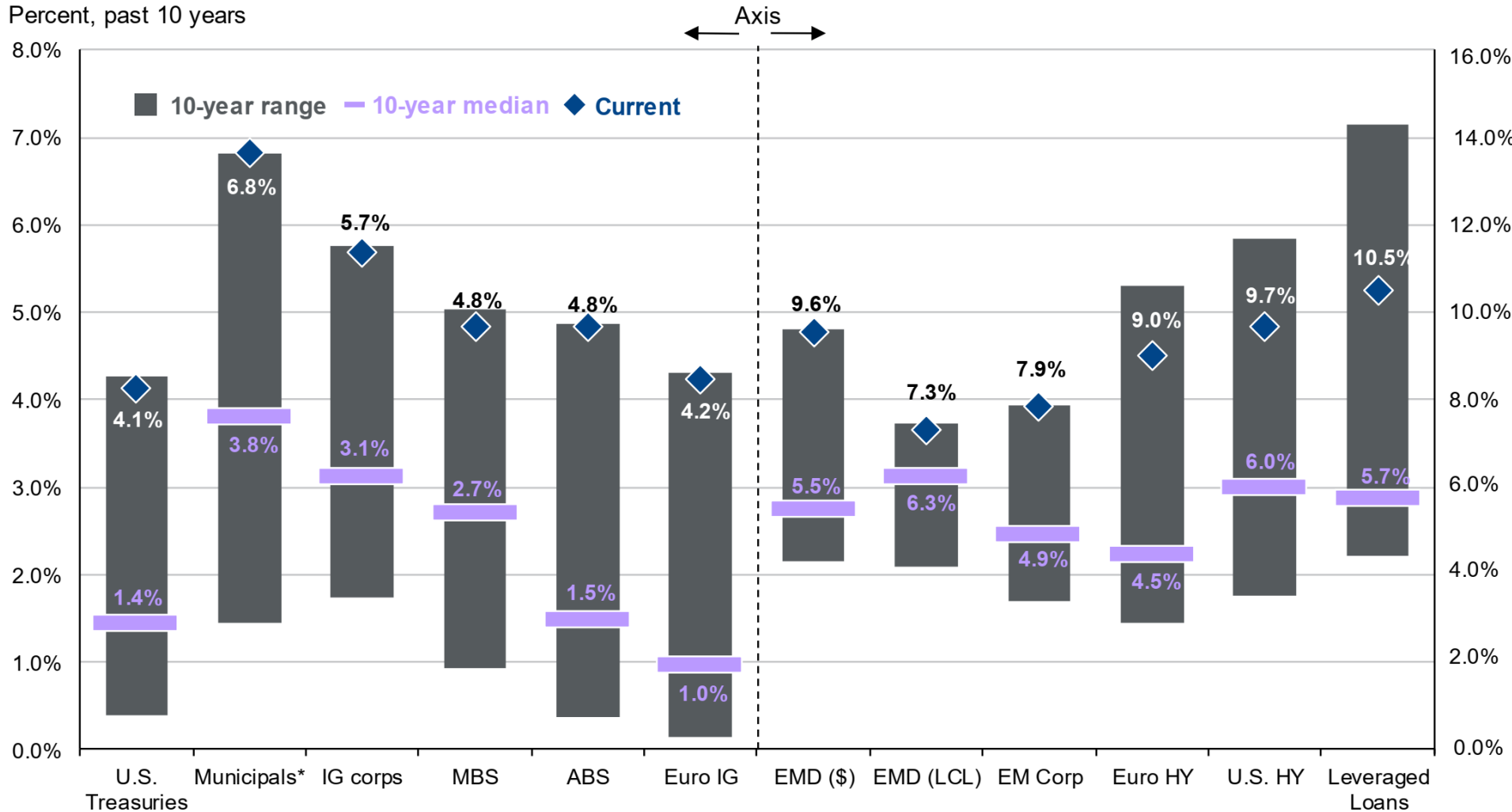
U.S. Treasury yield curve



Short-term yields have increased significantly, as the Federal Reserve raised rates 75 basis points in September. However, long-term rates have not increased as much as short-term rates, leading to an inverted yield curve

Yield-to-worst across fixed income sectors

Percent, past 10 years



Source: Bloomberg, FactSet, J.P. Morgan Credit Research, J.P. Morgan Asset Management.

*Municipals: tax-equivalent yield assuming 40.8% total tax rate

Fixed income yields-to-worst remain at or near their ten-year highs in most fixed income sectors.

S&P 500 Valuations Versus L-T Average

S&P 500 Index: Forward P/E ratio

Valuation measure	Description	Latest	25-year avg.*	Std. dev. Over-/under-Valued
P/E	Forward P/E	15.15x	16.84x	-0.50
CAPE	Shiller's P/E	27.15x	27.97x	-0.13
Div. Yield	Dividend yield	1.90%	1.99%	0.26
P/B	Price to book	3.18x	3.10x	0.10
P/CF	Price to cash flow	11.51x	11.18x	0.15
EY Spread	EY minus Baa yield	0.57%	0.24%	-0.17



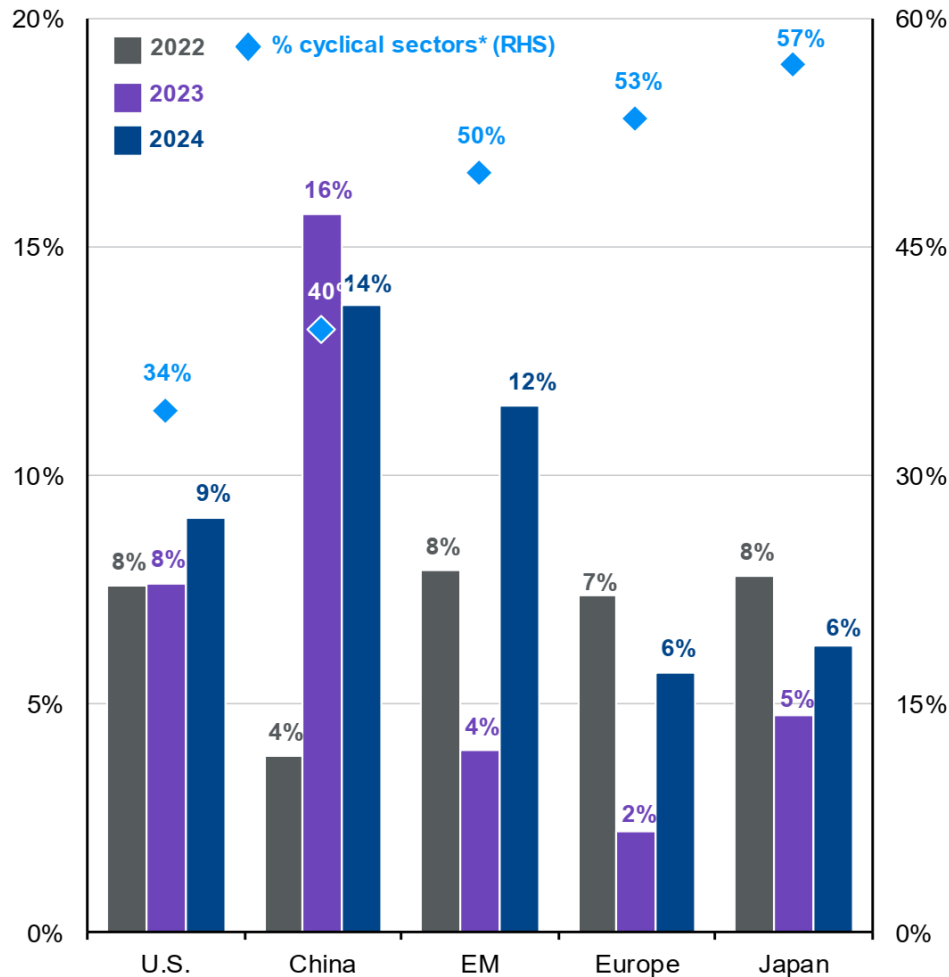
Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.

*P/CF is a 20-year average due to cash flow availability.

Equity valuations have fallen below their long-term average. In addition, equities remain attractive relative to fixed income, but by a much narrower margin than in prior quarters as interest rates have risen sharply.

Global earnings growth

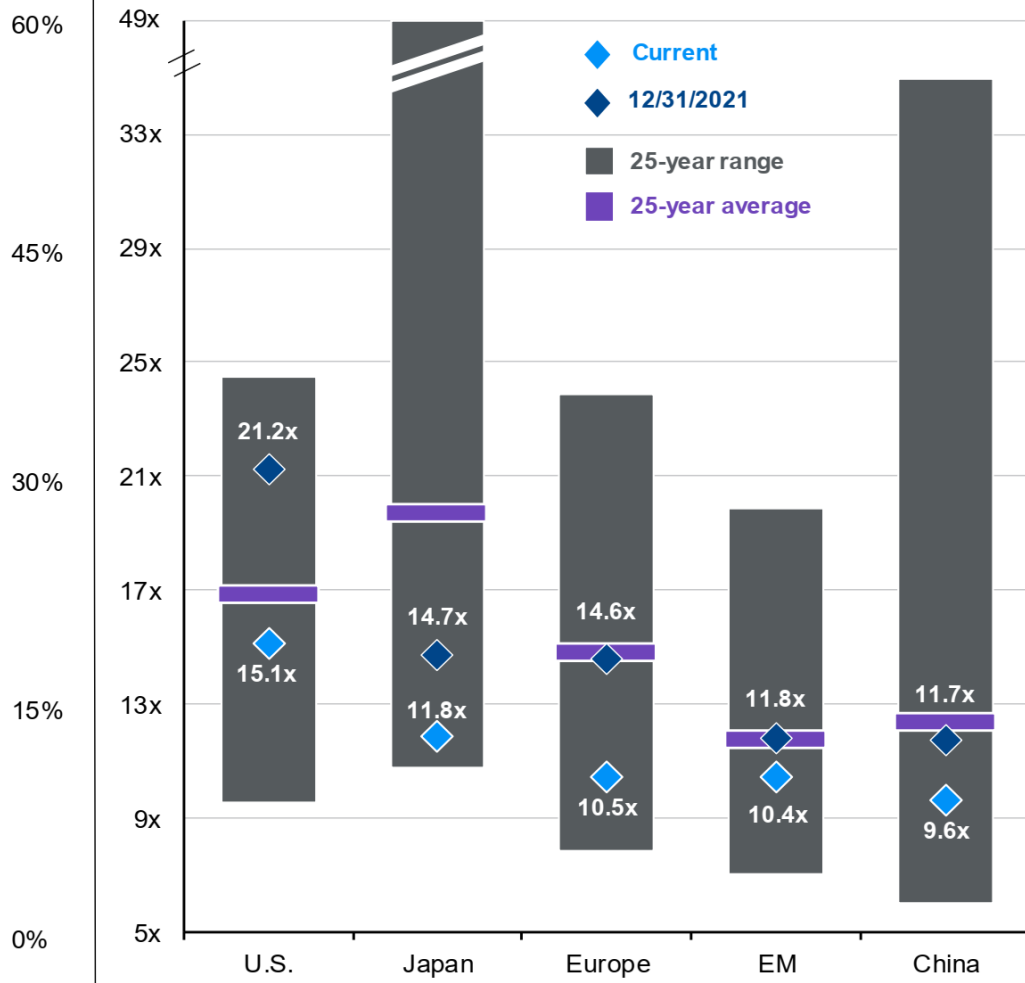
Calendar year consensus estimates



Source: FactSet, MSCI, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.

Global valuations

Current and 25-year next 12 months price-to-earnings ratio



Equity valuations in Europe and Japan are well below their long-term averages, while US equity valuations fell below their long-term average late in Q3. Earnings growth estimates for 2023 have declined in most parts of the world but remain positive.

The U.S. dollar

U.S. Dollar Index



Source: FactSet, ICE, J.P. Morgan Asset Management

The value of the US Dollar surged 8.6% during the third quarter. The move is partly a result of a more hawkish Federal Reserve and a higher US ten-year bond yield compared to other countries. The strong dollar hurt the returns of international investments held by US investors.

APTUS COLLARED INCOME OPPORTUNITY

Investment Committee Report

August 2022

Fund Summary and Investment Thesis

- Fund Characteristics.** Aptus Collared Income Opportunity (ACIO) is an option-based strategy that can add value in a variety of market environments. ACIO sells short-term call options on the individual stocks in the portfolio to generate income and uses a portion of that income to buy long put options on the S&P 500 to create downside protection. The actively managed portion of the equity portfolio is biased towards a “yield + growth” framework that results in a slightly higher quality equity portfolio than the S&P 500.

Fund Information	
Global Category	Equity Miscellaneous
Inception Date	7/9/2019
Firm City	Fairhope
Fund Size (\$Mil)	467
# of Holdings	79
Average Market Cap (\$Mil)	184,587
12 Mo Yield (%)	0.68
Turnover Ratio (%)	48.0
Closed to New Inv	No

Source: Morningstar. Data as of July 31, 2022

- Independent Ownership.** The firm is independent and Aptus employees own the majority of the firm.
- Dynamic Portfolio Management.** The target outcome of ACIO is upside potential with downside protection. Aptus writes call options on individual stocks and buys hedges at the index level but can also use option spreads to subsidize costs. The team trades weekly options, rather than more traditional monthly options, to ensure active portfolio management. The team often adjusts the strike prices of both the covered call options and the long index put option to adjust for changing market conditions, even though all option positions are short-term in nature and call options in the portfolio expire within 30 days.
- Risk / Return Profile:** The fund has performed in-line with expectations since its inception in July 2019, adding value in down and volatile markets and lagging in growth-dominated up markets. The past three years have provided numerous periods for the strategy to prove its value – most notably the Covid drawdown of February and March 2020 and the broad market drawdown of the first half 2022 that was driven by energy, inflation, and Russia/Ukraine. ACIO monetized its long put option on the S&P 500 three times in June 2022.
- Sunpointe View:** Aptus presents an intriguing strategy that includes active options trading and downside protection. We would anticipate that the strategy should add value in volatile market environments, as option premiums would increase. The strategy places significant importance on correlation with the S&P 500 to ensure that the firm’s hedges work as intended. The blend of active equity management and active options trading is not often found in ETFs, and we feel that this combination is attractive. We recommend using ACIO in the flexible portion of a client’s risk mitigation portfolio.

Firm Overview and Background

- Founder and Chief Investment Officer JD Gardner started Aptus in 2013. Mr. Gardner owns 42% of the firm (as of March 31, 2022), some of which is held in a trust. Other employee owners include John Goldsberry (fund operations), Beckham Wyrick (PM), and Derek Hernquist (business development); these three individuals own a combined 15% of Aptus. Two family offices own 20% and 11%, respectively. Mr. Gardner's brother, Will Gardner, owns 3% of the firm, and the remaining ownership is divided among several smaller investors.
- Aptus acquired Opus Capital Management from Driehaus Capital in 2020 and added David Wagner (PM) and Brad Rapping (analyst) in the process.
- Aptus has one office in Fairhope, AL. About half of the firm's 20 employees work remotely.
- Aptus also manages four other strategies, which are listed below. Various combinations of team members serve as portfolio managers for each respective strategy.
 - Aptus Drawdown-Managed Equity ETF (ADME) – includes market hedges to manage drawdown risk; should exhibit more upside and more downside than ACIO.
 - Aptus Defined Risk ETF (DRSK) – includes 90-95% investment grade bonds with equity options completing the portfolio.
 - International Drawdown Managed Equity ETF (IDME) – similar to ADME but invests in international equities.
 - Optus Small Cap Value ETF (OSCV) – an actively managed, long-only equity strategy.
- The five ETFs above combine for \$1.99 billion in AUM as of July 31, 2022. Aptus Defined Risk and ACIO make up \$1.32 billion of this AUM, while the smallest and newest fund, International Drawdown Managed Equity, has \$133.7 million in AUM.
- In addition, Aptus works with existing advisory teams and retirement plans as a consultant to review portfolios and add an extra layer of due diligence on a non-discretionary, fee-for-service basis. The firm also manages discretionary model portfolios for registered investment advisors while also providing consulting services; their model portfolios for this segment include investments in the five Aptus ETFs listed above and passive ETFs. Portfolio managers Tyner and Wyrick leads this effort.
- As of March 31, 2022, Aptus managed \$2.5 billion in discretionary assets (including the value of the five ETFs at that time) and \$1.6 billion in non-discretionary assets.
- Aptus is registered as an investment adviser with the SEC under the U.S. Investment Advisers Act of 1940.

Team Summary

Aptus has four portfolio managers who also conduct analyst work.

- **JD Gardner, CFA**, Founder and Chief Investment Officer — Mr. Gardner holds an undergraduate degree in Finance and an MBA with a concentration in Finance from Wright State University. He holds both the CFA and Chartered Market Technician (CMT) designations. He spent time at UBS, Morgan Stanley, and as a research analyst before starting Aptus.
- **John Luke Tyner, CFA**, Portfolio Manager — Mr. Tyner joined Aptus in 2019 and is a member of the Investment Committee. He is a fixed income analyst and trader, provides portfolio analysis, and leads the construction of the Impact Series Model portfolios. Prior to Aptus, he worked on the institutional fixed income desk at Duncan-Williams, Inc. He graduated from the University of Memphis with a degree in accounting and is a CFA charterholder.
- **David Wagner III, CFA**, Portfolio Manager, Equity Analyst — Mr. Wagner is a member of the firm's investment committee and is responsible for equity research, selection, and broad macroeconomic research. He has contributed to CNBC, Bloomberg, Barron's, and the Wall Street Journal, among others. Prior to joining Aptus, Mr. Wagner worked for both Opus Capital Management and Driehaus Capital Management, where he was

responsible for conducting research and analysis for various small and micro-cap equity strategies. He earned a bachelor's in accounting and finance from the University of Kentucky and an MBA with a specialization in finance from Xavier University. Mr. Wagner is a CFA charterholder and resides near Cincinnati, OH.

- **Beckham Wyrick, CFA, Portfolio Manager** — Mr. Wyrick joined Aptus Capital Advisors in 2016 and serves as a portfolio manager and analyst. He holds a bachelor's degree in Finance from the University of North Carolina at Wilmington, where he played on the basketball team. He then played nine years of professional basketball in Germany before joining Aptus as the firm's Director of Development; he later became a portfolio manager and leads the firm's asset allocation effort for outside clients and advisors. Mr. Wyrick is a CFA charterholder.

Aptus also has two equity analysts, one institutional trader, a five-person operations team (which includes two additional traders), a five-person advisor relationship and client service team, two project managers, and a chief wellness officer.

The four portfolio managers comprise the firm's portfolio construction team. Gardner, Tyner, and options and derivative trader Mark Callahan make up the derivative and fixed income team, while Wagner leads the equity research team alongside analysts Brad Rapping, CFA and Joseph Sykora, CFA.

Research Process

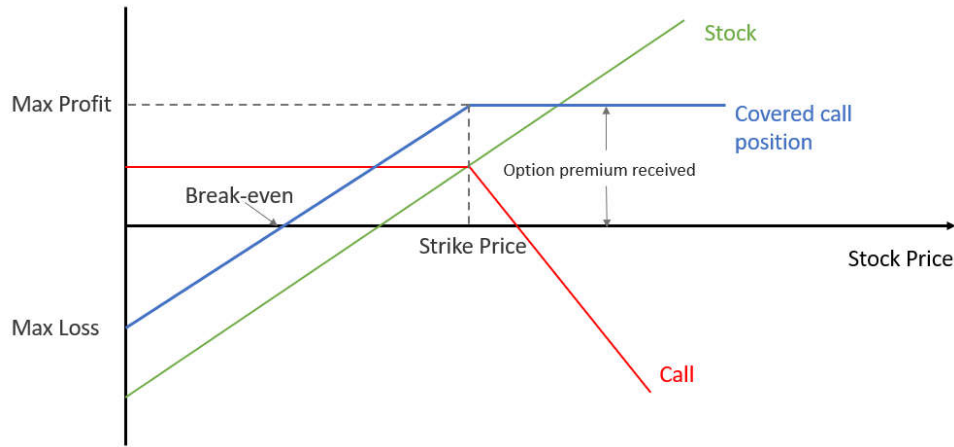
- The equity process starts with a "yield + growth" framework, as they feel that these two factors combine to produce most of the long-term investment return of equities. While a stock's current dividend yield is known, its future growth rate is unknown, so the team researches the ability of each company to sustainably generate sales, EBITDA, earnings, cash flows, and dividend payouts.
 - The market's long-term "yield + growth" return is around 8%; Aptus looks for a greater than 10% return.
 - This screen eliminates a significant number of companies from their equity universe.
- The remainder of market return would come from multiple expansion / contraction, which is more variable in the short-term and harder to predict.
- The team will run multiple screens to further refine their investment universe:
 - Quality: target companies have ROE of at least 10-15% and tend to be asset-light businesses
 - Growth: focus on cash flow and how companies use that cash flow, as well as growth in revenue and EBIT.
 - Valuation: Aptus reviews a variety of common valuation metrics for portfolio companies and their most direct competitors: P/E, EV/EBITDA, P/B, ROE, and ROIC.
 - Momentum: while the team reviews stock momentum, it is weighted less than quality, growth, and valuation in the research process.
- In addition, Aptus reviews metrics such as ROE, leverage, short interest, and earnings surprises to answer the following questions:
 - Does the company earn enough to return capital to shareholders and reinvest in the business?
 - Will a heavy debt load impair the business in a downturn?
 - Is the market telling us something about the company's prospects?
 - What is the near-term outlook?
- Aptus calls companies that meet these criteria "Quality Compounds." These companies tend to have price inelasticity, are of high quality, have strong moats, and have strong management teams. Quality Compounds are the team's highest conviction stocks.

Equity Strategy Overview

- First, the team applies the “yield + growth” framework to target at least a 10% projected total return over the next 1-3 years.
- The team then constructs a portfolio of 50-75 individual stocks utilizing the three categories below.
 - Growth Stocks: (35-45%): These stocks have expected ROE and ROIC of at least 10% and expected earnings growth of at least 15%.
 - Value Stocks (35-45%): These stocks have expected ROE and ROIC of at least 10% and expected earnings growth of at least 10%.
 - Quality Compounders (up to 20%): this part of the portfolio is designed to be an alpha generator. The team feels like the companies in this bucket can generate above average returns on shareholder equity and have strong management teams that can maintain this advantage over the long-term. These stocks have expected ROE, ROIC, and earnings growth of at least 15%. Each of these stocks comprises 1.0%-1.5%, on average, of the ACIO equity portfolio.
- The team ensures ACIO is sector neutral, with a maximum variance of 250 basis points relative to the GICS sector weights of the S&P 500. Further, the team ensures that the total portfolio has an expected correlation to the S&P 500 of at least 0.95 so that the strategy’s index option positions and the total portfolio move in a similar manner. This is crucial to ensuring that the long index put provides the intended downside protection.
- On average, Aptus expects the equity portion of ACIO to generate about 1-2% per annum in dividend income; these proceeds are re-invested in the fund. Morningstar calculates the portfolio’s dividend yield at 1.63% as of July 31, 2022.
- Portfolio companies that underperform the S&P 500 over a four to eight-week period are reviewed and are usually trimmed or eliminated from the portfolio. Aptus will also review stocks that have outperformed significantly over the same time period and will trim positions as needed. Since maintaining correlation with the S&P 500 is important, stocks in the growth and value categories are more likely to be reduced, while the quality compounders category is designed for long-term value generation and the team is less likely to cut losses or realize gains quickly.

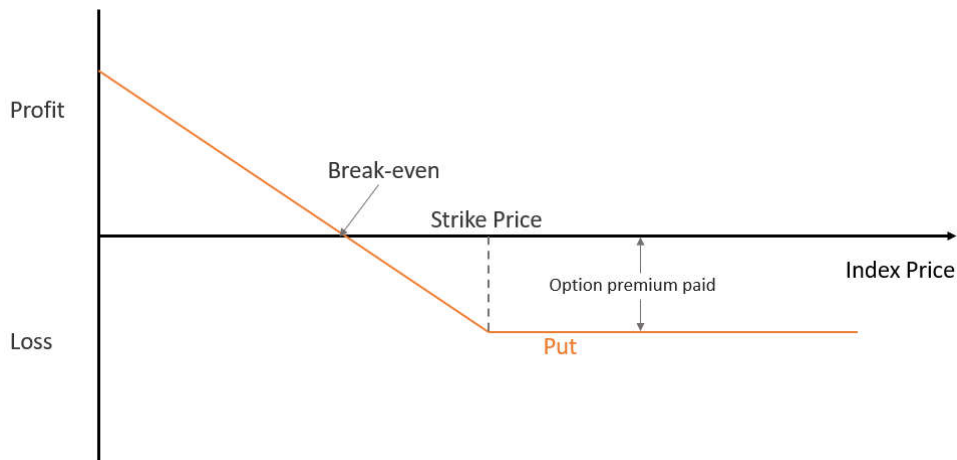
Option Strategy Overview

- The first option strategy that ACIO uses is covered call selling. Aptus sells individual upside call options on securities that are part of their high-quality stock portfolio. The goals of this strategy are additional income, a reduction of volatility, and cash to help mitigate the cost of downside protection.
- This is a basic covered call strategy which limits the upside of individual stock positions and generates income that mitigates the downside of that position. The chart below illustrates that once the stock price of the underlying stock rises above the strike price of the option, the value of the stock increases and the value of the option decreases by the same amount, resulting in no change in combined value. If the stock never reaches the strike price, ACIO collects the income from the call option and holds the stock just as they would if there was no option position.



Sunpointe illustration

- ACIO writes its average call option with a strike price about 8-10% above the current price but will move as much as 12% above the current price in more volatile markets. ACIO writes call options weekly or every other week, and they often close and re-set option positions at higher strike prices if the underlying stock appreciates. Call options have 30 days or less until expiration when initiated.
- The goal of the covered call position is to generate at least 4-6% per annum in option premium. In recent months, Aptus has realized 50-70 basis points per month in call option premium income, or 6.0%-8.4% annualized, as volatility has been somewhat elevated but well below other volatile markets such as the first quarter of 2020.
- ACIO writes these covered call positions on each of the stocks in the growth and value portions of the portfolio. The stocks in the Quality Compounders portion of the portfolio (generally 10-12 names) are uncapped and do not have option positions on them, except in the very rare circumstance where the team feels it is appropriate to do so.
- The second portion of ACIO's option strategy involves buying protection on the portfolio with out of the money put options on the S&P 500 with 30-90 days until expiration. This creates a downside hedge on the portfolio – Aptus refers to this as their “anchor hedge.”
- If the S&P 500 declines past the index price of the option, the value of the long put option increases at the same rate as the value of the S&P 500 decreases. This does not create a perfect hedge, as the ACIO portfolio does not match the holdings of the index. However, this downside hedge serves as protection in sharp down markets, and the correlation between the equity portfolio and the S&P 500 helps this put option to provide the intended downside protection.



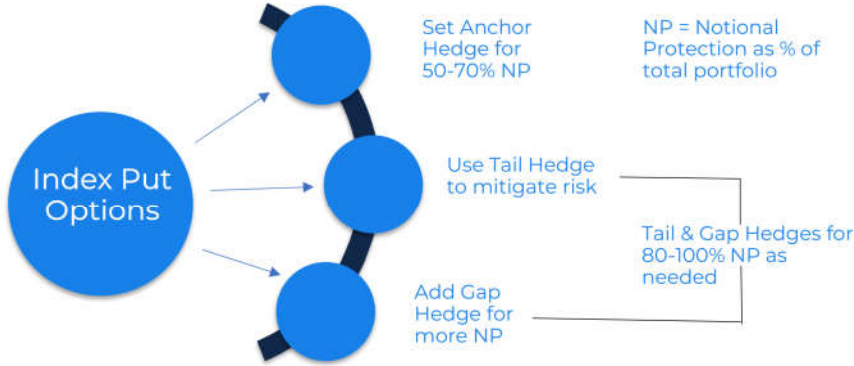
Sunpointe illustration

- This “anchor hedge” costs about 3% of the portfolio per annum annually to maintain, but the option premium received from the individual stock call options more than covers this expense. However, this process has provided the desired downside protection in months where the S&P 500 declines. The table below highlights the five worst months for the S&P 500 since ACIO’s July 2019 inception and ACIO’s corresponding return and alpha.

Month	S&P 500 (Total Return)	ACIO (Price)	ACIO Alpha
March 2020	-12.35%	-0.32%	+12.03%
April 2022	-8.25%	-4.48%	+4.24%
June 2022	-8.25%	-3.67%	+4.59%
February 2020	-8.23%	-3.52%	+4.71%
January 2022	-5.17%	-3.16%	+2.02%

Source: Morningstar. Data through July 31, 2022.

- In market environments where the risk / return scenario is attractive and when the team feels that the US equity market is oversold, ACIO may add long call option exposure on the S&P 500. When doing this, the team is looking to add positive convexity, balance the long put (which has appreciated in value), and risk a relatively small amount of capital. This “hedge on the hedge” position is designed for at least a 10:1 return and can help the portfolio participate in sharp market upswings that follow market declines. This portion of the strategy is relatively new and was not in place during the Covid drawdown of early 2020.



Source: Aptus Capital Advisors

- ACIO can own volatility outright by purchasing call options on the VIX Index during periods when Aptus believes the VIX is relatively inexpensive against other forms of downside protection. The VIX is a financial benchmark designed by CBOE to provide an estimate of the 30-day expected volatility of the S&P 500 and is calculated by using the midpoint of real time S&P 500 option bid/ask quotes with around 30 days until expiration. ACIO has traded the VIX explicitly just one time in its history, and that trade lasted for only a few weeks. However, given that the team trades call options on a weekly basis, a rise in the VIX should lead to higher call option premiums on the covered call option trades on the portfolio’s individual stock positions.
- Aptus trades options through Citadel, Jane Street Capital, and Seaport Global Securities. The firm’s AUM growth has increased their scale with these trading partners and thus decreased the cost of options trading.

Performance Review

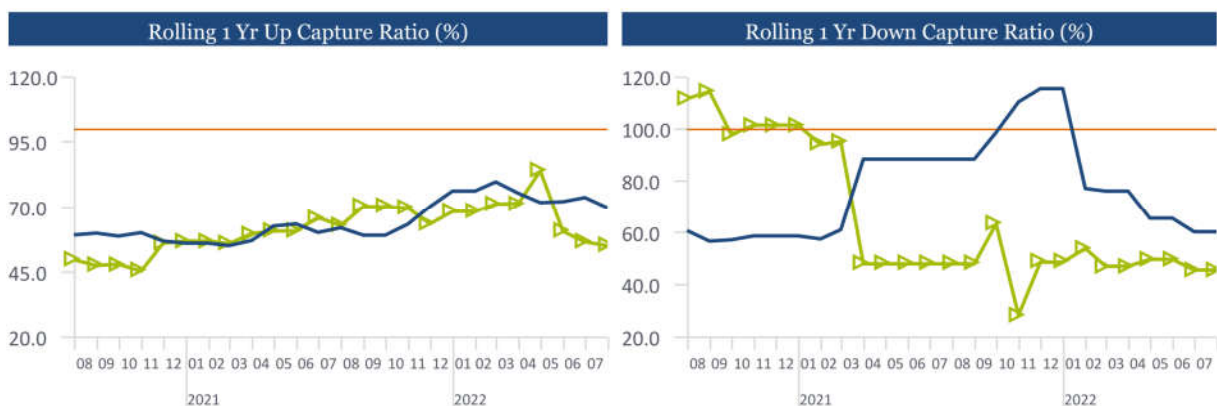
- Aptus's goal for ACIO is to outperform the S&P 500 on a risk-adjusted basis (using Sharpe ratio as a guidepost) with an underlying stock portfolio that has less sensitivity to overall market movements while producing income and protecting against market drawdowns.



■ Aptus Collared Income Opportunity ETF ■ S&P 500 TR USD ■ CBOE S&P 500 BuyWrite BXM

Source: Morningstar. Data through July 31, 2022.

- ACIO underperformed the S&P 500 in 2020, when the index returned 18.4%, and in 2021, when the index returned 28.7%. Underperformance relative to an all-equity index in straight-up markets is to be expected for this strategy, as the covered calls and index puts detract from returns and the expected up-market capture is 65-75%. However, the strategy protected capital on the downside in the first half of 2022, outperforming the S&P 500 index by a wide margin and producing a down-market capture in-line with Aptus' 40-50% expectation.
- On a rolling one-year basis, ACIO's up-market capture has remained within a range of 60-80%, in-line with expectations. The strategy's down-market capture on a rolling one-year basis has been as low as 60%, spiked to over 100% at the end of 2021 (the S&P 500 was up 28.7% in 2021), but has returned to around 60% as the strategy outperformed by a wide margin in the first half of 2022, a volatile and mostly negative equity market.



■ Aptus Collared Income Opportunity ETF ■ S&P 500 TR USD ■ CBOE S&P 500 BuyWrite BXM

Source: Morningstar. Data through July 31, 2022.

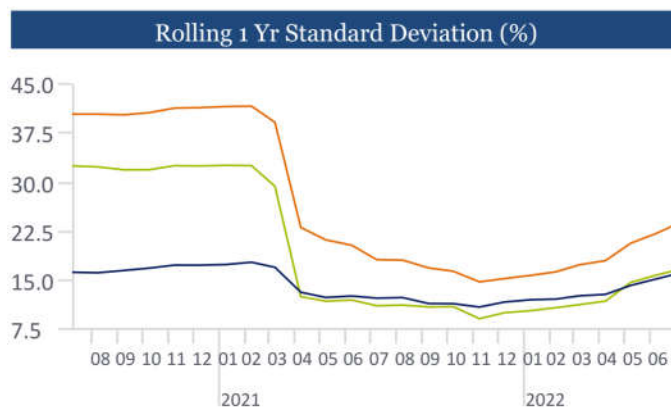
- The strategy's diversification benefits are most evident on sharp daily swings in the S&P 500. From ACIO's July 10, 2019 inception through July 31, 2022, ACIO outperformed the S&P 500 on the 46 days the index declined by 2% or more by an average of 205 basis points. Predictably, the strategy underperformed the S&P 500 on the 35 days the index gained 2% or more by an average of 223 basis points.

Daily Downside Capture vs S&P 500

S&P 500 Daily Decline	ACIO (Market) Average Daily Outperformance vs. S&P 500	Total Observation Days	Days ACIO Outperformed	Hit Rate
0 bps to -25 bps	-0.87 bps	84	45	53.6%
-26 bps to -75 bps	15.59 bps	107	77	72.0%
> -75 bps	106.85 bps	144	140	97.2%

Data as of 06/30/2022. Since Inception: 7/10/2019.
Source: Bloomberg

- The strategy's rolling one-year standard deviation has remained below that of the S&P 500 since inception.



■ Aptus Collared Income Opportunity ETF ■ S&P 500 TR USD ■ CBOE S&P 500 BuyWrite BXM

Source: Morningstar. Data through July 31, 2022.

- While ACIO does not have a long track record, the significant market volatility of the past three years provides a reasonable data set to review how the strategy performs in extreme up or down markets.
 - The strategy's index hedges protected the strategy well during the Covid-19 drawdown of February and March 2020. ACIO declined 4.0% in February 2020 and 5.7% in March 2020, while the S&P 500 declined 8.2% and 12.4% in those months. On the S&P 500's three worst days during that period (-7.6%, -9.5%, and -12.0%), ACIO returned -1.7%, +2.3%, and -1.5%, respectively.
 - In 2021, equity markets gained throughout the year, downside volatility was low, and lower quality growth stocks outperformed. We would expect ACIO to underperform the S&P 500 by a significant margin in such an environment. ACIO still returned 18.3% when the S&P 500 gained 28.7%, achieving 64% of the index's return.
 - ACIO held up well during the first half of 2022, declining 11.4% from January 1 - June 30 while the S&P 500 declined 20.0% over the same period. This experience aligns with the strategy's target downside capture ratio of around 50%.
- Aptus also divides their performance between equities and options.
 - From July 10, 2019 inception through June 30, 2022, the options strategy detracted an average of 181 basis points per month in months where the S&P 500 was up but added an average of 245 basis points when the S&P 500 declined.
 - The equity portfolio has underperformed the S&P 500 by an average of 12 basis points in up months over the same period and has underperformed by an average of 45 basis points in down markets. This is similar to other quality focused strategies, which lagged in the post-Covid rally of 2020 and 2021 but outperformed in the first half of 2022 when markets declined and rotated towards value-oriented names. ACIO's equity portfolio added an average of eight basis points per month in alpha during this period.
- A potential alternative benchmark that could also be applicable to ACIO is the CBOE S&P 500 BuyWrite Index (BXMSM). This index uses a systematic approach that buys the S&P 500 and sells the near-term covered call option on the third Friday of each month. The call is held to expiration, settled for cash, and a new option is sold. While this index is more similar in strategy to ACIO than the S&P 500, there are a few notable differences:

- ACIO writes call options weekly or every other week and can close and re-set the option at a higher strike price if the price of the underlying stock rises, while the index uses a rigid monthly methodology.
- ACIO does not sell call options on every stock in the portfolio, as the stocks in the Quality Compounders category are held uncapped without an option position except in rare circumstances.
- ACIO buys index puts as the “anchor hedge” and can buy call options on the S&P 500 if they feel that it is attractive.

Risk Management

- By prospectus, ACIO cannot write more options on individual equities than they could deliver. All call options are “covered call” options and not “naked call” options.
- ACIO does not hold any options that have value to expiration; Aptus sells options rather than exercising them. In practice, the team often closes option positions that have realized 75-80% of their potential gain in advance of expiration.
- ACIO does not make significant sector bets and uses the growth and value buckets of the portfolio to maintain sector neutrality relative to the S&P 500. ACIO’s growth / value profile will look very similar to that of the S&P 500.

Terms & Conditions

- ACIO is only available as an Exchange Traded Fund (ETF).
 - Expense Ratio: 0.79%
 - Minimum Investment: one share (\$30.62 as of July 31, 2022)
- Aptus is reviewing a potential monthly liquidity commingled fund option for larger investors, likely with a reduced fee relative to the ETF. The firm would like to launch with at least \$25 million, and a founder’s fee discount would likely be offered for investors in the first three months.

Important Information

The charts and information in this presentation are for illustrative purposes only, and are based upon sources of information that Sunpointe, LLC generally considers reliable, however we cannot guarantee, nor have we verified, the accuracy of such independent market information. The charts and information, and the sources utilized in the compilation thereof, are subjective in nature and open to interpretation.

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If you have any questions regarding this performance report, please contact us at (314) 880-0821.

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Data reflected within this report may reflect data held at various Custodians and may not be covered under SIPC. Certain other reported entities may be SIPC members that provide coverage for assets held there. You should contact your financial representative, or the other entity, or refer to the other entity's statement, regarding SIPC coverage. Assets reflected on this report are not held at the Firm on your behalf, but at the Custodian.

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Performance data quoted represents past performance and does not guarantee future results. The investment return and principal of an investment will fluctuate so that an investor's shares when redeemed may be worth more or less than original cost. The values represented in this report may not reflect the true original cost of your initial investment.

APTUS COLLARED INCOME OPPORTUNITY

Investment Committee Report

August 2022

Fund Summary and Investment Thesis

- Fund Characteristics.** Aptus Collared Income Opportunity (ACIO) is an option-based strategy that can add value in a variety of market environments. ACIO sells short-term call options on the individual stocks in the portfolio to generate income and uses a portion of that income to buy long put options on the S&P 500 to create downside protection. The actively managed portion of the equity portfolio is biased towards a “yield + growth” framework that results in a slightly higher quality equity portfolio than the S&P 500.

Fund Information	
Global Category	Equity Miscellaneous
Inception Date	7/9/2019
Firm City	Fairhope
Fund Size (\$Mil)	467
# of Holdings	79
Average Market Cap (\$Mil)	184,587
12 Mo Yield (%)	0.68
Turnover Ratio (%)	48.0
Closed to New Inv	No

Source: Morningstar. Data as of July 31, 2022

- Independent Ownership.** The firm is independent and Aptus employees own the majority of the firm.
- Dynamic Portfolio Management.** The target outcome of ACIO is upside potential with downside protection. Aptus writes call options on individual stocks and buys hedges at the index level but can also use option spreads to subsidize costs. The team trades weekly options, rather than more traditional monthly options, to ensure active portfolio management. The team often adjusts the strike prices of both the covered call options and the long index put option to adjust for changing market conditions, even though all option positions are short-term in nature and call options in the portfolio expire within 30 days.
- Risk / Return Profile:** The fund has performed in-line with expectations since its inception in July 2019, adding value in down and volatile markets and lagging in growth-dominated up markets. The past three years have provided numerous periods for the strategy to prove its value – most notably the Covid drawdown of February and March 2020 and the broad market drawdown of the first half 2022 that was driven by energy, inflation, and Russia/Ukraine. ACIO monetized its long put option on the S&P 500 three times in June 2022.
- Sunpointe View:** Aptus presents an intriguing strategy that includes active options trading and downside protection. We would anticipate that the strategy should add value in volatile market environments, as option premiums would increase. The strategy places significant importance on correlation with the S&P 500 to ensure that the firm’s hedges work as intended. The blend of active equity management and active options trading is not often found in ETFs, and we feel that this combination is attractive. We recommend using ACIO in the flexible portion of a client’s risk mitigation portfolio.

Firm Overview and Background

- Founder and Chief Investment Officer JD Gardner started Aptus in 2013. Mr. Gardner owns 42% of the firm (as of March 31, 2022), some of which is held in a trust. Other employee owners include John Goldsberry (fund operations), Beckham Wyrick (PM), and Derek Hernquist (business development); these three individuals own a combined 15% of Aptus. Two family offices own 20% and 11%, respectively. Mr. Gardner's brother, Will Gardner, owns 3% of the firm, and the remaining ownership is divided among several smaller investors.
- Aptus acquired Opus Capital Management from Driehaus Capital in 2020 and added David Wagner (PM) and Brad Rapping (analyst) in the process.
- Aptus has one office in Fairhope, AL. About half of the firm's 20 employees work remotely.
- Aptus also manages four other strategies, which are listed below. Various combinations of team members serve as portfolio managers for each respective strategy.
 - Aptus Drawdown-Managed Equity ETF (ADME) – includes market hedges to manage drawdown risk; should exhibit more upside and more downside than ACIO.
 - Aptus Defined Risk ETF (DRSK) – includes 90-95% investment grade bonds with equity options completing the portfolio.
 - International Drawdown Managed Equity ETF (IDME) – similar to ADME but invests in international equities.
 - Optus Small Cap Value ETF (OSCV) – an actively managed, long-only equity strategy.
- The five ETFs above combine for \$1.99 billion in AUM as of July 31, 2022. Aptus Defined Risk and ACIO make up \$1.32 billion of this AUM, while the smallest and newest fund, International Drawdown Managed Equity, has \$133.7 million in AUM.
- In addition, Aptus works with existing advisory teams and retirement plans as a consultant to review portfolios and add an extra layer of due diligence on a non-discretionary, fee-for-service basis. The firm also manages discretionary model portfolios for registered investment advisors while also providing consulting services; their model portfolios for this segment include investments in the five Aptus ETFs listed above and passive ETFs. Portfolio managers Tyner and Wyrick leads this effort.
- As of March 31, 2022, Aptus managed \$2.5 billion in discretionary assets (including the value of the five ETFs at that time) and \$1.6 billion in non-discretionary assets.
- Aptus is registered as an investment adviser with the SEC under the U.S. Investment Advisers Act of 1940.

Team Summary

Aptus has four portfolio managers who also conduct analyst work.

- **JD Gardner, CFA**, Founder and Chief Investment Officer — Mr. Gardner holds an undergraduate degree in Finance and an MBA with a concentration in Finance from Wright State University. He holds both the CFA and Chartered Market Technician (CMT) designations. He spent time at UBS, Morgan Stanley, and as a research analyst before starting Aptus.
- **John Luke Tyner, CFA**, Portfolio Manager — Mr. Tyner joined Aptus in 2019 and is a member of the Investment Committee. He is a fixed income analyst and trader, provides portfolio analysis, and leads the construction of the Impact Series Model portfolios. Prior to Aptus, he worked on the institutional fixed income desk at Duncan-Williams, Inc. He graduated from the University of Memphis with a degree in accounting and is a CFA charterholder.
- **David Wagner III, CFA**, Portfolio Manager, Equity Analyst — Mr. Wagner is a member of the firm's investment committee and is responsible for equity research, selection, and broad macroeconomic research. He has contributed to CNBC, Bloomberg, Barron's, and the Wall Street Journal, among others. Prior to joining Aptus, Mr. Wagner worked for both Opus Capital Management and Driehaus Capital Management, where he was

responsible for conducting research and analysis for various small and micro-cap equity strategies. He earned a bachelor's in accounting and finance from the University of Kentucky and an MBA with a specialization in finance from Xavier University. Mr. Wagner is a CFA charterholder and resides near Cincinnati, OH.

- **Beckham Wyrick, CFA, Portfolio Manager** — Mr. Wyrick joined Aptus Capital Advisors in 2016 and serves as a portfolio manager and analyst. He holds a bachelor's degree in Finance from the University of North Carolina at Wilmington, where he played on the basketball team. He then played nine years of professional basketball in Germany before joining Aptus as the firm's Director of Development; he later became a portfolio manager and leads the firm's asset allocation effort for outside clients and advisors. Mr. Wyrick is a CFA charterholder.

Aptus also has two equity analysts, one institutional trader, a five-person operations team (which includes two additional traders), a five-person advisor relationship and client service team, two project managers, and a chief wellness officer.

The four portfolio managers comprise the firm's portfolio construction team. Gardner, Tyner, and options and derivative trader Mark Callahan make up the derivative and fixed income team, while Wagner leads the equity research team alongside analysts Brad Rapping, CFA and Joseph Sykora, CFA.

Research Process

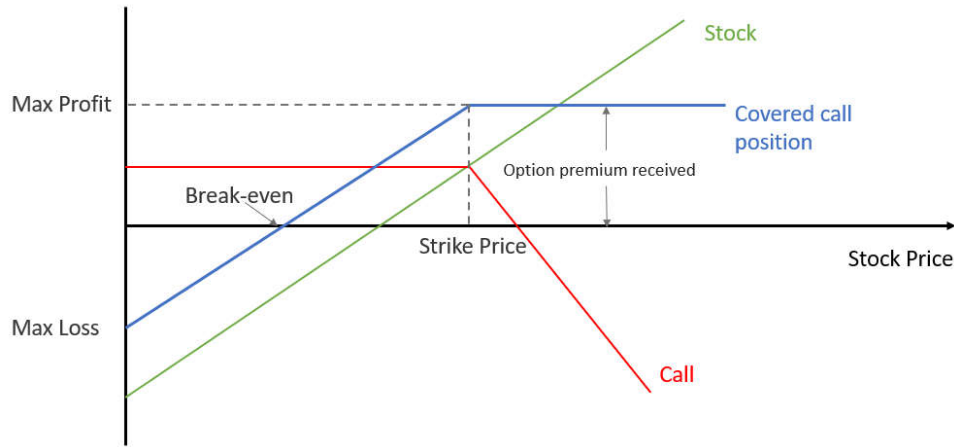
- The equity process starts with a "yield + growth" framework, as they feel that these two factors combine to produce most of the long-term investment return of equities. While a stock's current dividend yield is known, its future growth rate is unknown, so the team researches the ability of each company to sustainably generate sales, EBITDA, earnings, cash flows, and dividend payouts.
 - The market's long-term "yield + growth" return is around 8%; Aptus looks for a greater than 10% return.
 - This screen eliminates a significant number of companies from their equity universe.
- The remainder of market return would come from multiple expansion / contraction, which is more variable in the short-term and harder to predict.
- The team will run multiple screens to further refine their investment universe:
 - Quality: target companies have ROE of at least 10-15% and tend to be asset-light businesses
 - Growth: focus on cash flow and how companies use that cash flow, as well as growth in revenue and EBIT.
 - Valuation: Aptus reviews a variety of common valuation metrics for portfolio companies and their most direct competitors: P/E, EV/EBITDA, P/B, ROE, and ROIC.
 - Momentum: while the team reviews stock momentum, it is weighted less than quality, growth, and valuation in the research process.
- In addition, Aptus reviews metrics such as ROE, leverage, short interest, and earnings surprises to answer the following questions:
 - Does the company earn enough to return capital to shareholders and reinvest in the business?
 - Will a heavy debt load impair the business in a downturn?
 - Is the market telling us something about the company's prospects?
 - What is the near-term outlook?
- Aptus calls companies that meet these criteria "Quality Compounds." These companies tend to have price inelasticity, are of high quality, have strong moats, and have strong management teams. Quality Compounds are the team's highest conviction stocks.

Equity Strategy Overview

- First, the team applies the “yield + growth” framework to target at least a 10% projected total return over the next 1-3 years.
- The team then constructs a portfolio of 50-75 individual stocks utilizing the three categories below.
 - Growth Stocks: (35-45%): These stocks have expected ROE and ROIC of at least 10% and expected earnings growth of at least 15%.
 - Value Stocks (35-45%): These stocks have expected ROE and ROIC of at least 10% and expected earnings growth of at least 10%.
 - Quality Compounders (up to 20%): this part of the portfolio is designed to be an alpha generator. The team feels like the companies in this bucket can generate above average returns on shareholder equity and have strong management teams that can maintain this advantage over the long-term. These stocks have expected ROE, ROIC, and earnings growth of at least 15%. Each of these stocks comprises 1.0%-1.5%, on average, of the ACIO equity portfolio.
- The team ensures ACIO is sector neutral, with a maximum variance of 250 basis points relative to the GICS sector weights of the S&P 500. Further, the team ensures that the total portfolio has an expected correlation to the S&P 500 of at least 0.95 so that the strategy’s index option positions and the total portfolio move in a similar manner. This is crucial to ensuring that the long index put provides the intended downside protection.
- On average, Aptus expects the equity portion of ACIO to generate about 1-2% per annum in dividend income; these proceeds are re-invested in the fund. Morningstar calculates the portfolio’s dividend yield at 1.63% as of July 31, 2022.
- Portfolio companies that underperform the S&P 500 over a four to eight-week period are reviewed and are usually trimmed or eliminated from the portfolio. Aptus will also review stocks that have outperformed significantly over the same time period and will trim positions as needed. Since maintaining correlation with the S&P 500 is important, stocks in the growth and value categories are more likely to be reduced, while the quality compounders category is designed for long-term value generation and the team is less likely to cut losses or realize gains quickly.

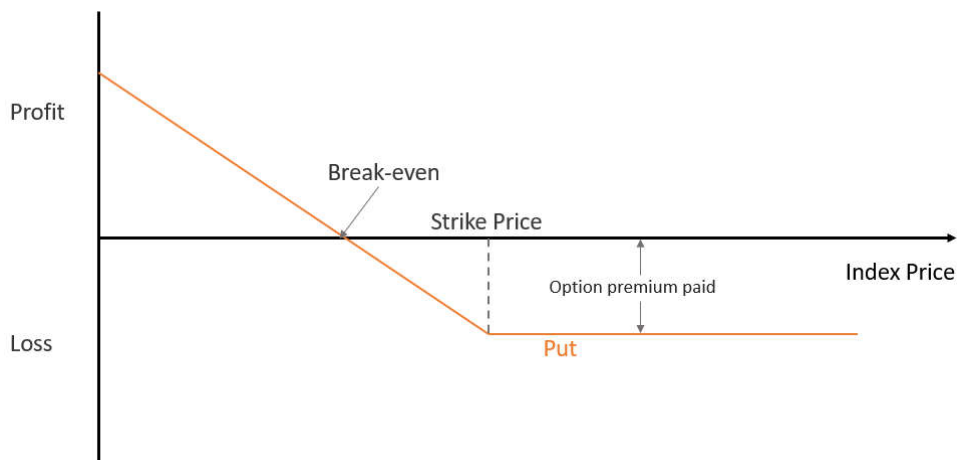
Option Strategy Overview

- The first option strategy that ACIO uses is covered call selling. Aptus sells individual upside call options on securities that are part of their high-quality stock portfolio. The goals of this strategy are additional income, a reduction of volatility, and cash to help mitigate the cost of downside protection.
- This is a basic covered call strategy which limits the upside of individual stock positions and generates income that mitigates the downside of that position. The chart below illustrates that once the stock price of the underlying stock rises above the strike price of the option, the value of the stock increases and the value of the option decreases by the same amount, resulting in no change in combined value. If the stock never reaches the strike price, ACIO collects the income from the call option and holds the stock just as they would if there was no option position.



Sunpointe illustration

- ACIO writes its average call option with a strike price about 8-10% above the current price but will move as much as 12% above the current price in more volatile markets. ACIO writes call options weekly or every other week, and they often close and re-set option positions at higher strike prices if the underlying stock appreciates. Call options have 30 days or less until expiration when initiated.
- The goal of the covered call position is to generate at least 4-6% per annum in option premium. In recent months, Aptus has realized 50-70 basis points per month in call option premium income, or 6.0%-8.4% annualized, as volatility has been somewhat elevated but well below other volatile markets such as the first quarter of 2020.
- ACIO writes these covered call positions on each of the stocks in the growth and value portions of the portfolio. The stocks in the Quality Compounders portion of the portfolio (generally 10-12 names) are uncapped and do not have option positions on them, except in the very rare circumstance where the team feels it is appropriate to do so.
- The second portion of ACIO's option strategy involves buying protection on the portfolio with out of the money put options on the S&P 500 with 30-90 days until expiration. This creates a downside hedge on the portfolio – Aptus refers to this as their “anchor hedge.”
- If the S&P 500 declines past the index price of the option, the value of the long put option increases at the same rate as the value of the S&P 500 decreases. This does not create a perfect hedge, as the ACIO portfolio does not match the holdings of the index. However, this downside hedge serves as protection in sharp down markets, and the correlation between the equity portfolio and the S&P 500 helps this put option to provide the intended downside protection.



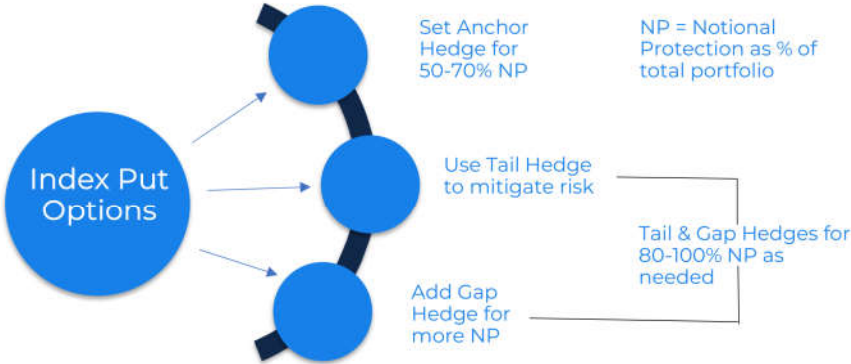
Sunpointe illustration

- This “anchor hedge” costs about 3% of the portfolio per annum annually to maintain, but the option premium received from the individual stock call options more than covers this expense. However, this process has provided the desired downside protection in months where the S&P 500 declines. The table below highlights the five worst months for the S&P 500 since ACIO’s July 2019 inception and ACIO’s corresponding return and alpha.

Month	S&P 500 (Total Return)	ACIO (Price)	ACIO Alpha
March 2020	-12.35%	-0.32%	+12.03%
April 2022	-8.25%	-4.48%	+4.24%
June 2022	-8.25%	-3.67%	+4.59%
February 2020	-8.23%	-3.52%	+4.71%
January 2022	-5.17%	-3.16%	+2.02%

Source: Morningstar. Data through July 31, 2022.

- In market environments where the risk / return scenario is attractive and when the team feels that the US equity market is oversold, ACIO may add long call option exposure on the S&P 500. When doing this, the team is looking to add positive convexity, balance the long put (which has appreciated in value), and risk a relatively small amount of capital. This “hedge on the hedge” position is designed for at least a 10:1 return and can help the portfolio participate in sharp market upswings that follow market declines. This portion of the strategy is relatively new and was not in place during the Covid drawdown of early 2020.

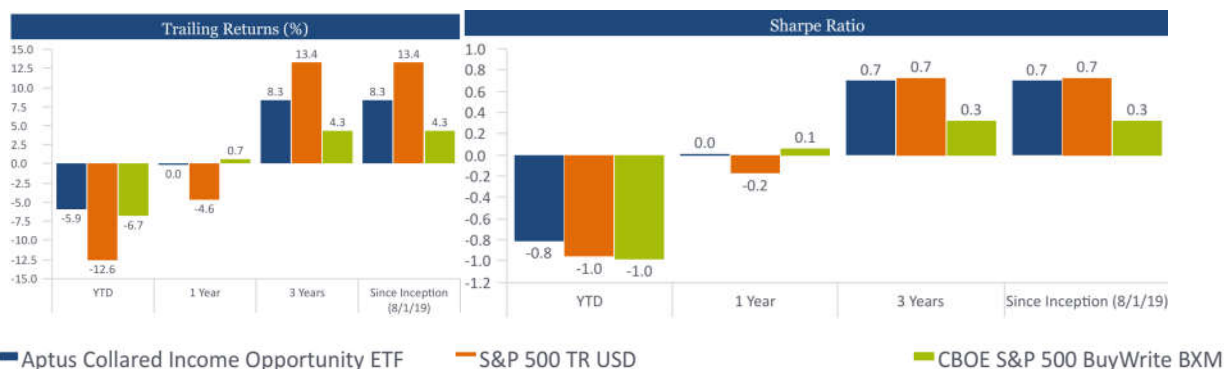


Source: Aptus Capital Advisors

- ACIO can own volatility outright by purchasing call options on the VIX Index during periods when Aptus believes the VIX is relatively inexpensive against other forms of downside protection. The VIX is a financial benchmark designed by CBOE to provide an estimate of the 30-day expected volatility of the S&P 500 and is calculated by using the midpoint of real time S&P 500 option bid/ask quotes with around 30 days until expiration. ACIO has traded the VIX explicitly just one time in its history, and that trade lasted for only a few weeks. However, given that the team trades call options on a weekly basis, a rise in the VIX should lead to higher call option premiums on the covered call option trades on the portfolio’s individual stock positions.
- Aptus trades options through Citadel, Jane Street Capital, and Seaport Global Securities. The firm’s AUM growth has increased their scale with these trading partners and thus decreased the cost of options trading.

Performance Review

- Aptus's goal for ACIO is to outperform the S&P 500 on a risk-adjusted basis (using Sharpe ratio as a guidepost) with an underlying stock portfolio that has less sensitivity to overall market movements while producing income and protecting against market drawdowns.



Source: Morningstar. Data through July 31, 2022.

- ACIO underperformed the S&P 500 in 2020, when the index returned 18.4%, and in 2021, when the index returned 28.7%. Underperformance relative to an all-equity index in straight-up markets is to be expected for this strategy, as the covered calls and index puts detract from returns and the expected up-market capture is 65-75%. However, the strategy protected capital on the downside in the first half of 2022, outperforming the S&P 500 index by a wide margin and producing a down-market capture in-line with Aptus' 40-50% expectation.
- On a rolling one-year basis, ACIO's up-market capture has remained within a range of 60-80%, in-line with expectations. The strategy's down-market capture on a rolling one-year basis has been as low as 60%, spiked to over 100% at the end of 2021 (the S&P 500 was up 28.7% in 2021), but has returned to around 60% as the strategy outperformed by a wide margin in the first half of 2022, a volatile and mostly negative equity market.



Source: Morningstar. Data through July 31, 2022.

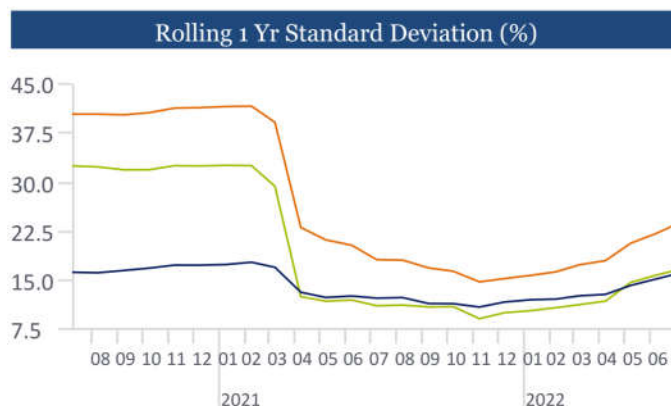
- The strategy's diversification benefits are most evident on sharp daily swings in the S&P 500. From ACIO's July 10, 2019 inception through July 31, 2022, ACIO outperformed the S&P 500 on the 46 days the index declined by 2% or more by an average of 205 basis points. Predictably, the strategy underperformed the S&P 500 on the 35 days the index gained 2% or more by an average of 223 basis points.

Daily Downside Capture vs S&P 500

S&P 500 Daily Decline	ACIO (Market) Average Daily Outperformance vs. S&P 500	Total Observation Days	Days ACIO Outperformed	Hit Rate
0 bps to -25 bps	-0.87 bps	84	45	53.6%
-26 bps to -75 bps	15.59 bps	107	77	72.0%
> -75 bps	106.85 bps	144	140	97.2%

Data as of 06/30/2022. Since Inception: 7/10/2019.
Source: Bloomberg

- The strategy's rolling one-year standard deviation has remained below that of the S&P 500 since inception.



■ Aptus Collared Income Opportunity ETF ■ S&P 500 TR USD ■ CBOE S&P 500 BuyWrite BXM

Source: Morningstar. Data through July 31, 2022.

- While ACIO does not have a long track record, the significant market volatility of the past three years provides a reasonable data set to review how the strategy performs in extreme up or down markets.
 - The strategy's index hedges protected the strategy well during the Covid-19 drawdown of February and March 2020. ACIO declined 4.0% in February 2020 and 5.7% in March 2020, while the S&P 500 declined 8.2% and 12.4% in those months. On the S&P 500's three worst days during that period (-7.6%, -9.5%, and -12.0%), ACIO returned -1.7%, +2.3%, and -1.5%, respectively.
 - In 2021, equity markets gained throughout the year, downside volatility was low, and lower quality growth stocks outperformed. We would expect ACIO to underperform the S&P 500 by a significant margin in such an environment. ACIO still returned 18.3% when the S&P 500 gained 28.7%, achieving 64% of the index's return.
 - ACIO held up well during the first half of 2022, declining 11.4% from January 1 - June 30 while the S&P 500 declined 20.0% over the same period. This experience aligns with the strategy's target downside capture ratio of around 50%.
- Aptus also divides their performance between equities and options.
 - From July 10, 2019 inception through June 30, 2022, the options strategy detracted an average of 181 basis points per month in months where the S&P 500 was up but added an average of 245 basis points when the S&P 500 declined.
 - The equity portfolio has underperformed the S&P 500 by an average of 12 basis points in up months over the same period and has underperformed by an average of 45 basis points in down markets. This is similar to other quality focused strategies, which lagged in the post-Covid rally of 2020 and 2021 but outperformed in the first half of 2022 when markets declined and rotated towards value-oriented names. ACIO's equity portfolio added an average of eight basis points per month in alpha during this period.
- A potential alternative benchmark that could also be applicable to ACIO is the CBOE S&P 500 BuyWrite Index (BXMSM). This index uses a systematic approach that buys the S&P 500 and sells the near-term covered call option on the third Friday of each month. The call is held to expiration, settled for cash, and a new option is sold. While this index is more similar in strategy to ACIO than the S&P 500, there are a few notable differences:

- ACIO writes call options weekly or every other week and can close and re-set the option at a higher strike price if the price of the underlying stock rises, while the index uses a rigid monthly methodology.
- ACIO does not sell call options on every stock in the portfolio, as the stocks in the Quality Compounders category are held uncapped without an option position except in rare circumstances.
- ACIO buys index puts as the “anchor hedge” and can buy call options on the S&P 500 if they feel that it is attractive.

Risk Management

- By prospectus, ACIO cannot write more options on individual equities than they could deliver. All call options are “covered call” options and not “naked call” options.
- ACIO does not hold any options that have value to expiration; Aptus sells options rather than exercising them. In practice, the team often closes option positions that have realized 75-80% of their potential gain in advance of expiration.
- ACIO does not make significant sector bets and uses the growth and value buckets of the portfolio to maintain sector neutrality relative to the S&P 500. ACIO’s growth / value profile will look very similar to that of the S&P 500.

Terms & Conditions

- ACIO is only available as an Exchange Traded Fund (ETF).
 - Expense Ratio: 0.79%
 - Minimum Investment: one share (\$30.62 as of July 31, 2022)
- Aptus is reviewing a potential monthly liquidity commingled fund option for larger investors, likely with a reduced fee relative to the ETF. The firm would like to launch with at least \$25 million, and a founder’s fee discount would likely be offered for investors in the first three months.

Important Information

The charts and information in this presentation are for illustrative purposes only, and are based upon sources of information that Sunpointe, LLC generally considers reliable, however we cannot guarantee, nor have we verified, the accuracy of such independent market information. The charts and information, and the sources utilized in the compilation thereof, are subjective in nature and open to interpretation.

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PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

2023 Pension Board Meeting Schedule

Core Topics for all Meetings

Tuesday January 24, 2023 3:00 p.m.

Approval of Meeting Minutes
Presentation of Quarterly Reports
Discussion of other Topics as necessary
Invoice(s) Paid Since Last Meeting
Retirement(s) since last meeting
Other Business

Tuesday April 18, 2023 3:00 p.m.

Approval of Meeting Minutes
Presentation of Quarterly Reports
Discussion of other Topics as necessary
Invoice(s) Paid Since Last Meeting
Retirement(s) since last meeting
Other Business

Tuesday July 18, 2023 3:00 p.m.

Approval of Meeting Minutes
Presentation of Quarterly Reports
Discussion of other Topics as necessary
Invoice(s) Paid Since Last Meeting
Retirement(s) since last meeting
Review Investment Policy Assumptions & Asset Allocations
LAGERS Report
Other Business

Tuesday October 17, 2023 3:00 p.m.

Apoin Chair & Vice Chair
Approval of Meeting Minutes
Presentation of Quarterly Reports
Actuarial Report
Discussion of other Topics as necessary
Invoice(s) Paid Since Last Meeting
Retirement(s) since last meeting
Other Business

NOTE: Other meetings needed during the year will be scheduled when it is necessary.



RETIREMENT PLAN FOR EMPLOYEES OF THE CITY OF CREVE COEUR

Actuarial Valuation Report July 1, 2022

Prepared by

William Winningham, EA, MAAA
Consulting Actuary

Michael A. Sudduth, FSA
Consulting Actuary

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Introduction and Purpose

In this report, we present the results of the July 1, 2022 actuarial valuation for the Retirement Plan for Employees of the City of Creve Coeur.

Purposes of the Valuation

The actuarial valuation of the Plan is intended to accomplish several purposes:

- (a) In general, the determination of current levels of employer contributions which, together with prior funding, will accumulate monies sufficient to meet benefit payments when due under the terms of the Plan;
- (b) review plan experience for the year ended on the valuation date to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application; and
- (c) assessment of the relative funded position of the plan on an ongoing basis, i.e., through a comparison of plan assets and projected plan liabilities.

Actuarial Certification

As requested, we have performed an actuarial valuation of the Retirement Plan for Employees of the City of Creve Coeur as of July 1, 2022 for the Plan Year ending June 30, 2023. Our findings are set forth in this actuary's report. This report reflects the benefit provisions in effect on July 1, 2022.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the the Plan's Administrative Staff. This information includes, but is not limited to, statutory plan provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

The valuation results were developed using models intended for valuations that use standard actuarial techniques. In addition, Milliman has developed certain models to develop the expected long term rate of return on assets used in this analysis. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice. The models, including all input, calculations, and output may not be appropriate for any other purpose.

All costs, liabilities, rates of interest, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Plan. Further, in our opinion, each actuarial assumption used is reasonably related to the experience of the Plan and to reasonable expectations which, in combination, represent our best estimate of anticipated experience under the Plan.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The City has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in this report.

Actuarial Certification

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the Fund. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Fund's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report.

Milliman's work is prepared solely for the internal business use of the City of Creve Coeur and its employees (for their use in administering the Plan). To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

- (a) The System may provide a copy of Milliman's work, in its entirety, to the System's professional advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.
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No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the City. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We respectfully submit the following report, and we look forward to discussing it with you.



William Winningham, EA, MAAA
Consulting Actuary



Michael A. Sudduth, FSA
Consulting Actuary

Discussion of Valuation Results

Actuarially Determined Contribution

The results of this valuation are used to actuarially determine contribution amounts to the Fund for the July 1, 2022 - June 30, 2023 fiscal year. A comparison of actuarially determined contribution amounts for the current and immediately preceding valuation are summarized below:

	Actuarial Valuation as of	
	<u>July 1, 2021</u>	<u>July 1, 2022</u>
Actuarially Determined Employer Contribution*	\$977,511	\$957,715
Actuarially Determined Employer Contribution**	\$1,036,162	\$1,015,177
Actual Employer Contribution	\$1,287,117	N/A

* Assuming payment as of first day of plan year

** Assuming payment as of last day of plan year

Plan Assets

The market value of plan assets decreased from \$33,098,397 at July 1, 2021 to \$29,039,366 at June 30, 2022. A balance sheet and statement of income and disbursements are presented on pages 7 and 8. Investment income (net of expense) was \$(3,327,696) for a return of (10.2)%. During the prior year, investment return was 28.2%. Contributions to the fund were \$1,369,843 and benefit payments totaled \$2,057,704.

Valuation assets are defined to be actuarial value using an asset smoothing method. On an actuarial value basis, fund assets are \$30,722,983 on July 1, 2022, compared to \$29,800,918 on July 1, 2021. Net investment income was \$1,653,400 for return of 5.6%. The development of the actuarial value of assets is shown on page 9.

Actuarial Assumptions, Methods and Plan Provisions

The mortality projection scale was updated from MP-2020 to MP-2021.

All other actuarial assumptions and methods remained the same as the prior valuation. Descriptions of all actuarial assumptions, methods, and Plan provisions can be found on pages 13-16.

Plan Population

The number of active participants decreased from 31 on July 1, 2021 to 27 on July 1, 2022. The number of retirees/beneficiaries/disableds increased from 86 to 89, and the number of deferred vested participants increased from 18 to 19.

Discussion of Valuation Results

Plan Experience

Prior to assumption changes, plan experience resulted in an overall experience loss for the plan year ending June 30, 2022. This is primarily due to a loss on Actuarial Value of Assets.

GASB 67/68

Results under GASB 67 and 68 are presented in a separate report.

Funded Status - Accrued Benefit Basis

Another measure of a plan's funded status is the relationship of the market value of plan assets to the present value of benefits accrued to date. The amounts for the current and prior year are shown in the following table:

	<u>Valuation Date</u> <u>July 1, 2021</u>	<u>Valuation Date</u> <u>July 1, 2022</u>
a) Present Value of Vested Accrued Benefits	\$33,417,805	\$33,910,533
b) Present Value of All Accrued Benefits	\$33,744,681	\$34,221,386
c) Market Value of Assets	\$33,098,397	\$29,039,366
d) Ratio: (c)/(a)	99.0%	85.6%
e) Ratio: (c)/(b)	98.1%	84.9%

The interest discount utilized for this purpose was 6.00% in 2021 and 6.00% in 2022. The discount rate that is required to value plan liabilities on a settlement basis is typically lower than the "ongoing basis" discount rate. Therefore, these amounts should not be used to assess the plan's funded status on a settlement basis.

Funded Status - Actuarial Accrued Liability Basis

The most common measure of a public sector plan's funded status is dividing the Plan Assets by the Actuarial Accrued Liability. As of the valuation date, this ratio is 86.2% using Actuarial Value of Assets and 81.5% using the Market Value of Assets.

Summary of Valuation Results

	<u>Valuation Date</u> <u>July 1, 2021</u>	<u>Valuation Date</u> <u>July 1, 2022</u>
Participant Data		
Number of Participants		
Active participants	31	27
Terminated vested participants	18	19
Retirees and beneficiaries	86	89
Total	<u>135</u>	<u>135</u>
Covered Payroll	2,510,196	2,367,957
Assets		
Market Value of Assets	33,098,397	29,039,366
Investment Yield	28.2%	-10.2%
Actuarial Value of Assets	29,800,918	30,722,983
Investment Yield	11.8%	5.6%
Actuarial Present Values		
Accrued Liability	35,171,396	35,652,124
- Actuarial Value of Assets	29,800,918	30,722,983
Unfunded Accrued Liability	<u>5,370,478</u>	<u>4,929,141</u>
Funded Ratio (Market Value Basis)	94.1%	81.5%
Funded Ratio (Actuarial Value Basis)	84.7%	86.2%
Costs and Contributions		
Normal Cost	324,322	302,596
% of Covered Payroll	12.9%	12.8%
Actuarially Determined Contribution (ADC)	977,511	957,715
% of Covered Payroll*	38.9%	40.4%
Funded Status of Accumulated Benefits		
Present Value of Accrued Benefits	33,744,681	34,221,386
Funded Ratio (Market Value Basis)	98.1%	84.9%
Funded Ratio (Actuarial Value Basis)	88.3%	89.8%

*Since the Plan has been closed to new members since 2006, Active Participant headcount as well as Covered Payroll have steadily declined (in line with expectations). Coupled with the aggressive funding policy (14-year amortization of the pre-2015 UAL), the ADC when expressed as a % of payroll is sharply increased. In dollar terms, the ADC has remained relatively flat and is expected to remain so through 2028. At that time, the pre-2015 UAL will be fully amortized and the ADC will decrease significantly.

Statement of Assets

	July 1, 2021	July 1, 2022
Assets		
Cash and cash equivalents	\$264,515	\$251,537
Receivables and prepaid expenses:		
Receivable contributions	0	0
Receivable investment income	34,451	35,211
Receivables from brokers for unsettled trades	0	0
Prepaid expenses	0	0
Total receivables	34,451	35,211
Investments:		
Fixed income	9,029,376	8,102,328
Stocks	23,770,055	20,650,290
Short-term investments	0	0
Real estate	0	0
Alternative investments	0	0
Total investments	32,799,431	28,752,618
Invested securities lending cash collateral	0	0
Capital assets net of accumulated depreciation	0	0
Total assets	33,098,397	29,039,366
Liabilities		
Accrued expenses and benefits payable	0	0
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	0	0
Total liabilities	0	0
Net Assets	\$33,098,397	\$29,039,366

Statement of Income and Disbursements

	July 1, 2022
Additions	
Member contributions	\$82,726
Employer contributions	1,287,117
Total contributions	1,369,843
Investment income (loss):	
Interest and dividends	869,148
Net increase in fair value of investments	(4,156,794)
Less investment expenses:	
Direct investment expense	40,050
Net investment income	(3,327,696)
Other income	0
Total additions	(1,957,853)
Deductions	
Service benefits	2,057,704
Disability benefits	N/A
Death benefits	N/A
Refunds of member contributions	N/A
Administrative expenses	43,474
Total deductions	2,101,178
Net increase (decrease)	(4,059,031)
Market Value of Assets	
Beginning of year (July 1, 2021)	33,098,397
End of year (June 30, 2022)	\$29,039,366
Net Rate of Return	-10.2%

Development of Actuarial Value of Assets

1. Actuarial Value Beginning of Year	\$29,800,918
2. Market Value End of Year	29,039,366
3. Market Value Beginning of Year	33,098,397
4. Non-Investment Cash Flows ⁽¹⁾	(731,335)
5. Investment Income	
a. Market Total: (2) - (3) - (4)	(3,327,696)
b. Assumed Rate of Return	6.00%
c. Expected Investment Return ⁽²⁾	1,963,964
d. Gain/(Loss): (5a) - (5c)	(5,291,660)
6. Phased-In Recognition of Investment Income	
a. Current Year: (1/3) x (5d)	(1,763,887)
b. (1/3) of Gain/(Loss) during plan year ending June 30, 2021	1,844,159
c. (1/3) of Gain/(Loss) during plan year ending June 30, 2020	(390,836)
d. Phased-In Investment Gain to be Recognized in Current Year: (6a) + (6b) + (6c)	(310,564)
7. Actuarial Value End of Year: (1) + (4) + (5c) + (6d)	\$30,722,983
8. Excess of Market Value over Actuarial Value: (2) - (7)	(1,683,617)
9. Approximate Rate of Return on Actuarial Value	5.6%
10. Ratio of Actuarial Value of Assets to Market Value of Assets: (7) / (2)	105.8%

⁽¹⁾ Contributions less benefit payments

⁽²⁾ Assumed Rate times (3) + (4) times Assumed Rate/2

Statement of Accrued Benefits

	July 1, 2021	July 1, 2022
1. Accumulated Plan Benefits		
a. Actuarial Present Value of Vested Benefits		
i. Participants currently receiving payments	22,962,084	23,465,255
ii. Active Participants	8,772,561	8,607,367
iii. Deferred Vested Participants	1,683,160	1,837,911
iv. Total Vested Benefits	33,417,805	33,910,533
b. Actuarial Present Value of Non-Vested Benefits	326,876	310,853
c. Total Actuarial Present Value of Accumulated Plan Benefits: (aiv) + (b)	33,744,681	34,221,386
2. Net Assets (Market Value) available for benefits	33,098,397	29,039,366
3. Funded Ratio		
a. Vested Benefits: (2) / (1aiv)	99.0%	85.6%
b. Accumulated Benefits: (2) / (1c)	98.1%	84.9%
4. Net Assets (Actuarial Value) available for benefits	29,800,918	30,722,983
5. Funded Ratio		
a. Vested Benefits: (4) / (1aiv)	89.2%	90.6%
b. Accumulated Benefits: (4) / (1c)	88.3%	89.8%

Development of Actuarially Determined Contribution

July 1, 2022

1. Accrued Liability

a. Active Participants	\$10,348,958
b. Terminated Vested Participants	1,837,911
c. Retired Participants	23,465,255
d. Total	35,652,124

2. Actuarial Value of Assets

30,722,983

3. Funded Ratio: (2) / (1d)

86.2%

4. Covered Payroll

2,367,957

5. Unfunded Actuarial Liability (UAL)

4,929,141

a. Outstanding UAL from July 1, 2015	3,011,670
b. Outstanding UAL after July 1, 2015	1,917,471

6. Normal Cost:

a. Entry Age Normal Cost	302,596
b. Expected Employee Contributions	94,718
i. As a percentage of Covered Payroll: (6b) / (4)	4.0%
c. Employer Normal Cost without Expenses: (6a) - (6b)	207,878
ii. As a percentage of Covered Payroll: (6c) / (4)	8.8%
d. Assumed Administrative Expenses	54,626
e. Employer Normal Cost including Expenses: (6c) + (6d)	262,504

7. 14-Year Amortization of UAL from July 1, 2015

(7 years remaining) 508,958

8. 15-Year Amortization of Additional UAL after July 1, 2015

186,253

9. Employer Cost

a. Actuarially Determined Contribution: (6e) + (7) + (8)	957,715
b. Payable as of the end of the plan year: (9a) x 1.06	1,015,177
c. As a percentage of Covered Payroll: (9a) / (4)	40.4%

Historical Investment Returns on Market Value Basis

Year Ended June 30	Rate of Return				
	Annual	Cumulative	Last 5 Years	Last 10 Years	Last 20 Years
1995	8.09%	8.09%	N/A	N/A	N/A
1996	14.35%	11.18%	N/A	N/A	N/A
1997	18.08%	13.43%	N/A	N/A	N/A
1998	17.31%	14.39%	N/A	N/A	N/A
1999	8.46%	13.18%	13.18%	N/A	N/A
2000	9.27%	12.52%	13.42%	N/A	N/A
2001	-5.76%	9.70%	9.12%	N/A	N/A
2002	-10.64%	6.93%	3.20%	N/A	N/A
2003	1.59%	6.32%	0.28%	N/A	N/A
2004	13.39%	7.01%	1.17%	7.01%	N/A
2005	6.21%	6.93%	0.60%	6.82%	N/A
2006	8.62%	7.07%	3.50%	6.27%	N/A
2007	16.67%	7.78%	9.17%	6.14%	N/A
2008	-8.15%	6.56%	6.99%	3.58%	N/A
2009	-18.25%	4.69%	0.21%	0.69%	N/A
2010	12.16%	5.14%	1.31%	0.95%	N/A
2011	19.62%	5.94%	3.28%	3.39%	N/A
2012	0.23%	5.62%	0.19%	4.58%	N/A
2013	12.87%	5.99%	4.41%	5.69%	N/A
2014	17.86%	6.55%	12.34%	6.10%	6.55%
2015	1.99%	6.33%	10.22%	5.67%	6.24%
2016	1.15%	6.09%	6.58%	4.92%	5.59%
2017	11.43%	6.32%	8.87%	4.44%	5.29%
2018	7.69%	6.37%	7.85%	6.12%	4.84%
2019	5.50%	6.34%	5.48%	8.86%	4.69%
2020	2.30%	6.18%	5.55%	7.86%	4.35%
2021	28.20%	6.92%	10.67%	8.61%	5.97%
2022	-10.20%	6.26%	6.00%	7.42%	5.99%

Actuarial Methods

Following are brief descriptions of the actuarial cost and asset valuation methods used in the valuation.

Actuarial Cost Method Entry Age Normal

The Entry Age Normal Cost Method on an individual basis is used. Normal costs are computed as a level percentage of pay.

The Unfunded Entry Age Accrued Liability as of July 1, 2015 is amortized over a 10 year period. Each year, the amortization period will decrease by 1 until it reaches 0 years as of July 1, 2025. This period was extended as of July 1, 2021 for an additional 4 years. The amortization period will end as of July 1, 2029. Any subsequent Unfunded Entry Age Accrued Liability is amortized over an open 15 year period.

Asset Valuation Method A three-year smoothed value, with difference between actual investment return and expected investment return recognized in equal installments over a three-year period.

Actuarial Assumptions

Following are the primary actuarial assumptions used in performing the valuation.

Interest Rates 6.00% per annum (effective July 1, 2021), net of investment expenses

Annual Pay Increases 4.00% per year

Mortality Pub-2010 General Amount-Weighted Mortality tables for Employees, Healthy Retirees, Disabled Retirees and Contingent Survivors, male and female rates, with generational projection from 2010 using Scale MP-2020 (improvement scale updates published annually) (effective July 1, 2021)

Turnover Rates are as follows:

Age	Percentage
25	10%
35	8%
45	4%
55	0%

Rate of Disability None assumed.

Retirement Non-Uniformed: Participants are assumed 60% retirement at their Unreduced Early Retirement Age, if it is prior to their Normal Retirement Age. Retirement rates of 5% are assumed between their Unreduced Early Retirement Age and age 65, at which a retirement rate of 100% is assumed.

Uniformed: Retirement rates are as follows:

Age	Percentage
55	60%
56 - 61	5%
62	100%

Administrative Expenses Average of last two years of actual administrative expenses (effective July 1, 2019)

Marriage For retired members, actual marital status and spouse birth date is used. For active members, 100% are assumed married with males assumed three years older than their spouses.

Form of Payment It is assumed that all employees will elect a life annuity with 120 months guaranteed.

Summary of Plan Provisions

A summary of the current primary provisions of the Plan are described below. A complete description of the provisions can be found in the local statutes.

Effective Date	Last restated effective July 1, 2013. Reflects subsequent Ordinance 5656 and Retirement Board resolution dated September 25, 2019.
Eligibility	Full-time employees enter the Plan on the July 1 on or immediately following their completion of two years of continuous employment and attainment of age 21. No Employees hired after May 23, 2006 may enter the Plan.
Employee Contributions	Participants are required to contribute 4% of salary (effective July 1, 2019). Contributions accumulate at an interest rate of 5%.
Credited Service	Elapsed time, in years and completed months, from date of hire.
Final Average Compensation	Average of the high 60 consecutive months in the last 120 months.
Normal Retirement Age	Age 55 for a uniformed participant and age 65 for a non-uniformed participant.
Normal Retirement Benefit	A benefit equal to Final Average Compensation times 1.7% times Credited Service not to exceed 30 years. If a participant elected not to participate in the City's defined contribution plan, then the multiplier would be 2.0%.
Normal Form of Payment	The benefit is payable for 120 months guaranteed and for the member's lifetime, thereafter.
Unreduced Early Retirement Eligibility	The participant will be eligible to retire with an unreduced benefit prior to their Normal Retirement Age when the sum of their age and Credited Service equals 85.
Early Retirement Age	Age 50 with at least 20 years of Credited Service.
Early Retirement Benefit	The actuarial equivalent of a benefit calculated in the same manner as the Normal Retirement Benefit with Final Average Compensation and Credited Service determined as of the Early Retirement Date.
Late Retirement Benefit	If a member remains employed after his Normal Retirement Date, he will receive a monthly benefit equal to the benefit computed using service and pay as of his late retirement date. Benefits commence on the first day of the month following actual retirement.

Summary of Plan Provisions

Pre-Retirement Death Benefit

The Surviving Spouse of a Participant who is actively employed and has satisfied Early or Normal Retirement eligibility requirements is entitled to a Death Benefit determined as if the Participant had retired on his date of death, selected a Joint & 2/3 Survivor Annuity and died the next day.

The Surviving Spouse of any other actively employed vested participant is entitled to a Death Benefit determined as follows:

- i) assume the Participant separated from service on date of death
- ii) survived to the earliest possible retirement eligibility date
- iii) retired with a Joint and 2/3 Survivor Annuity, and
- iv) dies the next day

Vested Termination

Members who terminate employment are eligible for a monthly benefit calculated in the same manner as the Normal Retirement Benefit, multiplied by the applicable vesting percentage:

Sum of Attained Age & Years of Service	Vesting Percentage
50	50%
51	60%
52	70%
53	80%
54	90%
55 and after	100%

However, if a participant has at least 8 years of Credited Service, then they are fully vested.

Refund of Contributions

If a participant terminates employment without a vested benefit, then the participant will receive a refund of contributions with interest. If the sum of benefit payments received by a retiree or beneficiary is less than the sum of contributions with interest, then the difference may be paid to their beneficiary as an additional death benefit.

Optional Forms of Payment

Life Annuity	Joint & 50% Survivor Annuity with Pop-Up
Joint & 50% Survivor Annuity	Joint & (2/3)% Survivor Annuity with Pop-Up
Joint & (2/3)% Survivor Annuity	Joint & 100% Survivor Annuity with Pop-Up
Joint & 100% Survivor Annuity	

Distribution of Active Members by Age and by Years of Service Number of Participants by Age-Service Groups

Attained Age	Years of Service																					
	Under 1		1 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 and up		Total	
	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	1	N/A	1	0	0	0	0	0	0	0	0	0	2	N/A
45 to 49	0	0	0	0	0	0	0	0	2	N/A	2	N/A	1	N/A	0	0	0	0	0	0	5	99,062
50 to 54	0	0	0	0	0	0	0	0	3	N/A	1	N/A	3	N/A	0	0	0	0	0	0	7	87,976
55 to 59	0	0	0	0	0	0	0	0	2	N/A	2	N/A	2	N/A	2	N/A	0	0	0	0	8	87,676
60 to 64	0	0	0	0	0	0	0	0	0	N/A	1	N/A	1	N/A	1	N/A	1	N/A	0	0	4	N/A
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A
70 and up	0	0	0	0	0	0	0	0	1	N/A	0	0	0	0	0	0	0	0	0	0	1	N/A
Total	0	0	0	0	0	0	0	0	9	78,045	7	114,502	7	89,120	3	N/A	1	N/A	0	0	27	90,514

Average Age 54.4

Average Service 23.7

Inactive Participants - Summary by Age

Deferred Vested Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 30	0	\$0	\$0
30 - 34	0	0	0
35 - 39	0	0	0
40 - 44	2	1,542	771
45 - 49	5	3,435	687
50 - 54	2	1,951	976
55 - 59	2	1,731	866
60 and over	8	8,611	1,076
Total	19	17,270	909

Retired Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 55	2	\$3,548	\$1,774
55 - 59	7	17,217	2,460
60 - 64	11	29,954	2,723
65 - 70	21	53,972	2,570
70 - 75	22	41,761	1,898
75 - 80	8	8,081	1,010
80 and over	18	20,059	1,114
Total	89	174,592	1,962

Summary of Changes in Member Data

	Active Participants	Retired Participants	Terminated Vested Participants	Total
Count as of July 1, 2021	31	86	18	135
New Entrants	0	0	0	0
Rehired	0	0	0	0
Retired	(3)	3	0	0
Lump Sum Payouts	0	0	0	0
Died with Beneficiary	0	0	0	0
New Alternate Payees	0	1	0	1
New Beneficiaries	0	0	0	0
Died without Beneficiary	0	(1)	0	(1)
Certain Period Expired	0	0	0	0
Terminated with Vesting	(1)	0	1	0
Terminated without Vesting	0	0	0	0
Data Corrections	0	0	0	0
Total Changes	(4)	3	1	0
Count as of July 1, 2022	27	89	19	135

Actuarial Standard of Practice 51 (ASOP 51)

The purpose of this section is to identify, assess, and provide illustrations of risks that are significant to the Plan, and in some cases to the Plan's participants.

The results of the actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match the assumptions. As an example, investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these potential differences when making decisions that may affect the future financial health of the Plan, or of the Plan's participants.

In addition, as plans mature they accumulate larger pools of assets and liabilities. This increases the potential risk to plan funding and the finances of those who are responsible for plan funding. As an example, it is more difficult for a plan sponsor to deal with the effects of a 10% investment loss on a plan with \$1 Billion in assets and liabilities than if the same plan sponsor is responsible for a 10% investment loss on a plan with \$1 Million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) addresses these issues by providing actuaries with guidance for assessing and disclosing the risk associated with measuring pension liabilities and the determination of pension plan contributions. Specifically, it directs the actuary to:

- Identify risks that may be significant to the plan.
- Assess the risks identified as significant to the plan.
- Disclose plan maturity measures and historical information that are significant to understanding the plan's risks.

ASOP 51 states that if in the actuary's professional judgment, a more detailed assessment would be significantly beneficial in helping the individuals responsible for the plan to understand the risks identified by the actuary, then the actuary should recommend that such an assessment be performed.

This appendix uses the framework of ASOP 51 to communicate important information about: significant risks to the Plan, the Plan's maturity, and relevant historical Plan data.

Actuarial Standard of Practice 51 (ASOP 51)

Maturity Risk

Definition: This is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time.

Identification: The Plan is subject to maturity risk because as Plan assets and liabilities continue to grow, the impact of any gains or losses on the assets or liabilities also becomes larger.

Assessment: Currently assets are equal to 21 times last year's contributions indicating a one-year asset loss of 10% would be equal to 2.1 times last year's contributions.

Retirement Risk

Definition: This is the potential for participants to retire and receive subsidized benefits more valuable than expected.

Identification: This plan has valuable early retirement benefits. If participants retire at earlier ages than anticipated by the actuarial assumptions, it is expected that additional funding will be required.

Investment Risk

Definition: The potential that investment returns will be different than expected.

Identification: To the extent that actual investment returns differ from the assumed investment return, the plan's future assets, funding contributions and funded status may differ significantly from those presented in this valuation.

Interest Rate Risk

Definition: The potential that interest rates will be different than expected.

Identification: The pension liabilities reported herein have been calculated by computing the present value of expected future benefit payments using the interest rate(s) described in the report. If interest rate(s) in future valuations are different from those used in this valuation, future pension liabilities, funding contributions and funded status may differ significantly from those presented in this valuation. As a general rule, using a higher interest rate to compute the present value of future benefit payments will result in a lower pension liability, and vice versa. One aspect that can be used to estimate the impact of different interest rates is the plan's

Assessment: If the interest rate changes by 1%, the estimated percentage change in pension liability is approximately 11%.

Actuarial Standard of Practice 51 (ASOP 51)

Demographic Risks

Definition: The potential that mortality or other demographic experience will be different than expected.

Identification: The pension liabilities reported herein have been calculated by assuming that participants will follow patterns of demographic experience (e.g. mortality, withdrawal, disability, retirement, form of payment election, etc.) as described in the appendix. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, funding contributions and funded status may differ significantly from those presented in this valuation.

Glossary of Terms

Actuarial Liability	The difference between the actuarial present value of all Fund benefits and the actuarial value of future normal costs. Also referred to as “actuarial accrued liability.”
Actuarial Assumptions	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure of allocating the dollar amount of the actuarial present value of retirement fund benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”
Experience Gain (Loss)	The difference between actual experience and anticipated experience based on the actuarial assumptions during the period between two actuarial valuation dates.
Actuarial Present Value	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Amortization	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with a lump sum payment.
Normal Cost	The actuarial present value of retirement fund benefits allocated to the current year by the actuarial cost method.
Unfunded Actuarial Liability	<p>The difference between actuarial liability and the valuation assets.</p> <p>Most retirement systems have unfunded actuarial liability. They arise each time new benefits are added, each time an actuarial loss is realized and when actuarial assumptions are modified.</p>
Accumulated Benefits	Sometimes referred to as Accrued Benefits. These are the benefits that have been earned by all plan members as of the valuation date.
Actuarially Determined Contribution	This is the annual contribution determined in accordance with a plan’s funding policy - typically the sum of the Normal Cost and an Amortization payment towards the Unfunded Actuarial Liability.



RETIREMENT PLAN FOR EMPLOYEES OF THE CITY OF CREVE COEUR

GASB 67 and 68 DISCLOSURE

Fiscal Year: July 1, 2021 to June 30, 2022

Prepared by

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Consulting Actuary

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Certification

Actuarial computations presented in this report under Statements No. 67 and 68 of the Governmental Accounting Standards Board are for purposes of assisting the City of Creve Coeur in fulfilling its financial accounting requirements. No attempt is being made to offer any accounting opinion or advice. This report is for fiscal year July 1, 2021 to June 30, 2022. The reporting date for determining plan assets and obligations is June 30, 2022. The calculations enclosed in this report have been made on a basis consistent with our understanding of the plan provisions. Determinations for purposes other than meeting financial reporting requirements may be significantly different than the results contained in this report. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security or meeting employer funding requirements.

In preparing this report, we relied, without audit, on information as of June 30, 2022 and June 30, 2022 furnished by the City of Creve Coeur. This information includes, but is not limited to, statutory provisions, member census data, and financial information. Please see Milliman's funding valuation report dated October 5, 2022 for more information on the plan's participant group as of June 30, 2022 as well as a summary of the plan provisions and a summary of the actuarial methods and assumptions used for funding

We performed a limited review of the census and financial information used directly in our analysis and have found them to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

We hereby certify that, to the best of our knowledge, this report, including all costs and liabilities based on actuarial assumptions and methods, is complete and accurate and determined in conformance with generally recognized and accepted actuarial principles and practices, which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions and supporting Recommendations of the American Academy of Actuaries.

Each of the assumptions used in this valuation with the exception of those set by law was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Certification

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurements.

The valuation results were developed using models intended for valuations that use standard actuarial techniques. In addition, Milliman has developed certain models to develop the expected long term rate of return on assets used in this analysis. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice. The models, including all input, calculations, and output may not be appropriate for any other purpose.

Milliman's work is prepared solely for the internal use and benefit of the City of Creve Coeur. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions: (a) the Plan Sponsor may provide a copy of Milliman's work, in its entirety, to the Plan Sponsor's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the City of Creve Coeur; and (b) the Plan Sponsor may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.



William Winningham, EA, MAAA
Consulting Actuary



Michael A. Sudduth, FSA, MAAA
Consulting Actuary

Overview of GASB 67 and GASB 68

The Governmental Accounting Standards Board (GASB) released accounting standards for public pension plans and participating employers in 2012. These standards, GASB Statements No. 67 and 68, have substantially revised the accounting requirements previously mandated under GASB Statements No. 25 and 27. The most notable change is the distinct separation of funding from financial reporting. The Annual Required Contribution (ARC) has been eliminated under GASB 67 and 68 and is no longer relevant for financial reporting purposes. As a result, plan sponsors have been encouraged to establish a formal funding policy that is separate from financial reporting calculations.

GASB 67 applies to financial reporting for public pension plans and is required to be implemented for plan fiscal years beginning after June 15, 2013. Note that a plan's fiscal year might not be the same as the employer's fiscal year. Even if the plan does not issue standalone financial statements, but rather is considered a pension trust fund of a government, it is subject to GASB 67. Under GASB 67, enhancements to the financial statement disclosures are required, along with certain required supplementary information.

GASB 68 governs the specifics of accounting for public pension plan obligations for participating employers and is required to be implemented for employer fiscal years beginning after June 15, 2014. GASB 68 requires a liability for pension obligations, known as the Net Pension Liability, to be recognized on the balance sheets of participating employers. Changes in the Net Pension Liability will be immediately recognized as Pension Expense on the income statement or reported as deferred inflows/outflows of resources depending on the nature of the change.

Executive Summary

Relationship Between Valuation Date, Measurement Date, and Reporting Date

The Valuation Date is June 30, 2022. This is the date as of which the actuarial valuation is performed. The Measurement Date is June 30, 2022. This is the date as of which the net pension liability is determined. The Reporting Date is June 30, 2022. This is the plan's and/or employer's fiscal year ending date.

Significant Changes

Given the substantial uncertainty regarding the impact of COVID-19 on plan costs, including whether the pandemic will increase or decrease costs during the term of our projections, we have chosen not to make an adjustment in the expected plan costs. It is possible that the COVID-19 pandemic could have a material impact on the projected costs.

Participant Data as of June 30, 2022

Actives	27
Terminated vested & other inactives	19
Retirees and beneficiaries	<u>89</u>
Total	135

Schedule of Employer Contributions

Fiscal Year Ending June 30	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a % of Covered Payroll
2013	\$1,204,193	\$1,261,350	(\$57,157)	\$4,016,528	31.40%
2014	1,088,415	1,444,717	(356,302)	3,822,287	37.80%
2015	910,670	1,254,457	(343,787)	3,866,480	32.44%
2016	1,220,627	1,270,404	(49,777)	3,816,272	33.29%
2017	1,139,751	1,200,992	(61,241)	3,557,984	33.75%
2018	1,159,936	1,188,826	(28,890)	3,224,888	36.86%
2019	1,262,474	1,307,755	(45,281)	2,611,428	50.08%
2020	1,252,981	1,303,058	(50,077)	2,532,924	51.44%
2021	1,230,482	1,271,253	(40,771)	2,510,196	50.64%
2022	977,511	1,287,117	(309,606)	2,367,957	54.36%

Actuarial Methods and Assumptions Used for Funding Policy

The following actuarial methods and assumptions were used in the June 30, 2022 funding valuation. Please see the valuation report dated October 5, 2022 for further details.

Valuation Timing	Actuarially determined contribution rates are calculated as of June 30
Actuarial Cost Method	Entry Age Normal
Amortization Method	
Level percent or level dollar	Level dollar
Closed, open, or layered periods	Closed, 14 year term for UAL as of 07/01/2015
Amortization period at 06/30/2022	Open, 15 year period for any UAL arising after 07/01/2015
Asset Valuation Method	
Smoothing period	3 years
Corridor	None
Inflation	2.35%
Salary Increases	4.00%
Investment Rate of Return	6.00%
Retirement Age	Retirement rates are summarized in the 2022 Actuarial Valuation
Turnover	Turnover rates are summarized in the 2022 Actuarial Valuation
Mortality	Pub-2010 General Amount-Weighted Mortality tables for Employees, Healthy Retirees, Disabled Retirees and Contingent Survivors, male and female rates, with generational projection from 2010 using Scale MP-2021 (improvement scale updates published annually)

Statement of Fiduciary Net Position

	June 30, 2021	June 30, 2022
Assets		
Cash and cash equivalents	\$264,515	\$251,537
Receivables and prepaid expenses:		
Receivable contributions	0	0
Receivable investment income	34,451	35,211
Receivables from brokers for unsettled trades	0	0
Prepaid expenses	0	0
Total receivables	34,451	35,211
Investments:		
Fixed income	9,029,376	8,102,328
Stocks	23,770,055	20,650,290
Short-term investments	0	0
Real estate	0	0
Alternative investments	0	0
Total investments	32,799,431	28,752,618
Invested securities lending cash collateral	0	0
Capital assets net of accumulated depreciation	0	0
Total assets	33,098,397	29,039,366
Liabilities		
Accrued expenses and benefits payable	0	0
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	0	0
Total liabilities	0	0
Net position restricted for pensions	\$33,098,397	\$29,039,366

Statement of Changes in Fiduciary Net Position

	June 30, 2022
Additions	
Member contributions	\$82,726
Employer contributions	1,287,117
Total contributions	1,369,843
Investment income (loss):	
Interest and dividends	869,148
Net increase in fair value of investments	(4,156,794)
Less investment expenses:	
Direct investment expense	40,050
Net investment income	(3,327,696)
Other income	0
Total additions	(1,957,853)
Deductions	
Service benefits	2,057,704
Disability benefits	N/A
Death benefits	N/A
Refunds of member contributions	N/A
Administrative expenses	43,474
Total deductions	2,101,178
Net increase (decrease)	(4,059,031)
Net position restricted for pensions	
Beginning of year (June 30, 2021)	33,098,397
End of year (June 30, 2022)	\$29,039,366

Money-Weighted Rate of Return

Fiscal Year Ending June 30	Net Money-Weighted Rate of Return
2013	12.87%
2014	17.86%
2015	1.99%
2016	1.15%
2017	11.43%
2018	7.83%
2019	5.69%
2020	2.46%
2021	27.90%
2022	-10.04%

Calculation of Money-Weighted Rate of Return

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the beginning of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - July 1, 2021	\$33,098,397	12.00	1.00	\$29,775,445
Monthly net external cash flows:				
July	542,705	12.00	1.00	488,220
August	(163,077)	11.00	0.92	(147,952)
September	(162,546)	10.00	0.83	(148,881)
October	416,682	9.00	0.75	384,896
November	(166,824)	8.00	0.67	(155,408)
December	(188,735)	7.00	0.58	(177,502)
January	(164,185)	6.00	0.50	(155,725)
February	(164,401)	5.00	0.42	(157,256)
March	(164,302)	4.00	0.33	(158,665)
April	(165,613)	3.00	0.25	(161,290)
May	(166,476)	2.00	0.17	(163,509)
June	(184,563)	1.00	0.08	(183,007)
Ending Value - June 30, 2022	29,039,366			29,039,366
Money-Weighted Rate of Return	-10.04%			

Long-Term Expected Rate of Return

The assumption for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman as of June 30, 2022.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
US Core Fixed Income (Aggregate)	24.00%	1.95%
US Interm (1-10 Yr) Credit Bonds	12.00%	2.41%
US Broad Equity Market	35.00%	5.70%
Non-US Equity	15.00%	7.90%
Emerging Markets Equity	6.00%	9.44%
Infrastructure - Public	4.00%	5.13%
Hedge Funds - Equity Hedge	4.00%	4.93%
Assumed Inflation - Mean		2.35%
Long-Term Expected Rate of Return		6.00%

Depletion Date Projection

GASB 67 and 68 generally require that a blended discount rate be used to measure the Total Pension Liability (the Actuarial Accrued Liability calculated using the Individual Entry Age Normal Cost Method). The long-term expected return on plan investments may be used to discount liabilities to the extent that the plan's Fiduciary Net Position (fair market value of assets) is projected to cover benefit payments and administrative expenses. A 20-year high quality (AA/Aa or higher) municipal bond rate must be used for periods where the Fiduciary Net Position is not projected to cover benefit payments and administrative expenses. Determining the discount rate under GASB 67 and 68 will often require that the actuary perform complex projections of future benefit payments and asset values. GASB 67 and 68 (paragraph 29) do allow for alternative evaluations of projected solvency, if such evaluation can reliably be made. GASB does not contemplate a specific method for making an alternative evaluation of sufficiency; it is left to professional judgment.

The following circumstances justify an alternative evaluation of sufficiency for the City of Creve Coeur:

- The City of Creve Coeur has at least a 5-year history of paying at least 100% of the Actuarially Determined Contribution (previously termed the Annual Required Contribution).
- The Actuarially Determined Contribution is based on a closed amortization period for the majority of the unfunded liability and a 15 year amortization for unfunded liability realized since July 1, 2015.
- GASB 67 and 68 specify that the projections regarding future solvency assume that plan assets earn the assumed rate of return and there are no future changes in the plan provisions or actuarial methods and assumptions, which means that the projections would not reflect any adverse future experience which might impact the plan's funded position.

Based on these circumstances, it is our professional opinion that the detailed depletion date projections outlined in GASB 67 and 68 will show that the Fiduciary Net Position is always projected to be sufficient to cover benefit payments and administrative expenses.

Net Pension Liability

Net Pension Liability	June 30, 2021	June 30, 2022
Total pension liability	\$35,171,396	\$35,652,124
Fiduciary net position	<u>33,098,397</u>	<u>29,039,366</u>
Net pension liability	2,072,999	6,612,758
Fiduciary net position as a % of total pension liability	94.11%	81.45%
Covered payroll	2,510,196	2,367,957
Net pension liability as a % of covered payroll	82.58%	279.26%

The total pension liability was determined by an actuarial valuation as of the measurement date, calculated based on the discount rate and actuarial assumptions below.

Discount Rate

Discount rate	6.00%	6.00%
Long-term expected rate of return, net of investment expense	6.00%	6.00%
Municipal bond rate	N/A	N/A

The plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total pension liability is equal to the long-term expected rate of return.

Other Key Actuarial Assumptions

The plan has not had a formal actuarial experience study performed.

Valuation date	June 30, 2021	June 30, 2022
Measurement date	June 30, 2021	June 30, 2022
Actuarial cost method	Entry Age Normal	Entry Age Normal
Inflation	2.30%	2.35%
Salary increases including inflation	4.00%	4.00%
Mortality	Pub-2010 General Amount-Weighted Mortality tables for Employees, Healthy Retirees, Disabled Retirees and Contingent Survivors, male and female rates, with generational projection from 2010 using Scale MP-2020 (improvement scale updates published annually)	Pub-2010 General Amount-Weighted Mortality tables for Employees, Healthy Retirees, Disabled Retirees and Contingent Survivors, male and female rates, with generational projection from 2010 using Scale MP-2021 (improvement scale updates published annually)

Please see Milliman's funding valuation report dated October 5, 2022 for more detail.

Changes in Net Pension Liability

Changes in Net Pension Liability	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances as of June 30, 2021	\$35,171,396	\$33,098,397	\$2,072,999
Changes for the year:			
Service cost	324,322		324,322
Interest on total pension liability	2,068,911		2,068,911
Effect of plan changes	0		0
Effect of economic/demographic gains or losses	89,780		89,780
Effect of assumptions changes or inputs	55,419		55,419
Benefit payments	(2,057,704)	(2,057,704)	0
Employer contributions		1,287,117	(1,287,117)
Member contributions		82,726	(82,726)
Net investment income		(3,327,696)	3,327,696
Administrative expenses		(43,474)	43,474
Balances as of June 30, 2022	35,652,124	29,039,366	6,612,758

Sensitivity Analysis

The following presents the net pension liability of the City of Creve Coeur, calculated using the discount rate of 6.00%, as well as what the City of Creve Coeur's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.00%) or 1 percentage point higher (7.00%) than the current rate.

	1% Decrease 5.00%	Current Discount Rate 6.00%	1% Increase 7.00%
Total pension liability	\$39,501,248	\$35,652,124	\$32,380,341
Fiduciary net position	29,039,366	29,039,366	29,039,366
Net pension liability	10,461,882	6,612,758	3,340,975

Schedule of Changes in Net Pension Liability and Related Ratios

	Fiscal Year Ending June 30									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Pension Liability										
Service cost	\$324,322	\$267,260	\$272,815	\$291,592	\$255,915	\$409,425	\$424,445	\$371,341	\$447,610	N/A
Interest on total pension liability	2,068,911	2,118,808	2,132,606	2,124,982	2,089,956	2,059,465	1,994,674	1,918,318	1,827,698	N/A
Effect of plan changes	0	(2,229)	(120,161)	0	0	0	0	0	0	N/A
Effect of economic/demographic gains or losses	89,780	(200,891)	(344,009)	(208,439)	187,078	(279,360)	21,701	64,357	3,949	N/A
Effect of assumption changes or inputs	55,419	2,846,555	0	0	793,015	0	0	1,832,668	0	N/A
Benefit payments	(2,057,704)	(1,929,682)	(2,343,780)	(1,817,650)	(1,657,854)	(1,544,910)	(1,457,024)	(1,392,017)	(1,508,007)	N/A
Net change in total pension liability	480,728	3,099,821	(402,529)	390,485	1,668,110	644,620	983,796	2,794,666	771,250	N/A
Total pension liability, beginning	35,171,396	32,071,575	32,474,104	32,083,619	30,415,509	29,770,889	28,787,093	25,992,427	25,221,177	N/A
Total pension liability, ending (a)	35,652,124	35,171,396	32,071,575	32,474,104	32,083,619	30,415,509	29,770,889	28,787,093	25,992,427	N/A
Fiduciary Net Position										
Employer contributions	\$1,287,117	\$1,271,253	\$1,303,058	\$1,307,755	\$1,188,826	\$1,200,992	\$1,270,402	\$1,254,457	\$1,444,717	N/A
Member contributions	82,726	89,838	96,152	86,614	99,041	107,272	112,251	93,099	74,183	N/A
Net investment income	(3,327,696)	7,359,276	630,154	1,464,646	1,893,838	2,499,524	251,339	426,117	3,245,642	N/A
Benefit payments	(2,057,704)	(1,929,682)	(2,343,780)	(1,817,650)	(1,657,854)	(1,544,910)	(1,457,024)	(1,392,017)	(1,508,007)	N/A
Administrative expenses	(43,474)	(65,777)	(31,015)	(52,266)	(44,133)	0	0	0	0	N/A
Net change in plan fiduciary net position	(4,059,031)	6,724,908	(345,431)	989,099	1,479,718	2,262,878	176,968	381,656	3,256,535	N/A
Fiduciary net position, beginning	33,098,397	26,373,489	26,718,920	25,729,821	24,250,103	21,987,225	21,810,257	21,428,601	18,172,066	N/A
Fiduciary net position, ending (b)	29,039,366	33,098,397	26,373,489	26,718,920	25,729,821	24,250,103	21,987,225	21,810,257	21,428,601	N/A
Net pension liability, ending = (a) - (b)	\$6,612,758	\$2,072,999	\$5,698,086	\$5,755,184	\$6,353,798	\$6,165,406	\$7,783,664	\$6,976,836	\$4,563,826	N/A
Fiduciary net position as a % of total pension liability	81.45%	94.11%	82.23%	82.28%	80.20%	79.73%	73.85%	75.76%	82.44%	N/A
Covered payroll	\$2,367,957	\$2,510,196	\$2,532,924	\$2,611,428	\$3,224,888	\$3,557,984	\$3,816,272	\$3,866,480	\$3,822,287	N/A
Net pension liability as a % of covered payroll	279.26%	82.58%	224.96%	220.38%	197.02%	173.28%	203.96%	180.44%	119.40%	N/A

This schedule is presented to illustrate the requirement to show information for 10 years. However, recalculations of prior years are not required, and if prior years are not reported in accordance with the current GASB standards, they should not be reported.

Pension Expense

Pension Expense	July 1, 2020 to June 30, 2021	July 1, 2021 to June 30, 2022
Service cost	\$267,260	\$324,322
Interest on total pension liability	2,118,808	2,068,911
Effect of plan changes	(2,229)	0
Administrative expenses	65,777	43,474
Member contributions	(89,838)	(82,726)
Expected investment return net of investment expenses	(1,759,150)	(1,964,283)
Recognition of Deferred Inflows/Outflows of Resources		
Recognition of economic/demographic gains or losses	(252,820)	35,259
Recognition of assumption changes or inputs	2,189,658	707,278
Recognition of investment gains or losses	(1,076,391)	175,718
Pension Expense	1,461,075	1,307,953

As of June 30, 2022, the deferred inflows and outflows of resources are as follows:

Deferred Inflows / Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual experience	\$0	\$8,162
Changes of assumptions	0	5,038
Net difference between projected and actual earnings	0	1,381,166
Contributions made subsequent to measurement date	0	0
Total	0	1,394,366

Amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2023	\$231,033
2024	166,568
2025	(61,630)
2026	1,058,395
2027	0
Thereafter*	0

* Note that additional future deferred inflows and outflows of resources may impact these numbers.

Schedule of Deferred Inflows and Outflows of Resources

	Original Amount	Date Established	Original Rec. Period*	Amount Recognized in Pension Expense for FYE 06/30/2022	Amount Recognized in Pension Expense through 06/30/2022	Balance of Deferred Inflows as of 06/30/2022	Balance of Deferred Outflows as of 06/30/2022
Economic/ demographic gains or losses	\$89,780	6/30/2022	1.1	\$81,618	\$81,618	\$0	\$8,162
	(200,891)	6/30/2021	1.3	(46,359)	(200,891)	0	0
		Total		35,259	(119,273)	0	8,162
Assumption changes or inputs	55,419	6/30/2022	1.1	50,381	50,381	0	5,038
	2,846,555	6/30/2021	1.3	656,897	2,846,555	0	0
		Total		707,278	2,896,936	0	5,038
Investment gains or losses	5,291,979	6/30/2022	5.0	1,058,396	1,058,396	0	4,233,583
	(5,600,126)	6/30/2021	5.0	(1,120,025)	(2,240,050)	(3,360,076)	0
	1,140,985	6/30/2020	5.0	228,197	684,591	0	456,394
	256,329	6/30/2019	5.0	51,266	205,064	0	51,265
	(210,580)	6/30/2018	5.0	(42,116)	(210,580)	0	0
	Total		175,718	(502,579)	(3,360,076)	4,741,242	
Total for economic/demographic gains or losses and assumption changes or inputs						0	13,200
Net deferred (inflows)/outflows for investment gains or losses						0	1,381,166
Total deferred (inflows)/outflows						0	1,394,366
Total net deferrals							1,394,366

* Investment (gains)/losses are recognized in pension expense over a period of five years; economic/demographic (gains)/losses and assumption changes or inputs are recognized over the average remaining service life for all active and inactive members.

Milliman Financial Reporting Valuation

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Deferred (Inflows)	Deferred Outflows	Net Investment (Inflows)/ Outflows	Net Deferrals	Net Pension Liability plus Net Deferrals	Annual Expense
Balances as of June 30, 2021	(\$35,171,396)	\$33,098,397	(\$2,072,999)	(\$46,359)	\$656,897	(\$3,735,095)	(\$3,124,557)	(\$5,197,556)	
Service cost	(324,322)		(324,322)						324,322
Interest on total pension liability	(2,068,911)		(2,068,911)						2,068,911
Effect of plan changes	0		0						0
Effect of liability gains or losses	(89,780)		(89,780)		89,780		89,780		
Effect of assumption changes or inputs	(55,419)		(55,419)		55,419		55,419		
Benefit payments	2,057,704	(2,057,704)	0						
Administrative expenses		(43,474)	(43,474)						43,474
Member contributions		82,726	82,726						(82,726)
Expected net investment income		1,964,283	1,964,283						(1,964,283)
Investment gains or losses		(5,291,979)	(5,291,979)			5,291,979	5,291,979		
Employer contributions		1,287,117	1,287,117					1,287,117	
Recognition of liability gains or losses				46,359	(81,618)		(35,259)		35,259
Recognition of assumption changes or inputs					(707,278)		(707,278)		707,278
Recognition of investment gains or losses						(175,718)	(175,718)		175,718
Annual expense								(1,307,953)	1,307,953
Balances as of June 30, 2022	(35,652,124)	29,039,366	(6,612,758)	0	13,200	1,381,166	1,394,366	(5,218,392)	

Glossary

Actuarially Determined Contribution	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined based on the funding policy and most recent measurement available when the contribution for the reporting period was adopted.
Deferred Inflows/Outflows of Resources	Portion of changes in net pension liability that is not immediately recognized in Pension Expense. These changes include differences between expected and actual experience, changes in assumptions, and differences between expected and actual earnings on plan investments.
Discount Rate	Single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the sum of: <ol style="list-style-type: none">1) The actuarial present value of benefit payments projected to be made in future periods where the plan assets are projected to be sufficient to meet benefit payments, calculated using the Long-Term Expected Rate of Return.2) The actuarial present value of projected benefit payments not included in (1), calculated using the Municipal Bond Rate.
Fiduciary Net Position	Equal to market value of assets.
Long-Term Expected Rate of Return	Long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits, net of investment expenses.
Money-Weighted Rate of Return	The internal rate of return on pension plan investments, net of investment expenses.
Municipal Bond Rate	Yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.
Net Pension Liability	Total Pension Liability minus the Plan's Fiduciary Net Position (unfunded accrued liability).
Projected Benefit Payments	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and expected future service.
Service Cost	The portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total Pension Liability	The portion of actuarial present value of projected benefit payments that is attributable to past periods of member service using the Entry Age Normal cost method based on the requirements of GASB 67 and 68.



**CITY OF CREVE COEUR
OTHER POST-EMPLOYMENT BENEFITS PROGRAM**

GASB 75 DISCLOSURE

Fiscal Year: July 1, 2021 to June 30, 2022

Prepared by

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Consulting Actuary

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Certification

Actuarial computations presented in this report under Statements No. 74 and 75 of the Governmental Accounting Standards Board are for purposes of assisting the City in fulfilling its financial accounting requirements. No attempt is being made to offer any accounting opinion or advice. This report is for fiscal year July 1, 2021 to June 30, 2022. The measurement date for determining plan assets and obligations is June 30, 2022. The calculations enclosed in this report have been made on a basis consistent with our understanding of the plan provisions. Determinations for purposes other than meeting financial reporting requirements may be significantly different than the results contained in this report. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security or meeting employer funding requirements.

In preparing this report, we relied, without audit, on information furnished by the City. This information includes, but is not limited to, statutory provisions, member census data, and financial information.

We performed a limited review of the census and financial information used directly in our analysis and have found them to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

The valuation results were developed using models intended for valuations that use standard actuarial techniques.

We hereby certify that, to the best of our knowledge, this report, including all costs and liabilities based on actuarial assumptions and methods, is complete and accurate and determined in conformance with generally recognized and accepted actuarial principles and practices, which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Code of Professional Conduct, amplifying Opinions and supporting Recommendations of the American Academy of Actuaries.

Each of the assumptions used in this valuation with the exception of those set by law was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period. Assumptions related to the claims costs and healthcare trend (cost inflation) rates for the retiree healthcare program discussed in this report were determined by Milliman actuaries qualified in such matters.

This valuation report is only an estimate of the plan's financial condition as of a single date. It can neither predict the plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of plan benefits, only the timing of plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Certification

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurements.

Milliman's work is prepared solely for the internal use and benefit of the City of Creve Coeur. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions: (a) the Plan Sponsor may provide a copy of Milliman's work, in its entirety, to the Plan Sponsor's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the City; and (b) the Plan Sponsor may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.



William Winningham, EA, MAAA
Consulting Actuary

Overview of GASB 74 and GASB 75

The Governmental Accounting Standards Board (GASB) released new accounting standards for public postemployment benefit plans other than pension (OPEB) and participating employers in 2015. These standards, GASB Statements No. 74 and 75, have substantially revised the accounting requirements previously mandated under GASB Statements No. 43 and 45. The most notable change is the that the Annual Required Contribution (ARC) has been eliminated and the Net OPEB Liability will be an item on the employer's financial statement rather than a footnote entry.

GASB 74 applies to financial reporting for public OPEB plans funded by OPEB trusts and is required to be implemented for plan fiscal years beginning after June 15, 2016. Note that a plan's fiscal year might not be the same as the employer's fiscal year. Even if the plan does not issue standalone financial statements, but rather is considered a trust fund of a government, it is subject to GASB 74. Under GASB 74, enhancements to the financial statement disclosures are required, along with certain required supplementary information.

GASB 75 governs the specifics of accounting for public OPEB plan obligations for participating employers and is required to be implemented for employer fiscal years beginning after June 15, 2017. GASB 75 requires a liability for OPEB obligations, known as the Net OPEB Liability (Total OPEB Liability for unfunded plans), to be recognized on the balance sheets of participating employers. Changes in the Net OPEB Liability (Total OPEB Liability for unfunded plans) will be immediately recognized as OPEB Expense on the income statement or reported as deferred inflows/outflows of resources depending on the nature of the change.

Executive Summary

Relationship Between Valuation Date, Measurement Date, and Reporting Date

The Valuation Date is June 30, 2022. This is the date as of which the actuarial valuation is performed. The Measurement Date is June 30, 2022. This is the date as of which the total OPEB liability is determined. The Reporting Date is June 30, 2022. This is the plan's and/or employer's fiscal year ending date.

Significant Changes

Given the substantial uncertainty regarding the impact of COVID-19 on plan costs, including whether the pandemic will increase or decrease costs during the term of our projections, we have chosen not to make an adjustment in the expected plan costs. It is possible that the COVID-19 pandemic could have a material impact on the projected costs.

Participant Data as of June 30, 2022

Actives	98
Retirees	12
Spouses of Retirees	<u>5</u>
Total	115

Total OPEB Liability

Total OPEB Liability	<u>June 30, 2021</u>	<u>June 30, 2022</u>
Total OPEB liability	\$2,796,210	\$2,329,286
Covered payroll	N/A	N/A
Total OPEB liability as a % of covered payroll	N/A	N/A

The total OPEB liability was determined by an actuarial valuation as of the measurement date, calculated based on the discount rate and actuarial assumptions below.

Discount Rate

Discount rate	2.16%	3.54%
20 Year Bond GO Index	2.16%	3.54%

The discount rate was based on the 20 Year Bond GO Index.

Other Key Actuarial Assumptions

The plan has not had a formal actuarial experience study performed.

Valuation date	June 30, 2020	June 30, 2022
Measurement date	June 30, 2021	June 30, 2022
Actuarial cost method	Entry Age Normal	Entry Age Normal
Inflation	2.30%	2.40%
Mortality Rate	Pub-2010 Mortality for Employees and Healthy Annuitants, with generational projection per Scale MP-2019	Pub-2010 Mortality for Employees and Healthy Annuitants, with generational projection per Scale MP-2021
Salary increases including inflation	4.00%	4.00%

Changes in Total OPEB Liability

Changes in Total OPEB Liability	Increase (Decrease) Total OPEB Liability
Balance as of June 30, 2021	\$2,796,210
Changes for the year:	
Service cost	79,160
Interest on total OPEB liability	60,168
Effect of plan changes	0
Effect of economic/demographic gains or losses	(249,807)
Effect of assumptions changes or inputs	(175,824)
Benefit payments	(180,621)
Balance as of June 30, 2022	2,329,286

Sensitivity Analysis

The following presents the total OPEB liability of the City, calculated using the discount rate of 3.54%, as well as what the City's total OPEB liability would be if it were calculated using a discount rate that is 1 percentage point lower (2.54%) or 1 percentage point higher (4.54%) than the current rate.

	1% Decrease	Discount Rate	1% Increase
	2.54%	3.54%	4.54%
Total OPEB liability	\$2,456,576	\$2,329,286	\$2,208,816

The following presents the total OPEB liability of the City, calculated using the current healthcare cost trend rates as well as what the City's total OPEB liability would be if it were calculated using trend rates that are 1 percentage point lower or 1 percentage point higher than the current trend rates.

	1% Decrease	Current Trend Rate	1% Increase
Total OPEB liability	\$2,180,989	\$2,329,286	\$2,494,888

Schedule of Changes in Total OPEB Liability and Related Ratios
(in 1,000s)

	Fiscal Year Ending June 30									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total OPEB Liability										
Service cost	\$79	\$83	\$60	\$62	\$61	N/A	N/A	N/A	N/A	N/A
Interest on total OPEB liability	60	67	106	115	109	N/A	N/A	N/A	N/A	N/A
Effect of plan changes	0	(197)	0	0	0	N/A	N/A	N/A	N/A	N/A
Effect of economic/demographic gains or (losses)	(250)	0	(205)	0	0	N/A	N/A	N/A	N/A	N/A
Effect of assumption changes or inputs	(176)	8	219	67	(56)	N/A	N/A	N/A	N/A	N/A
Benefit payments	(181)	(206)	(185)	(206)	(186)	N/A	N/A	N/A	N/A	N/A
Net change in total OPEB liability	(467)	(245)	(6)	38	(72)	N/A	N/A	N/A	N/A	N/A
Total OPEB liability, beginning	2,796	3,041	3,047	3,009	3,081	N/A	N/A	N/A	N/A	N/A
Total OPEB liability, ending (a)	2,329	2,796	3,041	3,047	3,009	N/A	N/A	N/A	N/A	N/A
Covered payroll	N/A	N/A	N/A	\$7,758	\$7,011	N/A	N/A	N/A	N/A	N/A
Total OPEB liability as a % of covered payroll	N/A	N/A	N/A	39.27%	42.92%	N/A	N/A	N/A	N/A	N/A

This schedule is presented to illustrate the requirement to show information for 10 years. However, recalculations of prior years are not required, and if prior years are not reported in accordance with the current GASB standards, they should not be reported.

OPEB Expense

OPEB Expense	July 1, 2020 to June 30, 2021	July 1, 2021 to June 30, 2022
Service cost	\$82,938	\$79,160
Interest on total OPEB liability	66,788	60,168
Effect of plan changes	(197,042)	0
Recognition of Deferred Inflows/Outflows of Resources		
Recognition of economic/demographic gains or losses	(24,959)	(55,914)
Recognition of assumption changes or inputs	29,069	7,282
OPEB Expense	(43,206)	90,696

As of June 30, 2022, the deferred inflows and outflows of resources are as follows:

Deferred Inflows / Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual experience	(\$349,390)	\$0
Changes of assumptions	(174,946)	179,006
Total	(524,336)	179,006

Amounts currently reported as deferred outflows of resources and deferred inflows of resources related to other postemployment benefits will be recognized in OPEB expense as follows:

Year ended June 30:	
2023	(\$48,632)
2024	(48,632)
2025	(48,632)
2026	(41,845)
2027	(49,950)
Thereafter*	(107,639)

* Note that additional future deferred inflows and outflows of resources may impact these numbers.

Schedule of Deferred Inflows and Outflows of Resources

	Original Amount	Date Established	Original Rec. Period*	Amount Recognized in Expense for FYE 06/30/2022	Amount Recognized in Expense through 06/30/2022	Balance of Deferred Inflows 06/30/2022	Balance of Deferred Outflows 06/30/2022
Economic/ demographic (gains) or losses	(\$249,807)	6/30/2022	8.07	(\$30,955)	(\$30,955)	(\$218,852)	\$0
	0	6/30/2021	0.00	0	0	0	0
	(205,415)	6/30/2020	8.23	(24,959)	(74,877)	(130,538)	0
	0	6/30/2019	0.00	0	0	0	0
	0	6/30/2018	0.00	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
		Total		(55,914)	(105,832)	(349,390)	0
Assumption changes or inputs	(175,824)	6/30/2022	8.07	(21,787)	(21,787)	(154,037)	0
	7,688	6/30/2021	8.23	934	1,868	0	5,820
	219,317	6/30/2020	8.23	26,648	79,944	0	139,373
	67,457	6/30/2019	8.02	8,411	33,644	0	33,813
	(55,529)	6/30/2018	8.02	<u>(6,924)</u>	<u>(34,620)</u>	<u>(20,909)</u>	<u>0</u>
		Total		7,282	59,049	(174,946)	179,006
Total deferred (inflows)/outflows						(524,336)	179,006
Total net deferrals						(345,330)	

* Economic/demographic (gains)/losses and assumption changes or inputs are recognized over the average remaining service life for all active and inactive members.

Milliman Financial Reporting Valuation

	Total OPEB Liability	Deferred Inflows	Deferred Outflows	Net Deferrals	Total OPEB Liability plus Net Deferrals	Annual Expense
Balances as of June 30, 2021	(\$2,796,210)	(\$183,330)	\$214,999	\$31,669	(\$2,764,541)	
Service cost	(79,160)					79,160
Interest on total OPEB liability	(60,168)					60,168
Effect of plan changes	0					0
Effect of liability gains or losses	249,807	(249,807)		(249,807)		
Effect of assumption changes or inputs	175,824	(175,824)		(175,824)		
Benefit payments	180,621				180,621	
Recognition of liability gains or losses		55,914		55,914		(55,914)
Recognition of assumption changes or inputs		28,711	(35,993)	(7,282)		7,282
Annual expense					(90,696)	90,696
Balances as of June 30, 2022	(2,329,286)	(524,336)	179,006	(345,330)	(2,674,616)	

Glossary

Deferred Inflows/Outflows of Resources	Portion of changes in net OPEB liability that is not immediately recognized in OPEB Expense. These changes include differences between expected and actual experience, changes in assumptions, and differences between expected and actual earnings on plan investments.
Discount Rate	Single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the sum of: <ol style="list-style-type: none">1) The actuarial present value of benefit payments projected to be made in future periods where the plan assets are projected to be sufficient to meet benefit payments, calculated using the Long-Term Expected Rate of Return.2) The actuarial present value of projected benefit payments not included in (1), calculated using the Municipal Bond Rate.
Municipal Bond Rate	Yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.
Projected Benefit Payments	All benefits estimated to be payable through the OPEB plan to current active and inactive employees as a result of their past service and expected future service.
Service Cost	The portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total OPEB Liability	The portion of actuarial present value of projected benefit payments that is attributable to past periods of member service using the Entry Age Normal cost method based on the requirements of GASB 74 and 75.

Summary of Census Data

The following were included in our analysis as of June 30, 2022 on information provided by the City.

Number of members

Active	98
Retired	12
Spouses of retirees	5
Total	115

Average age

Active	43.1
Retired	60.4

Attained Age	Years of credited service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Under 25	3	2	0	0	0	0	0	0	0	0	0	5
25 to 29	7	10	1	0	0	0	0	0	0	0	0	18
30 to 34	3	1	2	0	0	0	0	0	0	0	0	6
35 to 39	0	8	1	4	1	0	0	0	0	0	0	14
40 to 44	2	1	2	2	1	1	0	0	0	0	0	9
45 to 49	1	1	4	1	2	2	1	0	0	0	0	12
50 to 54	0	0	1	2	4	1	3	0	0	0	0	13
55 to 59	3	1	2	3	2	2	2	2	0	0	0	17
60 to 64	1	1	0	0	0	1	1	1	1	1	0	6
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	1	0	0	0	0	0	0	1
Total	20	25	13	11	11	7	7	3	1	0	0	98

Summary of Claims Cost

Milliman's Health Cost Guidelines were used to develop the expected relationship of the true cost of medical insurance benefits across age and gender. Expected medical claims are based in part on historical premium, enrollment and expense information provided by the City. Representative factors are shown below.

MEDICAL (Monthly)

Age	Retiree		Spouse	
	Male	Female	Male	Female
55	\$986.61	\$1,081.90	\$850.16	\$962.59
56	\$1,021.96	\$1,101.82	\$884.23	\$984.42
57	\$1,058.57	\$1,122.11	\$919.65	\$1,006.75
58	\$1,103.21	\$1,152.79	\$963.09	\$1,035.81
59	\$1,149.73	\$1,184.32	\$1,008.58	\$1,065.71
60	\$1,198.21	\$1,216.71	\$1,056.22	\$1,096.47
61	\$1,248.74	\$1,249.98	\$1,106.10	\$1,128.12
62	\$1,301.40	\$1,284.17	\$1,158.35	\$1,160.69
63	\$1,378.63	\$1,321.31	\$1,227.09	\$1,194.26
64	\$1,460.44	\$1,359.52	\$1,299.90	\$1,228.80

Appendix A: Actuarial Assumptions

**Discount Rate
(Adopted 6/30/2022)**

The interest rate for discounting liabilities is 3.54% per annum based on the 20 year bond GO index at the fiscal year end. The rate for the prior fiscal year was 2.16%.

Medical/Retiree Premium Inflation Rate

<u>Year</u>	<u>Medical</u>	<u>Year</u>	<u>Medical</u>
2022	5.30%	2035	4.40%
2023	5.00%	2040	4.30%
2024	4.90%	2045	4.30%
2025	4.80%	2050	4.30%
2026	4.70%	2055	4.30%
2027	4.60%	2060	4.30%
2028	4.50%	2065	4.20%
2029	4.40%	2070	3.90%
2030	4.40%	2072+	3.80%

The healthcare trends used in this valuation are based on long term healthcare trends generated by the Getzen Model. The Getzen Model is the result of research sponsored by the Society of Actuaries and completed by a committee of economists and actuaries. This model is the current industry standard for projecting long term medical trends. Inputs to the model are consistent with the assumptions used in deriving the discount rate used in the valuation.

Salary Increase

Salary is assumed to increase at a rate of 4.00% per annum.

**Healthy Mortality
(Adopted 6/30/2022)**

Pub-2010 Mortality for Employees and Healthy Annuitants, with generational projection per Scale MP-2021

Turnover

Rates are as follows:
Creve Coeur Retirement Plan (Hired prior to June 1, 2006):

<u>Age</u>	<u>Percentage</u>
25	10%
35	8%
45	4%
55	0%

Appendix A: Actuarial Assumptions

Turnover (continued)

LAGERS plan:

<u>Male Employees (General)</u>				<u>Female Employees (General)</u>			
Select rates 0-4 Years of Service		Ultimate Rates after 4 years of service		Select rates 0-4 Years of Service		Ultimate Rates after 4 years of service	
<u>Years</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Years</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
0	19.0%	25	7.3%	0	22.0%	25	10.8%
1	17.0%	30	6.5%	1	20.0%	30	8.9%
2	15.0%	35	5.0%	2	17.0%	35	7.4%
3	13.0%	40	3.7%	3	14.0%	40	5.7%
4	11.0%	45	3.0%	4	13.0%	45	4.2%
		50	2.4%			50	3.3%
		55	1.8%			55	2.5%
		60	1.0%			60	1.2%
		65	0.0%			65	0.0%

Police Employees (Male and Female)

Select rates 0-4 Years of Years		Ultimate Rates after 4 years of Age	
<u>Years</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
0	18.00%	25	9.80%
1	17.00%	30	7.80%
2	16.00%	35	6.10%
3	13.00%	40	4.40%
4	12.00%	45	3.20%
		50	1.80%
		55	1.00%
		60	0.00%

Retirement

Creve Coeur Retirement Plan (Hired prior to June 1, 2006):

<u>Non-Uniformed</u>		<u>Uniformed</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
60	60%	55	60%
61-64	5%	55-61	5%
65	100%	62	100%

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Appendix A: Actuarial Assumptions

Retirement (continued)

LAGERS Plan:

Age	General		Police
	Men	Women	All
50-54	N/A	N/A	2.50%
55	3%	3%	10%
56	3%	3%	10%
57	3%	3%	10%
58	3%	3%	10%
59	3%	3%	10%
60	10%	10%	10%
61	10%	10%	10%
62	25%	15%	25%
63	20%	15%	20%
64	20%	15%	20%
65	25%	25%	100%

Future Retiree Coverage

For retirees hired prior to 6/1/2001: 80% of employees who retire prior to age 65 are assumed to elect medical coverage under the plan.

For retirees hired after 6/1/2001: 40% of employees who retire prior to age 65 are assumed to elect medical coverage under the plan.

Medicare eligible retirees:

Medical coverage is not provided for Medicare eligible retirees.

Future Dependent Coverage (Adopted 6/30/2021)

Current active members are assumed to elect spouse coverage at retirement as follows. All female spouses are assumed to be 3 years younger than males.

Male	Female
40%	40%

No dependent children are assumed to be covered in retirement.

1 in 6 spouses of active employees are assumed to elect coverage while also having coverage available through their own employer. These spouses are required to pay an additional \$200 per month.

1 in 3 spouses of retirees that are currently covered by the plan are assumed to have coverage available through their own employer. These spouses are required to pay an additional \$200 per month.

Appendix B: Plan Provisions

Eligibility

Creve Coeur Retirement Plan (Hired prior to 6/1/2006): Employees who are eligible for Normal or Early retirement are eligible for OPEB benefits. Normal Retirement age is the earlier of age 65 (55 for Uniformed participants) or age plus service equal to 85 points (“Rule of 85”). Early retirement is age 50 with 20 years of service.

LAGERS Plan: Employees who are eligible for Normal or Early retirement are eligible for OPEB benefits. General employees are eligible for normal retirement at age 60 with 5 years of service or early retirement at age 55 with 5 years of service. Police employees are eligible for normal retirement at age 55 with 5 years of service or early retirement at age 50 with 5 years of service.

Dependents

Retirees may cover spouses and eligible dependent children. Surviving spouses can continue coverage after retiree’s death.

OPEB Benefits

Medical including prescription drugs. Retirees coverage is not offered past Medicare eligibility age (age 65).

Cost Sharing

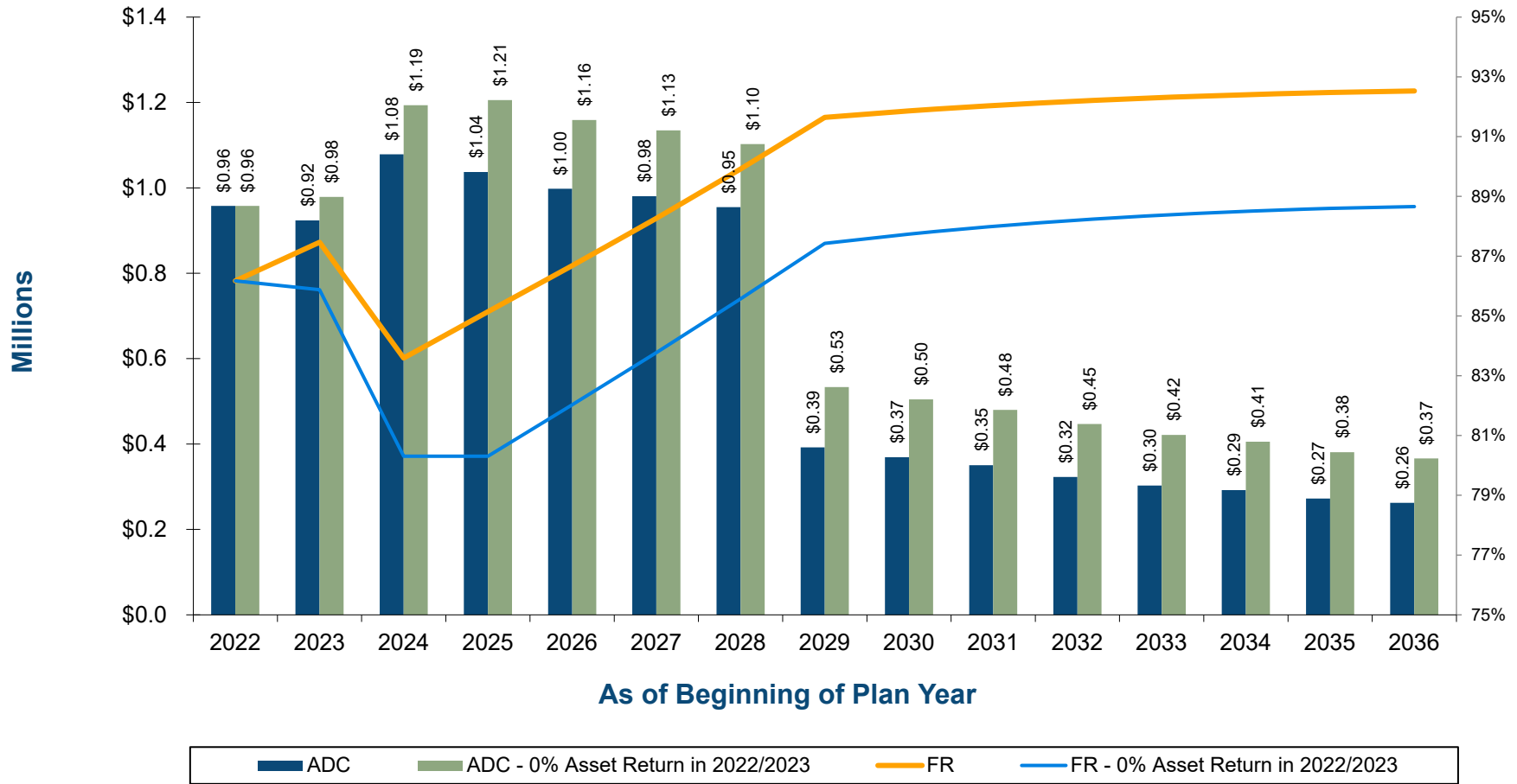
Retiree medical contributions effective 7/1/2021 are as follows:

	<u>Hired prior to</u> <u>7/1/2001</u>	<u>Hired after</u> <u>7/1/2001</u>
Retiree	\$91.84	\$612.28
Retiree + Spouse*	226.56	1,285.84
Retiree +Children	202.06	1,163.39
Family*	324.52	1,775.67

*Effective January 1, 2021, spouse medical premiums are increased by \$200 for each spouse that could attain coverage through their own employer's medical plan.

This summary is intended only to describe our understanding of the essential features of the benefits that will be provided to future retirees based on information provided by the City. All eligibility requirements and benefit amounts shall be determined in strict accordance with the relevant plan documents. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Retirement Plan for Employees of the City of Creve Coeur 2022 Projections



1. Assumptions are the same as 2022 valuation plus:
 - Administrative expenses remain the same
 - Employer contributes Actuarially Determined Contribution each year
2. Potential variability of results discussed in ASOP 51 section of the 2022 actuarial valuation

ADC = Actuarially Determined Contribution FR = Funded Ratio



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October 14, 2022

Lori Obermoeller
Director of Finance
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141

**RE: *Retirement Plan for Employees of the City of Creve Coeur -
Preliminary Review of Potential Ad hoc Retiree COLA***

Dear Lori:

As requested, enclosed is the plan change analysis for the Retirement Plan for Employees of the City of Creve Coeur, including estimations of the recommended contribution requirements and the Plan's funded status for a number of scenarios. The following is a summary of the scenarios modeled in the attached exhibits.

Scenario 1 – July 1, 2022 Valuation

The first column of Exhibit 1 contains the results of the most recently completed valuation as of July 1, 2022. We have also included a multi-year projection of the pension funded status and Actuarially Determined Contribution (ADC) in Exhibit 2. This information is included for comparative purposes.

Scenario 2 – 1% COLA per Year of Retirement Since 7/1/2001

This scenario includes a 1% COLA for each full year of retirement since 7/1/2001. The COLA increase is assumed to be a one-time increase for members who retired on or before 7/1/2021. The COLA does not change the benefit of any active or deferred vested members. As shown in Exhibit 1, the total cost of the COLA is \$2,140,279 (line 5b). Assuming that the cost is amortized over a closed 15 year period, the ADC would increase by \$220,369 to \$1,235,546 per year. The projected impact of the 1% COLA is represented by the green bars and line on Exhibit 2.

Scenario 3 – 0.5% COLA per Year of Retirement Since 7/1/2001

Scenario 3 is the same as Scenario 2 except that the COLA per year of retirement is assumed to be 0.5% instead of 1.0%. As shown in Exhibit 1, the total cost of the COLA

is \$1,125,362 (line 5b). Assuming that the cost is amortized over a closed 15 year period, the ADC would increase by \$110,185 to \$1,125,362 per year. The projected impact of the 0.5% COLA is represented by the orange bars and line on Exhibit 2.

For the purpose of this study, we have assumed that the benefit increases are effective, July 1, 2022. Unless stated otherwise, all actuarial assumptions and methods are the same as those used in the July 1, 2022 Actuarial Valuation Report. Note that if the City shows a pattern of COLA increases over time, it may become necessary to include liability for future COLAs in future Actuarial Valuations and GASB 67/68 reports.

Please note that before the plan can be amended to increase benefits, an actuarial cost statement under Missouri Revised Statute Section 105.665 must be filed with the Joint Committee on Public Employee Retirement (JCPER). The Section 105.665 requires additional information not contained in this preliminary report.

Milliman is not a law firm and cannot provide legal advice. We recommend that the City consult with its benefits attorney prior to taking any action.

Certification

These estimates are subject to the uncertainties of a regular actuarial valuation; the costs are inexact because they are based on assumptions that are themselves necessarily inexact, even though we consider them reasonable. Thus, the emerging costs may vary from those presented in this letter to the extent actual experience differs from the actuarial assumptions.

Milliman's work is prepared solely for the internal business use of the City of Creve Coeur. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

- (a) The City may provide a copy of Milliman's work, in its entirety, to the Plan's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the Plan.
- (b) The City may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

These estimates have been prepared for the internal use of and are only to be relied upon by the City. No portion of this report may be disclosed to any other party without Milliman's prior written consent. In the event such consent is given, the report must be provided in its entirety, unless prior written consent is obtained from Milliman.

Best Regards,

William D. Winningham, EA, MAAA, FCA
Consulting Actuary

WDW

Enclosures

DRAFT

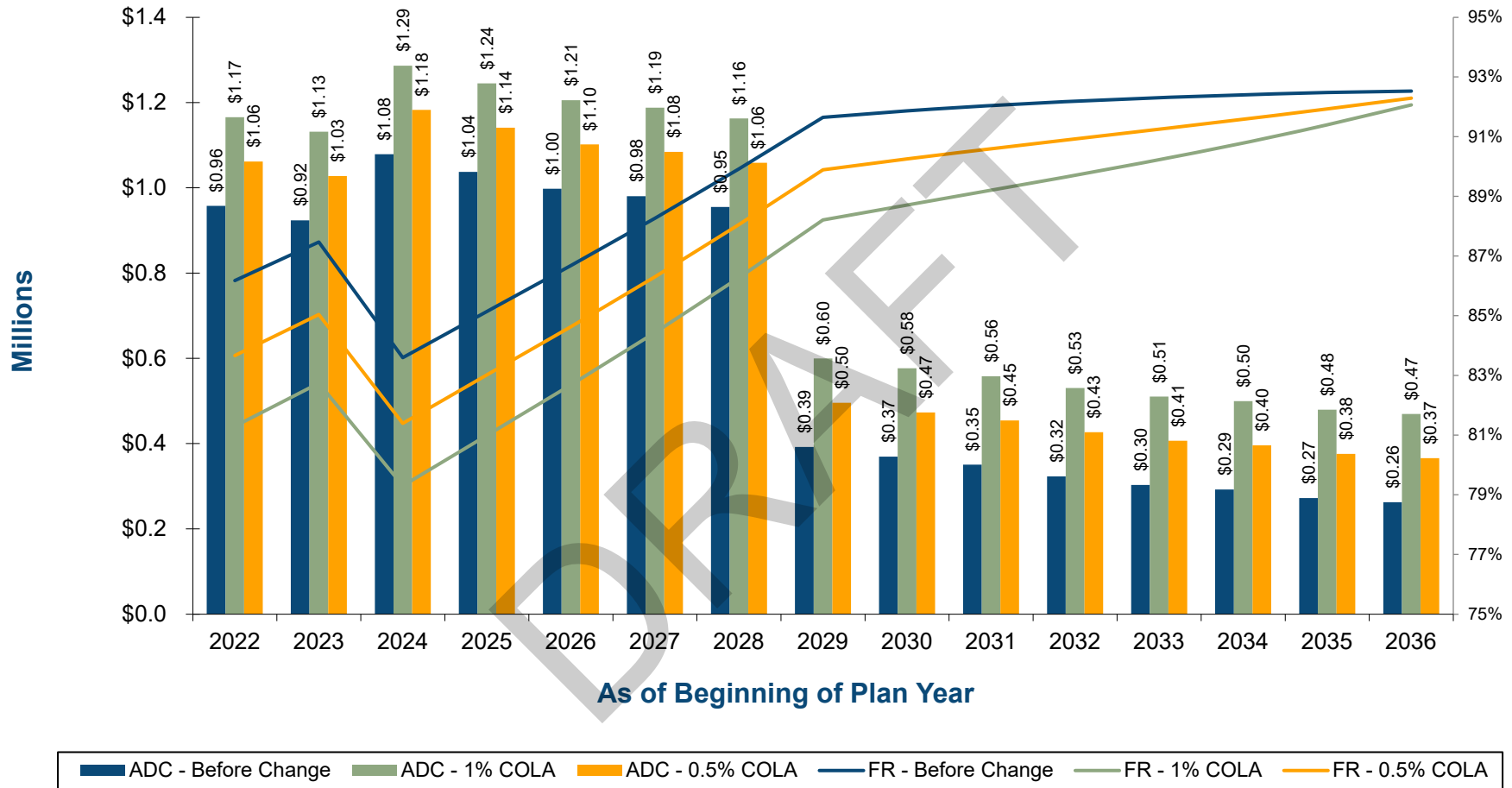
Development of Actuarially Determined Contribution (Proposed Retiree COLA)

	<u>Baseline</u>	<u>1% COLA</u>	<u>0.5% COLA</u>
1. Accrued Liability			
a. Active Participants	\$10,348,958	\$10,348,958	\$10,348,958
b. Terminated Vested Participants	1,837,911	1,837,911	1,837,911
c. Retired Participants	23,465,255	25,605,534	24,535,395
d. Total	<u>35,652,124</u>	<u>37,792,403</u>	<u>36,722,264</u>
2. Actuarial Value of Assets	30,722,983	30,722,983	30,722,983
3. Funded Ratio: (2) / (1d)	86.2%	81.3%	83.7%
4. Covered Payroll	2,367,957	2,367,957	2,367,957
5. Unfunded Actuarial Liability (UAL)	4,929,141	7,069,420	5,999,281
a. Outstanding UAL from July 1, 2015	3,011,670	3,011,670	3,011,670
b. Outstanding UAL after July 1, 2022 - COLA	0	2,140,279	1,070,140
c. Outstanding UAL after July 1, 2015	1,917,471	1,917,471	1,917,471
6. Normal Cost:			
a. Entry Age Normal Cost	302,596	302,596	302,596
b. Expected Employee Contributions	94,718	94,718	94,718
i. As a percentage of Covered Payroll: (6b) / (4)	4.0%	4.0%	4.0%
c. Employer Normal Cost without Expenses: (6a) - (6b)	207,878	207,878	207,878
ii. As a percentage of Covered Payroll: (6c) / (4)	8.8%	8.8%	8.8%
d. Assumed Administrative Expenses	54,626	54,626	54,626
e. Employer Normal Cost including Expenses: (6c) + (6d)	262,504	262,504	262,504
7. 14-Year Amortization of UAL from July 1, 2015 (7 years remaining)	508,958	508,958	508,958
8. 15-Year Amortization of Additional UAL after July 1, 2022 - COLA	0	207,895	103,948
9. 15-Year Amortization of Additional UAL after July 1, 2015	186,253	186,253	186,253
10. Employer Cost			
a. Actuarially Determined Contribution: (6e) + (7) + (8) + (9)	<u>957,715</u>	<u>1,165,610</u>	<u>1,061,663</u>
b. Payable as of the end of the plan year: (10a) x 1.06	1,015,177	1,235,546	1,125,362
c. As a percentage of Covered Payroll: (10a) / (4)	40.4%	49.2%	44.8%
11. Increase in Actuarially Determined Contribution (as of end of plan year)	0	220,369	110,185

Actuarial Valuation for Plan Year Beginning July 1, 2022
Retirement Plan for Employees of the City of Creve Coeur

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Retirement Plan for Employees of the City of Creve Coeur 2022 Projections (Proposed Retiree COLA)



1. Assumptions are the same as 2022 valuation plus:
 - Administrative expenses remain the same
 - Employer contributes Actuarially Determined Contribution each year
2. Potential variability of results discussed in ASOP 51 section of the 2022 actuarial valuation

ADC = Actuarially Determined Contribution FR = Funded Ratio



**City of Creve Coeur
Employee Pension Fund Board of Trustees**

DATE: August 11, 2022

TO: Commerce Trust
c/o John Bascio, Plan Administrator

FROM: City of Creve Coeur
Director of Finance Lori Obermoeller
Employee Pension Fund Board of Trustees

SUBJECT: Pension Plan Disbursements

This is your authorization to make the following disbursements from the City of Creve Coeur Pension account.

Payee	Reason for Payment	Amount
City of Creve Coeur 300 N. New Ballas Road Creve Coeur, MO 63141	MAPERS Annual Conference July 13-15, 2022	
	MAPERS Annual Conference for 2:	
	Brad Holmes Hotel & Mileage	\$ 475.21
	Mike Breitenstein Hotel & Mileage	\$ 313.61
	Mark Perkins Registration, Food & Mileage	\$ 315.77

Please prepare the check(s) and advise Lori Obermoeller by e-mail at lobermoeller@crevecoeurmo.gov

Thank you for your immediate attention to this matter.

Total \$ 1,104.59