Employee Pension Board of Trustees
Pension Board Meeting Agenda
October 17, 2017
5:30 PM
Administrative Conference Room
City of Creve Coeur
300 N. New Ballas Road

I. Call Meeting to Order

II. Fiduciary Advisors Quarterly Report

III. Commerce Bank Report

Commerce Bank Report

IV. Actuarial Report Review

FY 18 Actuarial Report

FY 18 Actuarial Valuation

FY 18 GASB 67-68

Fy 18 Gasb 67-68

V. Approval of Meeting Minutes

Approval of July 18, 2017 Employee Pension Board of Trustees Pension Board Meeting Minutes z

Approval of August 29, 2017 Employee Pension Board of Trustees Pension Board Meeting Minutes z

VI. Annual Report

Annual Pension Report

VII. Commerce Bank Discussion

VIII. Revised Retirement Forms

Retirement Form Change

IX. Pension Report Certification

Pension Reports Financial Certification

X. LAGERS Follow-up

LAGERS Information

XI. Proposed Meeting Schedule for 2018

1. **Proposed Pension Board Meeting Schedule - 2018**

XII. Invoice Paid since 7-18-17

Invoices Paid Since 7-18-17 Meeting

XIII. Other Business

XIV. Upcoming events

Joint meeting with City Council is scheduled for 11/27/17
Citizen Survey to be done next spring.
Mayor's Holiday Dinner is December 5, 2017
Required Annual Training for Pension Board Members

Annual Training for Board Members

XV. Adjournment

INVESTMENT ADVISOR REPORT (ID # 2697)

Commerce Bank Report

City of Creve Coeur
Pension (Fixed Income)

We ask,
listen
and solve

October 17, 2017

The Commerce Trust Company
A division of Commerce Bank

  

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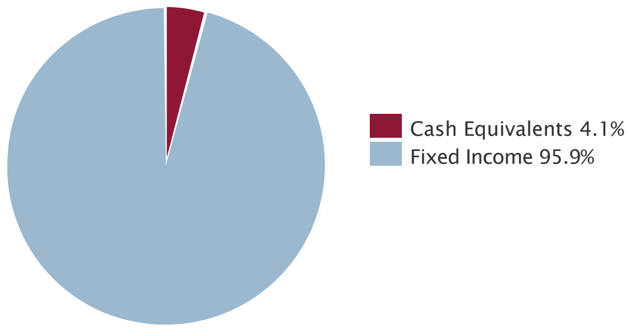
Asset Allocation Summary - As of September 30, 2017

Actual Allocation



	% of Portfolio	Market Value	Total Cost	Est. Annual Income	Yield
Cash Equivalents	4.06%	$274,278	$274,278	$2,893	1.05%
Equity Investments	0.00%	$0	$0	$0	0.00%
Fixed Income Investments	95.94%	$6,480,101	$6,410,133	$208,003	2.76%
Domestic	95.94%	$6,480,101	$6,410,133	$208,003	2.76%
Alternative Investments	0.00%	$0	$0	$0	0.00%
GRAND TOTAL	100.00%	$6,754,379	$6,684,411	$210,896	2.69%

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

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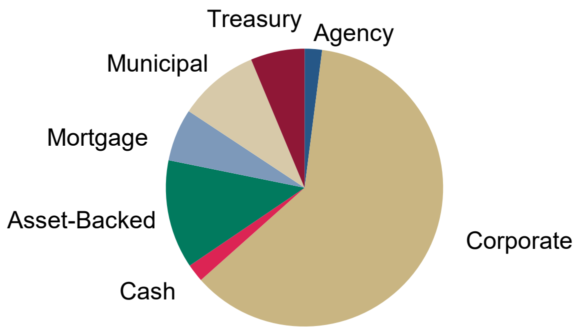
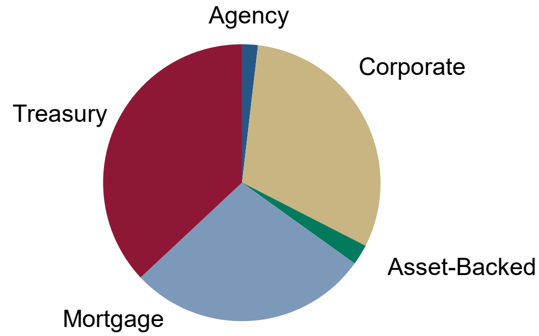
Portfolio vs. Benchmark Comparison – as of September 30, 2017

City of Creve Coeur (MV: $6.7MM)



Asset Class	%
Treasury	6.30
Agency	2.02
Corporate	61.39
Asset-Backed	12.68
Mortgage	6.13
Municipal	9.40
Cash	2.08
Total	**100.00**

BBG Barclays Aggregate



Asset Class	%
Treasury	36.98
Agency	1.84
Corporate	30.68
Asset-Backed	2.37
Mortgage	28.13
Total	**100.00**

City of Creve Coeur		BBG Barclays Aggregate
2.66%	YTM	2.55%
7.36	Maturity (yrs)	8.25
5.72	Duration (yrs)	5.96
A+	Quality	AA

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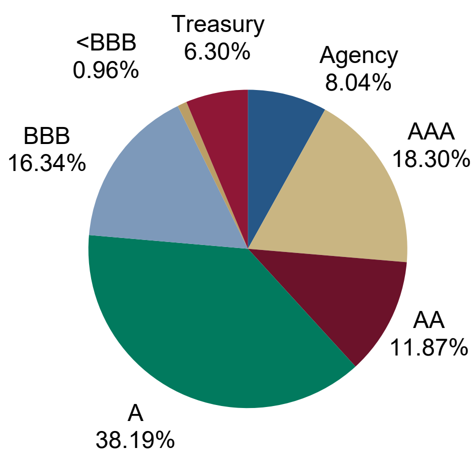
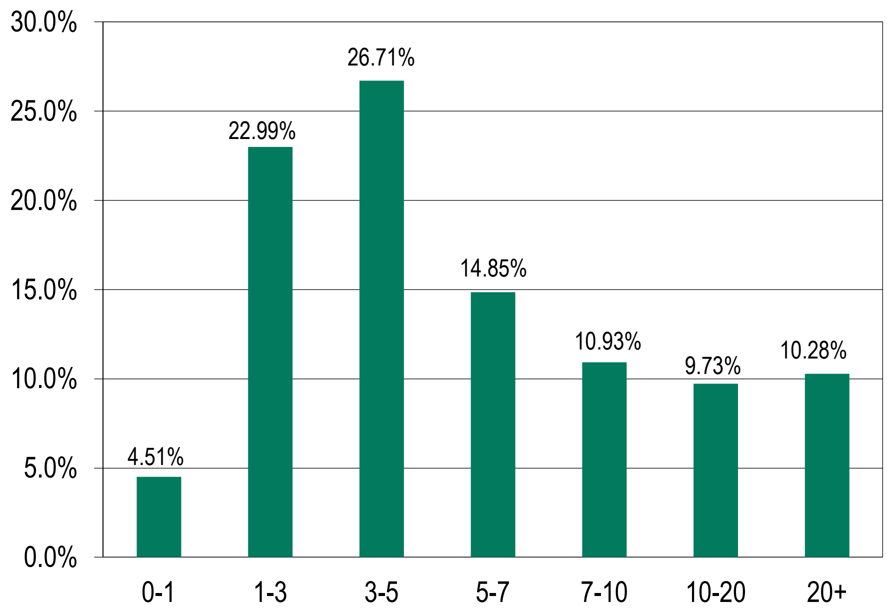
Bond Portfolio Characteristics – as of September 30, 2017

Quality



Average Quality = A+

Effective Maturity Schedule



Average Life = 7.36 years

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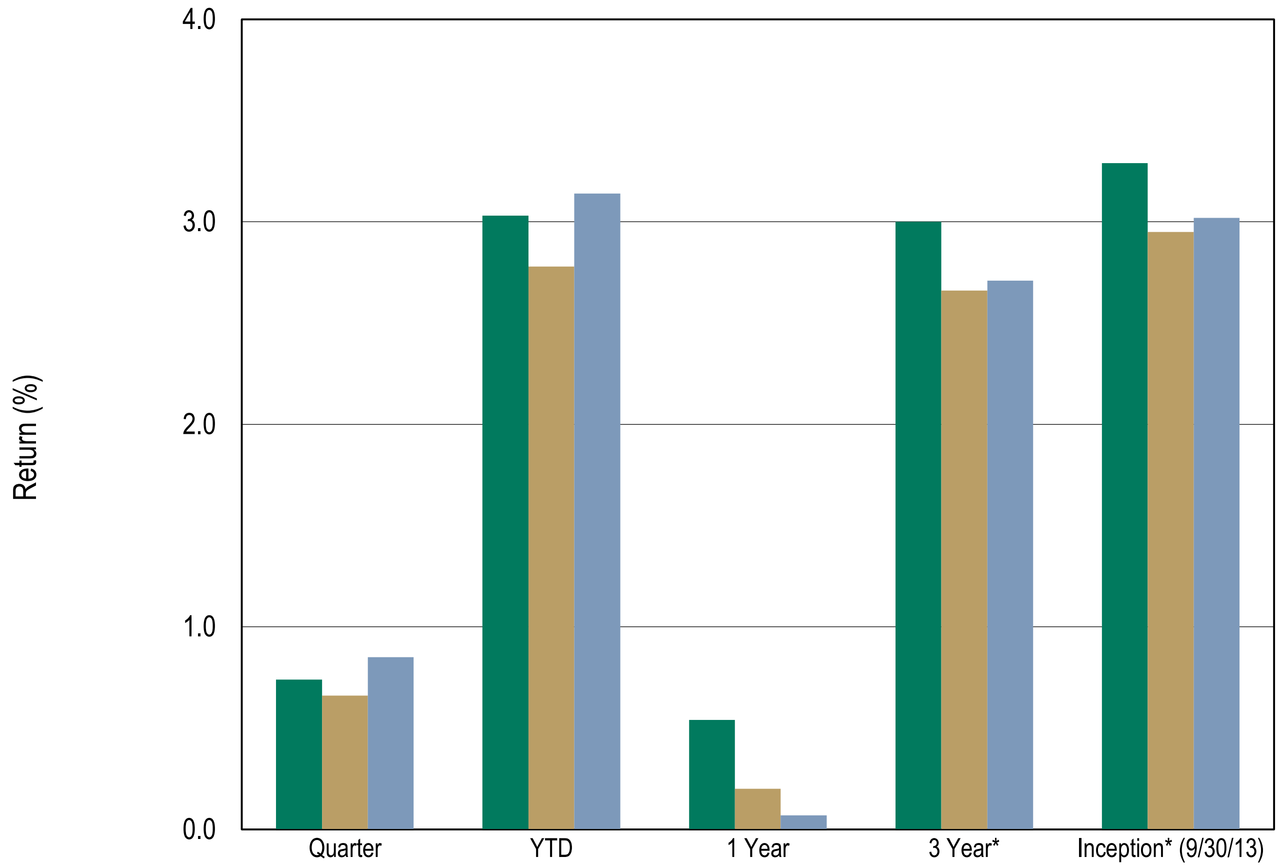
Fixed Income Performance Comparison – as of September 30, 2017



	Quarter	YTD	1 Year	3 Year*	Inception* (9/30/13)
City of Creve Coeur (Gross of Fees)	0.74	3.03	0.54	3.00	3.29
City of Creve Coeur (Net of Fees)	0.66	2.78	0.20	2.66	2.95
BBG Barclays Aggregate	0.85	3.14	0.07	2.71	3.02

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

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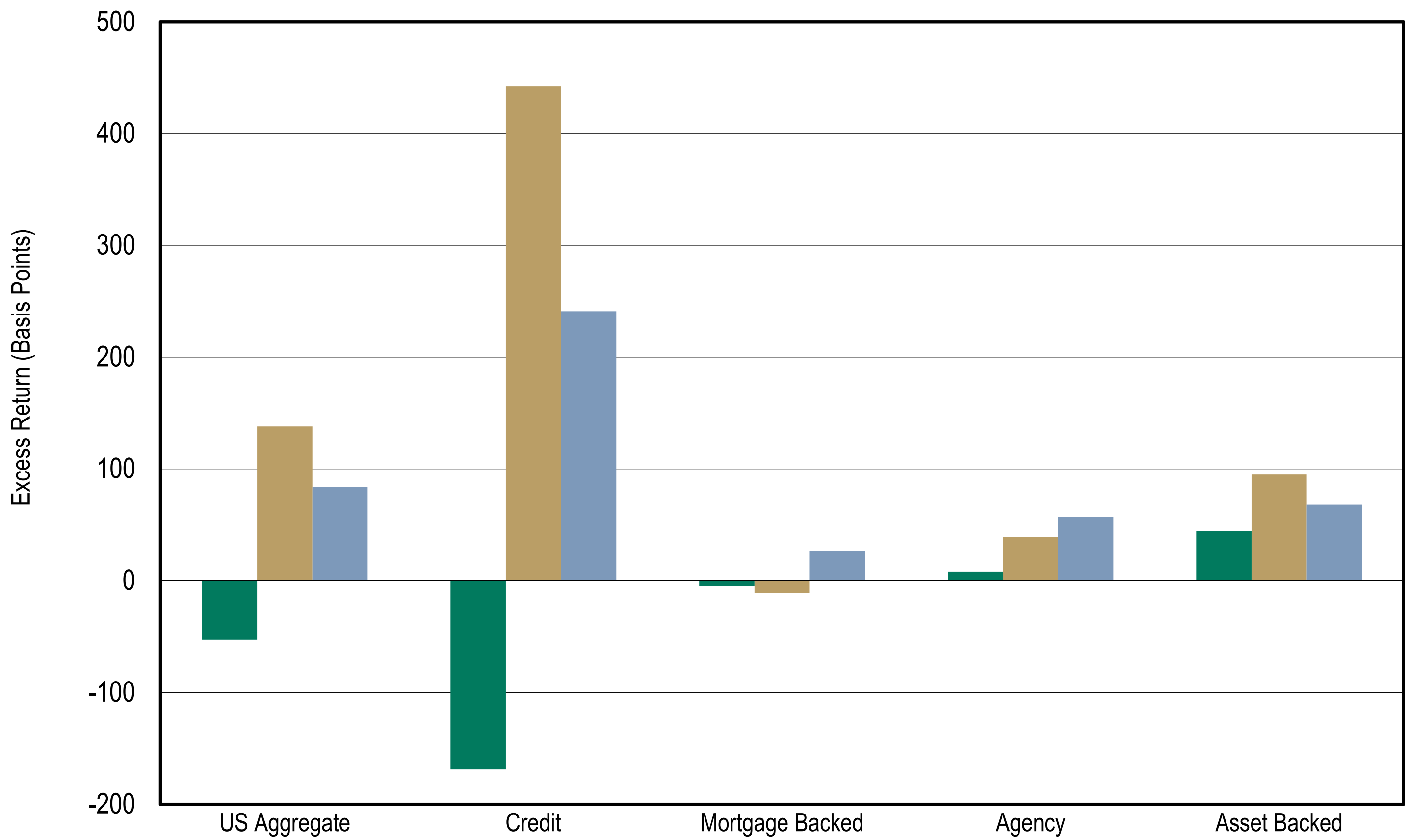
Duration Adjusted Excess Returns Relative to US Treasuries – as of September 30, 2017



	US Aggregate	Credit	Mortgage Backed	Agency	Asset Backed
2015	-53	-169	-5	8	44
2016	138	442	-11	39	95
YTD 2017	84	241	27	57	68

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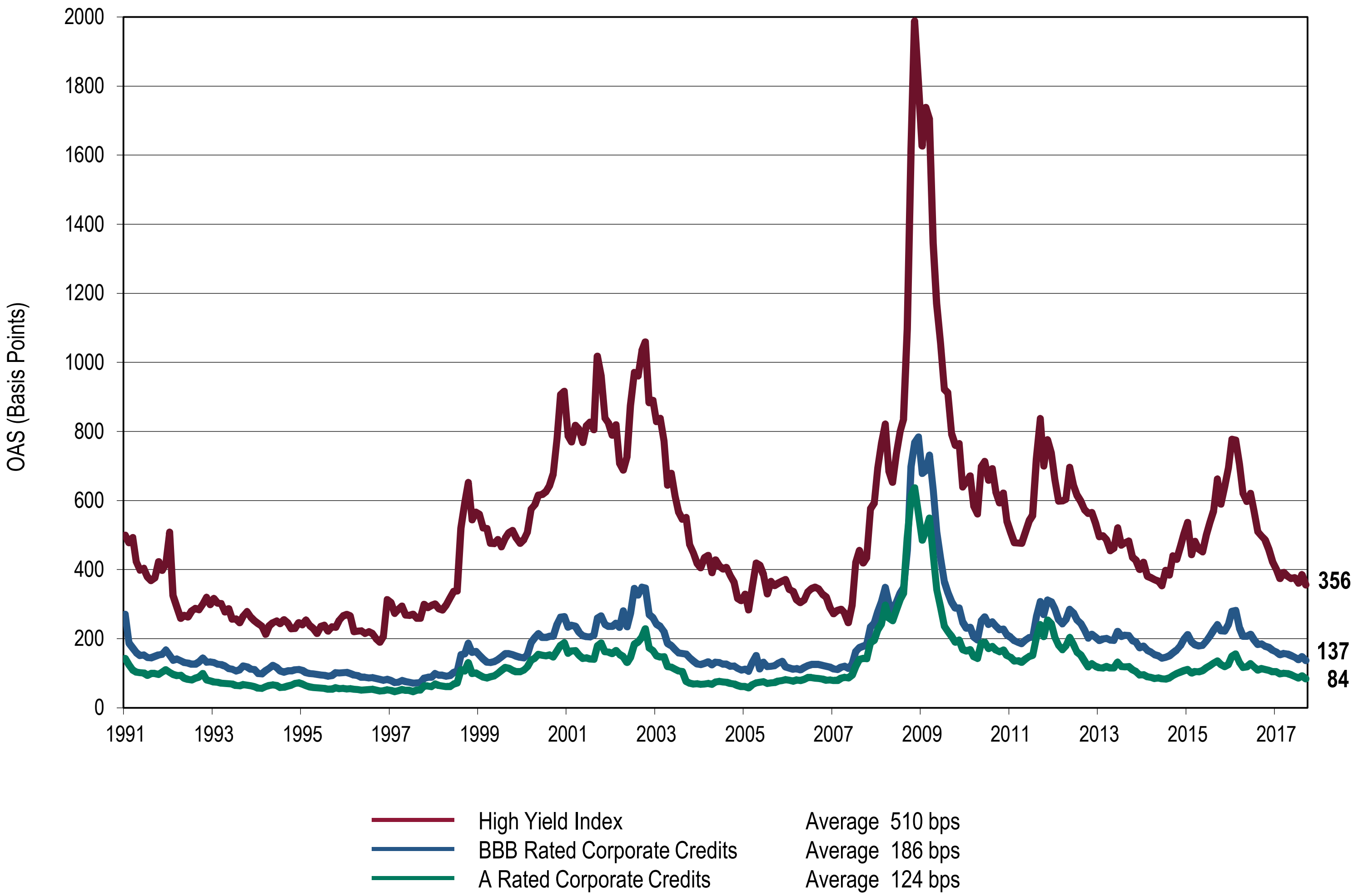
Corporate Credit Spreads – 01-31-91 through 09-30-17



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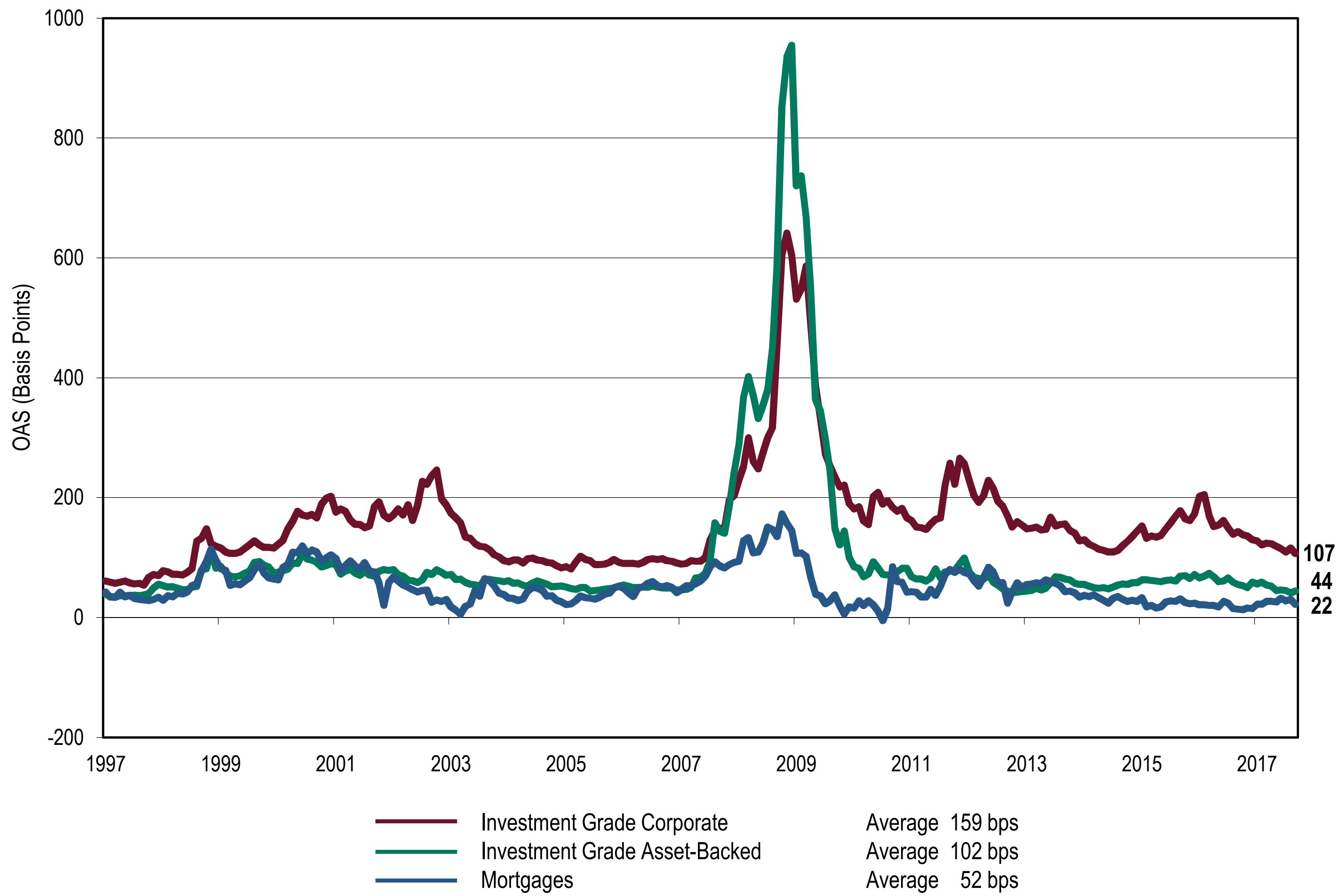
Sector Credit Spreads – 01-31-97 through 09-30-17



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Bond Market Total Returns

Market	2015	2016	2017 1Q	2017 2Q	2017 3Q	YTD	Sept.
Master Index	0.60%	2.62%	0.87%	1.46%	0.83%	3.19%	-0.51%
Corporate	-0.63%	5.96%	1.42%	2.42%	1.37%	5.30%	-0.23%
Treasuries	0.83%	1.14%	0.68%	1.22%	0.39%	2.32%	-0.88%
Agencies	0.99%	1.50%	0.74%	0.88%	0.51%	2.15%	-0.50%
Mortgages	1.46%	1.67%	0.46%	0.90%	0.92%	2.30%	-0.25%
Asset-Backed	0.42%	1.97%	0.75%	0.66%	0.56%	1.99%	-0.01%
High-Yield	-4.64%	17.49%	2.71%	2.16%	2.03%	7.05%	0.90%
Municipal	3.55%	0.44%	1.39%	1.98%	1.20%	4.63%	-0.38%
2yr Treasury	0.46%	0.66%	0.23%	0.12%	0.18%	0.53%	-0.17%
10 Yr Treasury	0.91%	-0.16%	0.77%	1.29%	0.27%	2.35%	-1.61%
30yr Treasury	-3.20%	0.89%	1.27%	4.21%	0.32%	5.87%	-2.42%
TIPS	-1.71%	4.85%	1.31%	-0.38%	0.93%	1.86%	2.57%

Source: Bank of America/Merrill Lynch

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Economic Outlook

— GDP growth in Q2-17 was reported at 3.1%. Personal consumption remained solid, and business capex rebounded. Near-term economic indicators reveal a mixed picture due to hurricane impacts, but GDP growth will likely register between 2% and 3% during the next six to nine months; at least until more clarity appears on Trump's pro-growth policies.

— The FOMC raised the Fed Funds rate by 25 bps to a target range of 1.00-1.25% at their June 14 meeting, but remained on hold on July 26 and September 20. Ongoing improvement in economic activity and the labor market suggests that the pace of further rate hikes is expected to be gradual; with one more increase projected for 2017.

— September nonfarm payroll employment lost 33,000 jobs in the month, well off the year-to-date average of a 171,000 gain, due to the impacts of Hurricanes Harvey, Irma, and Maria. This should prove to be a one month anomaly, as the unemployment rate fell to 4.2% (a 16-year low). Wage growth also showed signs of a healthy labor market and continued support to consumer spending.

— Corporate credit spreads (borrowing rates) have continued to narrow slightly this year as a result of improved economic data, steady growth in employment and income, as well as favorable credit conditions. These positive fundamentals are projected to continue through the rest of the year.

— Until recently, ongoing slack and low inflation had pushed interest rates in developed markets to extremely low – in many cases negative – levels. After the Trump election, the bond market initially reacted to potentially stronger growth, inflation, and fiscal spending with significantly higher yield levels. However, headwinds remain in place and longer term U.S. Treasury yields are now lower year-to-date.

— Broadly speaking, financial conditions are still favorable for growth. Fundamentals of employment, wages, energy prices and wealth should continue to support sustained growth moving into 2018.

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City of Creve Coeur Retirement
Analysis of Sector Limitations
September 2017

Sector Type	Normal Unit Commitment (% Portfolio)	Max Exposure Per Credit (% Portfolio)	Max Sector Exposure (% Portfolio)	Current (% Portfolio)
U.S. Treasury Securities	**Unlimited**	**Unlimited**	**Unlimited**	6.3%
Federal Agency Securities	**Unlimited**	**Unlimited**	**Unlimited**	2.0%
Agency Passthroughs/CMOs/Other MBS	**2%**	**5%**	**60%**	6.1%
Asset Backed Securities	**2%**	**5%**	**25%**	12.7%
Corporate Securities	**2%**	**5%**	**75%**	61.4%
Municipal Securities	**2%**	**5%**	**20%**	9.4%
Cash & Equivalents	**2%**	**10%**	**10%**	2.1%

Additional Constraints	Constraint	Current
Average Credit Quality	>=A-	A+
Duration	±30% of index	-4.9%
BBB Credits	<=20%	16.3%
144A Issues	<=10%	0.0%
Below Investment Grade**	<=5%	1.0%

* Index = BBG Barclays 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.

Attachment: Commerce Bank Report (Commerce Bank Report)

Portfolio Position Report

Portfolio: CITY OF CREVE C 8016
Pricing Date: 09/29/2017
Representative:

Currency: USD
LOTS COMBINED:

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		**139**	**139**	**2.084**		**1.100**	**0.082**	**Aaa**	**Aaa**	**AAA**	**1.100**	**0.083**	**0.082**	**0.000**	**0**
	000000CM9	139	139	2.084	CASH & EQUIVALENTS	1.100	10/29/2017	Aaa	Aaa	AAA	1.100	0.083	0.082	0.000	0
TSY		**430**	**420**	**6.301**		**1.930**	**13.054**	**Aa1**	**Aaa**	**AA+**	**2.373**	**13.077**	**10.550**	**0.865**	**2**
	9128282D1	150	144	2.166	UNITED STATES TREAS NTS	1.375	08/31/2023	Aa1	TSY	TSY	2.056	5.917	5.685	0.178	0
	912828P46	150	143	2.142	UNITED STATES TREAS NTS	1.625	02/15/2026	Aa1	TSY	TSY	2.273	8.417	7.845	0.339	4
	912810QX9	70	69	1.040	UNITED STATES TREAS BDS	2.750	08/15/2042	Aa1	TSY	TSY	2.818	24.917	18.498	2.091	3
	912810RH3	60	64	0.952	UNITED STATES TREAS BDS	3.125	08/15/2044	Aa1	TSY	TSY	2.831	26.917	19.019	2.269	1
AGY		**135**	**135**	**2.017**		**1.444**	**3.021**	**Aa1**	**Aaa**	**AA+**	**1.643**	**3.045**	**2.942**	**0.047**	**1**
	3135G0D75	75	75	1.126	FEDERAL NATL MTG ASSN	1.500	06/22/2020	Aa1	AGY	AA+	1.605	2.750	2.657	0.038	2
	3130A7CV5	60	59	0.892	FEDERAL HOME LOAN BANKS	1.375	02/18/2021	Aa1	AGY	AA+	1.690	3.417	3.301	0.058	0
OGVT		**405**	**418**	**6.261**		**2.821**	**5.271**	**Aa2**	**Aa1**	**AA+**	**2.489**	**3.938**	**3.877**	**-0.044**	**59**
	7987646R2	50	50	0.751	SAN MARCOS TEX GO REF BDS 2	1.750	02/15/2018	Aa2	N/A	AA	1.820	0.417	0.377	0.002	62
	172253DX1	60	60	0.903	CINCINNATI OHIO CITY SCH DI	2.050	12/15/2019	Aa3	Aa3	N/A	2.138	2.250	2.138	0.028	62
	613741EY9	55	58	0.869	MONTGOMERY CNTY VA ECONOMI(	3.350	06/01/2021	Aa3	Aa2	AA-	2.139	3.667	3.430	0.065	41
	8827237K9	60	61	0.921	TEXAS ST GO AND REF BDS 201	2.315	10/01/2021	Aaa	Aaa	AAA	2.070	4.000	3.772	0.079	28
	45462TFP2	75	75	1.124	INDIANA BD BK REV TAXABLE B	2.263	02/01/2022	Aa1	N/A	AA+	2.389	4.333	4.114	0.094	54
	696543MZ7	55	59	0.883	PALM BEACH CNTY FLA PUB IMP	4.000	11/01/2025	Aa1	Aa1	AA+	3.229	6.083	5.904	-0.083	91
	60374Y8A8	50	54	0.810	MINNEAPOLIS MINN TAXABLE GO	4.379	03/01/2034	Aa1	Aa1	AAA	3.682	6.417	7.116	-0.574	82
IND		**2,066**	**2,250**	**33.727**		**3.947**	**8.351**	**A2**	**A2**	**A**	**2.870**	**8.303**	**6.316**	**0.344**	**83**
	884903BB0	25	26	0.394	THOMSON REUTERS CORP	6.500	07/15/2018	Baa2	Baa2	BBB+	1.786	0.833	0.769	0.005	50
	118230AL5	25	25	0.380	BUCKEYE PARTNERS L P	2.650	11/15/2018	Baa3	Baa3	BBB-	2.276	1.083	1.047	-0.018	87
	594918AY0	60	60	0.906	MICROSOFT CORP	1.850	02/12/2020	Aaa	Aaa	AAA	1.653	2.250	2.273	0.008	11
	773903AF6	60	60	0.897	ROCKWELL AUTOMATION INC	2.050	03/01/2020	A3	A3	A	2.221	2.417	2.321	0.013	68
	053611AF6	30	33	0.490	AVERY DENNISON CORP	5.375	04/15/2020	Baa2	Baa2	BBB	2.715	2.583	2.333	0.032	116
	25243YAP4	50	54	0.815	DIAGEO CAP PLC	4.828	07/15/2020	A3	A3	A-	1.975	2.833	2.608	0.038	39
	375558BB8	60	61	0.917	GILEAD SCIENCES INC	2.550	09/01/2020	A3	A3	A	1.921	2.917	2.811	0.042	31
	046353AK4	60	61	0.912	ASTRAZENECA PLC	2.375	11/16/2020	Baa1	A3	BBB+	2.201	3.167	2.986	0.048	56
	92826CAB8	60	61	0.914	VISA INC	2.200	12/14/2020	A1	A1	A+	1.870	3.167	3.044	0.031	21
	494550BT2	30	31	0.462	KINDER MORGAN ENERGY PARTNE	3.500	03/01/2021	Baa3	Baa3	BBB-	2.737	3.250	3.121	0.020	103
	89233P4S2	75	81	1.207	TOYOTA MTR CRD CORP MTN BE	4.250	01/11/2021	Aa3	Aa3	AA-	2.207	3.250	3.057	0.051	54
	30231GAV4	50	50	0.756	EXXON MOBIL CORP	2.222	03/01/2021	Aa1	Aaa	AA+	1.992	3.333	3.253	0.040	30
	440452AE0	55	59	0.891	HORMEL FOODS CORP	4.125	04/15/2021	A2	A1	A	2.312	3.333	3.057	0.038	52
	63946BAE0	55	60	0.905	NBCUNIVERSAL MEDIA LLC	4.375	04/01/2021	A3	A3	A-	2.110	3.500	3.208	0.057	41
	92343VCN2	25	26	0.387	VERIZON COMMUNICATIONS INC	3.000	11/01/2021	Baa1	Baa1	BBB+	2.469	3.917	3.742	0.045	66
	458140AJ9	55	58	0.877	INTEL CORP	3.300	10/01/2021	A1	A1	A+	2.072	4.000	3.711	0.077	29
	009158AR7	55	57	0.859	AIR PRODS & CHEMS INC	3.000	11/03/2021	A2	A2	A	2.224	4.083	3.819	0.082	42
	00037BAB8	70	72	1.082	ABB FIN USA INC	2.875	05/08/2022	A2	A2	A	2.421	4.583	4.275	0.104	54
	893526DM2	70	70	1.053	TRANSCANADA CORP	2.500	08/01/2022	A3	A3	A-	2.502	4.833	4.542	0.116	58
	92826CAC6	55	57	0.850	VISA INC	2.800	12/14/2022	A1	A1	A+	2.337	5.083	4.757	0.099	36
	548661CZ8	55	59	0.883	LOWES COS INC	3.875	09/15/2023	A3	A3	A-	2.602	5.750	5.220	0.122	53
	89153UAF8	60	61	0.913	TOTAL CAP CDA LTD	2.750	07/15/2023	A1	Aa3	A+	2.566	5.833	5.341	0.162	54

Portfolio Position Report

Portfolio: CITY OF CREVE C 8016 — **Currency: USD**

Pricing Date: 09/29/2017 — **LOTS COMBINED:**

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
	61945CAC7	25	26	0.395	MOSAIC CO NEW	4.250	11/15/2023	Baa3	Baa3	BBB-	3.546	5.917	5.241	0.122	148
	44266RAC1	55	58	0.870	HOWARD HUGHES MED INST	3.500	09/01/2023	Aaa	Aaa	AAA	2.533	5.917	5.378	0.165	50
	90131HAA3	30	32	0.486	21ST CENTY FOX AMER INC	4.000	10/01/2023	Baa1	Baa1	BBB+	2.902	6.000	5.285	0.163	86
	546268AG8	45	55	0.825	LOUISIANA LD & EXPL CO	7.650	12/01/2023	Baa1	Baa1	A-	3.992	6.167	4.980	0.152	196
	84756NAD1	30	33	0.490	SPECTRA ENERGY PARTNERS LP	4.750	03/15/2024	Baa2	Baa2	BBB+	3.228	6.250	5.478	0.148	112
	37045XBW5	35	36	0.547	GENERAL MTRS FINL CO INC	3.950	04/13/2024	Baa3	Baa3	BBB	3.532	6.333	5.629	0.162	143
	74005PBN3	70	69	1.034	PRAXAIR INC	2.650	02/05/2025	A2	A2	A	2.934	7.333	6.611	0.216	76
	920355AK0	30	31	0.471	VALSPAR CORP	3.950	01/15/2026	Baa2	NR	BBB	3.408	8.083	6.986	0.252	119
	452308AX7	60	59	0.886	ILLINOIS TOOL WKS INC	2.650	11/15/2026	A2	A2	A+	2.960	9.167	8.002	0.338	69
	05565QDN5	100	100	1.499	BP CAP MKTS P L C	3.279	09/19/2027	A3	A1	A-	3.290	10.000	8.482	0.387	99
	925524AH3	25	35	0.519	VIACOM INC	7.875	07/30/2030	Baa2	Baa2	BBB	4.120	12.833	8.870	0.507	176
	001957BD0	50	72	1.078	AT&T CORP	8.250	11/15/2031	Baa1	Baa1	BBB+	4.352	14.167	9.243	0.568	195
	097023AG0	36	57	0.850	BOEING CO	8.625	11/15/2031	A2	A2	A	3.660	14.167	9.363	0.578	126
	91913YAE0	25	34	0.506	VALERO ENERGY CORP NEW	7.500	04/15/2032	Baa2	Baa2	BBB	4.509	14.583	9.524	0.604	209
	549271AF1	45	61	0.909	LUBRIZOL CORP	6.500	10/01/2034	Aa2	Aa2	AA	3.935	17.000	11.138	0.823	142
	898384AQ5	60	71	1.067	TRUSTEES UNION COLLEGE	4.877	07/01/2035	A1	A1	N/A	3.545	17.750	12.495	0.991	98
	88579EAC9	50	66	0.983	3M CO MEDIUM TERM NTS BK ENT	5.700	03/15/2037	A1	A1	AA-	3.495	19.500	13.046	1.102	89
	12189LAG6	40	46	0.693	BURLINGTON NORTHN SANTA FE C	4.950	09/15/2041	A3	A3	A	3.950	23.500	14.961	1.468	124
	13645RAQ7	25	31	0.466	CANADIAN PAC RY CO NEW	5.750	01/15/2042	Baa1	Baa1	BBB+	4.223	24.333	14.389	1.428	153
	035242AB2	55	55	0.831	ANHEUSER BUSCH INBEV FIN INC	4.000	01/17/2043	A3	A3	A-	3.998	25.333	16.178	1.740	125
	655844BQ0	35	38	0.571	NORFOLK SOUTHERN CORP	4.450	06/15/2045	Baa1	Baa1	BBB+	3.996	27.250	16.516	1.852	121
FIN		**1,265**	**1,320**	**19.788**		**3.545**	**8.912**	**A3**	**A3**	**A-**	**2.993**	**8.837**	**6.719**	**0.411**	**92**
	45866FAB0	55	56	0.838	INTERCONTINENTAL EXCHANGE IN	2.500	10/15/2018	A2	A2	A	1.955	1.083	1.015	0.008	58
	49326EEE9	30	30	0.455	KEYCORP MEDIUM TERM NTS BE	2.300	12/13/2018	Baa1	Baa1	BBB+	1.848	1.083	1.123	-0.013	42
	61761JB32	60	61	0.922	MORGAN STANLEY	2.800	06/16/2020	Baa1	A3	BBB+	2.163	2.750	2.589	0.037	58
	264411AD1	30	31	0.471	DUKE REALTY CORP	3.875	02/15/2021	Baa1	Baa1	BBB+	2.564	3.250	3.045	0.024	85
	94974BFR6	70	72	1.079	WELLS FARGO CO MTN BE	3.000	01/22/2021	A2	A2	A	2.283	3.333	3.139	0.053	61
	00912XAM6	30	32	0.478	AIR LEASE CORP	3.875	04/01/2021	Baa2	N/A	BBB	2.542	3.417	3.169	0.042	83
	0258M0EB1	75	76	1.133	AMERICAN EXPRESS CR CORP MTN	2.250	05/05/2021	A3	A2	A-	2.292	3.583	3.398	0.049	57
	637417AD8	30	33	0.497	NATIONAL RETAIL PPTYS INC	5.500	07/15/2021	Baa1	Baa1	BBB+	2.863	3.583	3.217	0.056	100
	06406HBY4	70	73	1.098	BANK NEW YORK MTN BK ENT	3.550	09/23/2021	A2	A1	A	2.337	3.917	3.675	0.060	55
	06051GGK9	45	46	0.686	BANK AMER CORP FXFLT	2.881	04/24/2022	Baa1	Baa1	BBB+	2.779	4.583	4.224	0.101	90
	12572QAE5	30	31	0.463	CME GROUP INC	3.000	09/15/2022	Aa3	Aa3	AA-	2.412	5.000	4.621	0.121	47
	59523UAA5	25	27	0.405	MID-AMERICA APTS LP	4.300	10/15/2023	Baa1	Baa1	BBB+	3.193	5.833	5.139	0.119	113
	313747AU1	55	58	0.871	FEDERAL REALTY INVT TR	3.950	01/15/2024	A3	A3	A-	3.090	6.083	5.459	0.134	100
	42217KBC9	25	27	0.406	HEALTH CARE REIT INC	4.500	01/15/2024	Baa1	Baa1	BBB+	3.197	6.083	5.356	0.135	110
	929089AD2	35	35	0.522	VOYA FINL INC	3.125	07/15/2024	Baa2	Baa2	BBB	3.341	6.833	6.048	0.192	121
	38141GWQ3	50	50	0.750	GOLDMAN SACHS GROUP IN FXFLT	3.272	09/29/2024	Baa1	A3	BBB+	3.251	7.000	6.272	0.224	110
	59156RBQ0	55	58	0.868	METLIFE INC	3.600	11/13/2025	A3	A3	A-	3.044	7.833	6.916	0.244	83
	69349LAQ1	55	60	0.899	PNC BK N A PITTSBURGH PA	4.200	11/01/2025	A3	A3	A-	3.175	8.000	6.804	0.263	97
	665859AP9	55	59	0.889	NORTHERN TR CORP	3.950	10/30/2025	A2	A2	A	3.085	8.083	6.900	0.279	89

Portfolio Position Report

Portfolio: CITY OF CREVE C 8016
Pricing Date: 09/29/2017
Representative:

Currency: USD
LOTS COMBINED:

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
	426767AA7	60	60	0.892	HENRY J KAISER FAMILY FNDTN	3.356	12/01/2025	Aaa	N/A	AAA	3.625	8.167	7.076	0.290	142
	91159HHM5	70	71	1.058	U S BANCORP MTNS BK ENT	3.100	04/27/2026	A3	A1	A-	3.162	8.583	7.443	0.310	93
	756109AS3	30	29	0.431	REALTY INCOME CORP	3.000	01/15/2027	Baa1	Baa1	BBB+	3.607	9.333	8.014	0.349	134
	172967KU4	30	31	0.466	CITIGROUP INC	4.125	07/25/2028	Baa3	Baa3	BBB	3.796	10.833	8.762	0.456	147
	46625HHV5	55	68	1.027	JPMORGAN CHASE & CO	5.500	10/15/2040	A3	A3	A-	4.025	23.083	14.067	1.353	135
	026874DA2	30	32	0.473	AMERICAN INTL GROUP INC	4.500	07/16/2044	Baa1	Baa1	BBB+	4.226	26.333	15.985	1.733	146
	743315AQ6	55	54	0.815	PROGRESSIVE CORP OHIO	3.700	01/26/2045	A2	A2	A	3.805	27.333	17.457	2.025	101
	89417EAK5	55	60	0.896	TRAVELERS COMPANIES INC	4.300	08/25/2045	A2	A2	A	3.817	27.417	17.041	1.939	102
UTIL		**490**	**526**	**7.882**		**4.021**	**12.266**	**A2**	**Aa3**	**A+**	**3.022**	**12.108**	**8.026**	**0.698**	**93**
	67021CAE7	55	56	0.845	NSTAR ELEC CO	5.625	11/15/2017	A2	A2	A	2.258	0.167	0.127	0.000	107
	837004CC2	40	43	0.644	SOUTH CAROLINA ELEC & GAS CO	6.500	11/01/2018	A3	A3	A	2.070	1.083	1.034	0.008	69
	637432MU6	70	71	1.063	NATIONAL RURAL UTILS COOP FI	2.350	06/15/2020	A2	A1	A	2.094	2.667	2.567	0.016	51
	26444GAB9	60	57	0.859	DUKE ENERGY FLA PROJ FIN LL	1.731	09/01/2024	Aaa	Aaa	AAA	2.963	4.000	3.822	0.088	113
	693304AP2	70	70	1.050	PECO ENERGY CO	2.375	09/15/2022	A3	Aa3	A-	2.386	5.000	4.632	0.088	44
	665772CB3	45	60	0.904	NORTHN STS PWR CO MINN	6.250	06/01/2036	A2	Aa3	A	3.831	18.667	12.119	0.973	126
	842400FZ1	50	59	0.880	SOUTHERN CALIF EDISON CO	4.650	10/01/2043	A2	Aa3	A	3.733	25.500	15.865	1.689	97
	595620AL9	50	58	0.873	MIDAMERICAN ENERGY CO	4.800	09/15/2043	A1	Aa2	A+	3.806	25.500	15.957	1.686	105
	89566EAK4	50	51	0.762	TRI-STATE GENERATION &TRANSM	4.250	06/01/2046	A3	A3	A	4.231	28.167	16.721	1.929	144
PASS		**207**	**211**	**3.161**		**3.039**	**4.297**	**Aa1**	**Aaa**	**AA+**	**2.513**	**4.297**	**3.568**	**-0.756**	**34**
	31402RGM5	10	10	0.154	FNMA POOL - 735604	5.000	06/01/2020	Aa1	AGY	AGY	2.235	1.000	0.957	-0.003	84
	3138X6NG6	42	42	0.636	FNMA POOL - AU6690	2.500	09/01/2028	Aa1	AGY	AGY	2.210	3.250	2.971	-0.388	24
	3138EPA46	35	35	0.527	FNMA POOL - AL6326	2.500	01/01/2030	Aa1	AGY	AGY	2.351	3.333	3.080	-0.482	35
	3138WD2G5	53	55	0.827	FNMA POOL - AS4374	3.500	02/01/2045	Aa1	AGY	AGY	2.570	4.750	3.418	-1.266	22
	3132J7YK2	67	68	1.017	FHLMC GOLD POOL - Q16613	3.000	03/01/2043	Aa1	AGY	AGY	2.782	5.583	4.713	-0.827	41
CMO		**200**	**198**	**2.966**		**2.545**	**4.063**	**Aa1**	**Aaa**	**AA+**	**2.849**	**4.063**	**4.394**	**-0.824**	**59**
	36229RLS6	3	3	0.045	GSR TRUST 2004-002F- 12A1(U)	4.500	09/25/2019	B1	N/A	B+	3.930	0.500	0.490	0.000	275
	55265K3X5	4	4	0.060	MASTER ASSET 2003-012- 5A(U)	4.500	12/25/2018	Aa1	N/A	AA+	3.950	0.500	0.506	-0.002	276
	3136AMQD4	50	50	0.743	FNMA 2015-002- PA	2.250	03/25/2044	Aa1	AGY	AGY	2.516	3.500	4.031	-0.946	30
	3137B6B34	26	26	0.395	FHLMC 4272- DG	3.000	04/15/2043	Aa1	AGY	AGY	2.702	4.083	3.923	-0.643	51
	3136A9KS6	64	62	0.924	FNMA 2012-114- ND	2.000	10/25/2041	Aa1	AGY	AGY	2.996	4.250	5.226	-0.804	67
	3136AQ5Y2	53	53	0.798	FNMA 2016-009- D	3.000	03/25/2046	Aa1	AGY	AGY	2.917	4.833	4.519	-0.931	53
ABS		**63**	**62**	**0.931**		**1.983**	**7.393**	**Aaa**	**Aaa**	**N/A**	**2.121**	**7.393**	**5.698**	**0.021**	**72**
	13056TAB8	1	1	0.015	CA REP AUTO 2013-2- A2(U)	1.230	03/15/2019	Aaa	Aaa	N/A	1.233	0.083	0.062	0.000	38
	45254NQR1	21	21	0.311	IMPAC CMB TR 2005-006- 2A2	2.037	10/25/2035	N/A	N/A	NR	2.434	3.167	0.174	0.039	96
	45254NLP0	41	40	0.605	IMPAC SEC 2004-010- 4A1(U)	1.974	03/25/2035	N/A	N/A	NR	1.981	9.750	8.682	0.012	61
CMBS		**771**	**784**	**11.746**		**2.940**	**1.552**	**Aaa**	**Aaa**	**AAA**	**1.971**	**1.552**	**1.534**	**0.017**	**48**
	46642EAU0	21	21	0.314	JPMBB CMBS 2014-C21- A1	1.322	08/16/2047	Aaa	Aaa	N/A	2.024	0.417	0.413	0.002	61
	92938GAB4	50	51	0.759	WFRBS CMBS 2013-C17- A2	2.921	12/17/2046	Aaa	Aaa	N/A	1.828	1.000	1.040	0.008	38
	92938VAM7	50	51	0.759	WFRBS CMBS 2014-C19- A2	2.895	03/15/2047	Aaa	Aaa	N/A	1.731	1.000	1.050	0.009	29
	17321RAB2	50	51	0.759	CITIGROUP 2013-GC17- A2	2.962	11/10/2046	Aaa	Aaa	N/A	1.928	1.083	1.082	0.009	50
	61762XAR8	55	56	0.835	MS BOA ML 2013-C12- A2	3.001	10/15/2046	Aaa	Aaa	N/A	1.929	1.083	1.093	0.009	46

Portfolio Position Report

Portfolio: CITY OF CREVE C 8016
Pricing Date: 09/29/2017
Representative:

Currency: USD
LOTS COMBINED:

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
	92938JAB8	55	56	0.835	WFRBS CMBS 2013-UBS1- A2	2.927	03/15/2046	Aaa	Aaa	AAA	1.985	1.167	1.214	0.010	51
	36252RAF6	45	46	0.684	GS MTG SEC 2014-GC18- A2	2.924	01/10/2047	Aaa	Aaa	N/A	1.854	1.167	1.142	0.010	42
	12626LAB8	50	51	0.763	COMM 2013-CCRE11- A2	3.047	08/10/2050	Aaa	Aaa	N/A	1.800	1.250	1.269	0.011	36
	12591RAX8	55	56	0.837	COMM 2014-CCRE15- A2	2.928	02/10/2047	Aaa	Aaa	N/A	1.900	1.333	1.286	0.012	45
	12591TAB2	55	56	0.836	COMM 2014-LC15- A2	2.840	04/12/2047	Aaa	Aaa	N/A	1.932	1.417	1.402	0.013	47
	12591QAM4	55	56	0.839	COMM MTG TR 2014-UBS4- A2	2.963	08/12/2047	Aaa	Aaa	N/A	2.002	1.667	1.644	0.018	51
	61763XAB2	55	56	0.844	MS BOA ML 2014-C18- A2	3.194	10/15/2047	Aaa	Aaa	N/A	2.041	1.917	1.895	0.023	51
	46643TAZ5	55	56	0.841	JPMBB 2014-C26- A2	3.019	01/17/2048	Aaa	Aaa	N/A	2.135	2.167	2.086	0.027	58
	12593FBA1	60	61	0.920	COMM MTG TR 2015-LC21- A2	2.976	07/10/2048	Aaa	Aaa	N/A	2.114	2.500	2.447	0.034	53
	12635RAV0	60	62	0.923	CSAIL 2015-C4- A2	3.157	11/15/2048	Aaa	Aaa	N/A	2.278	2.917	2.793	0.042	63
MUNI		**215**	**209**	**3.138**		**2.294**	**6.698**	**Aa2**	**Aa2**	**AA+**	**2.556**	**6.722**	**5.753**	**0.296**	**68**
	914805EQ5	70	70	1.049	UNIV OF PITTSBURGH PA HGR ED	1.829	09/15/2019	Aa1	Aa1	AA+	1.893	2.000	1.915	0.023	41
	914729SH2	75	76	1.137	UNIV OF N TEXAS 2.303% 4/15/	2.303	04/15/2021	Aa2	Aa2	NR	2.290	3.583	3.360	0.061	58
	76804ADA0	70	64	0.952	RIVER CITY INC KY PKG AUTH	2.750	12/01/2033	Aa3	Aa3	AA	3.602	15.667	12.836	0.877	110
Total:		**6,386**	**6,671**	**100.000**		**3.281**	**7.479**	**A1**	**Aa3**	**A+**	**2.655**	**7.355**	**5.718**	**0.268**	**69**

Attachment: Commerce Bank Report (Commerce Bank Report)

Portfolio Holdings - As of September 30, 2017

	Ticker	% of Portfolio	Quantity	Price	Market Value	Unit Cost	Total Cost	Est. Ann. Income	Yi
Cash Equivalents									
Cash Equivalents									
CASH SETTLED PENDING FROM TRADES		-0.56%	-37,747	1.00	-$37,747	0.00	-$37,747	$0	0.0
FINANCIAL SQUARE TR GOVERNMENT INSTITUTIONAL CLASS FD #465	FGTXX	4.62%	312,025	1.00	$312,025	1.00	$312,025	$2,894	0.9
Total for Cash Equivalents		**4.06%**			**$274,278**		**$274,278**	**$2,894**	**1.0**
TOTAL FOR CASH EQUIVALENTS		**4.06%**			**$274,278**		**$274,278**	**$2,894**	**1.05**
Fixed Income Investments									
Agencies									
FNMA NT 1.5% 6/22/20		1.11%	75,000	99.76	$74,820	99.51	$74,635	$1,125	1.5
FHLB NT 1.375% 2/18/21		0.88%	60,000	99.02	$59,410	99.41	$59,644	$825	1.6
Total for Agencies		**1.99%**			**$134,230**		**$134,279**	**$1,950**	**1.6**
Asset Backed Securities									
CRART 2013-2 CL A2 1.23% 3/15/19		0.01%	683	99.98	$683	99.98	$683	$8	1.2
WFRBS 2013-UBS1 CL A2 2.927% 3/15/46		0.82%	55,000	101.02	$55,558	103.00	$56,650	$1,610	2.7
MSBAM 2013-C12 CL A2 3.001% 10/15/46		0.82%	55,000	101.03	$55,569	103.00	$56,649	$1,651	2.8
CGCMT 2013-GC17 A2 2.962% 11/10/46		0.75%	50,000	101.04	$50,522	103.00	$51,499	$1,481	2.8
WFRBS 2013-C17 CL A2 2.921% 12/15/46		0.75%	50,000	101.02	$50,508	103.00	$51,500	$1,461	2.7
GSMS 2014-GC18 CL A2 2.924% 1/10/47		0.67%	44,611	101.15	$45,122	103.00	$45,948	$1,304	2.7
COMM 2014-CR15 CL A2 2.928% 2/10/47		0.82%	55,000	101.25	$55,690	103.00	$56,649	$1,610	2.7
WFRBS 2014-C19 CL A2 2.895% 3/15/47		0.75%	50,000	101.09	$50,543	103.00	$51,498	$1,448	2.7
COMM 2014-LC15 CL A2 2.84% 4/10/47		0.82%	55,000	101.22	$55,673	103.00	$56,649	$1,562	2.6
COMM 2014-UBS4 CL A2 2.963% 8/10/47		0.83%	55,000	101.53	$55,844	103.00	$56,648	$1,630	2.7
JPMBB 2014-C21 CL A1 1.322% 8/15/47		0.31%	21,113	99.69	$21,048	100.00	$21,113	$279	1.3
MSBAM 2014-C18 CL A2 3.194% 10/15/47		0.83%	55,000	102.07	$56,139	103.00	$56,648	$1,757	2.8
JPMBB 2014-C26 CL A2 3.0185% 1/15/48		0.83%	55,000	101.76	$55,967	103.00	$56,650	$1,660	2.7

Bond Yield is Market Yi

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The Commerce Trust Company
A division of Commerce Bank

Portfolio Holdings - As of September 30, 2017

	Ticker	% of Portfolio	Quantity	Price	Market Value	Unit Cost	Total Cost	Est. Ann. Income	Yie
COMM 2015-LC21 CL A2 2.976% 7/10/48		0.91%	60,000	102.08	$61,246	103.00	$61,798	$1,786	2.65
CSAIL 2015-C4 CL A2 3.1567% 11/11/48		0.91%	60,000	102.37	$61,424	103.00	$61,800	$1,894	2.50
COMM 2013-CR11 CL A2 3.047% 10/10/46		0.75%	50,000	101.51	$50,754	103.00	$51,498	$1,524	2.81
Total for Asset Backed Securities		**11.58%**			**$782,291**		**$793,880**	**$22,664**	**2.70**
Credit									
NSTAR ELECTRIC CO NT 5.625% 11/15/17		0.82%	55,000	100.42	$55,233	115.04	$63,271	$3,094	2.26
THOMSON REUTERS CO NT 6.5% 7/15/18		0.38%	25,000	103.70	$25,925	117.98	$29,496	$1,625	1.78
INTERCONTINENTAL NT 2.5% 10/15/18		0.82%	55,000	100.79	$55,436	99.91	$54,951	$1,375	1.73
SOUTH CAROL E&G NT 6.5% 11/1/18		0.62%	40,000	104.74	$41,897	121.31	$48,525	$2,600	2.07
BUCKEYE PART LP NT 2.65% 11/15/18		0.37%	25,000	100.41	$25,103	99.82	$24,956	$663	2.25
KEYCORP NT 2.3% 12/13/18		0.45%	30,000	100.54	$30,161	99.94	$29,981	$690	1.82
MICROSOFT CORP NT 1.85% 2/12/20		0.89%	60,000	100.46	$60,273	99.99	$59,994	$1,110	1.65
ROCKWELL AUTO NT 2.05% 3/1/20		0.88%	60,000	99.60	$59,758	101.03	$60,616	$1,230	2.22
AVERY DENNISON NT 5.375% 4/15/20		0.47%	30,000	106.50	$31,949	108.99	$32,696	$1,613	2.72
NATIONAL RURAL UTIL NT 2.35% 6/15/20		1.04%	70,000	100.67	$70,468	98.48	$68,938	$1,645	2.09
MORGAN STANLEY NT 2.8% 6/16/20		0.90%	60,000	101.67	$61,001	99.88	$59,928	$1,680	2.16
DIAGEO CAPITAL PLC NT 4.828% 7/15/20		0.80%	50,000	107.72	$53,858	111.54	$55,771	$2,414	1.97
GILEAD SCIENCES NT 2.55% 9/1/20		0.90%	60,000	101.78	$61,067	103.55	$62,132	$1,530	1.92
ASTRAZENECA NT 2.375% 11/16/20		0.89%	60,000	100.52	$60,313	102.39	$61,436	$1,425	2.20
VISA INC NT 2.2% 12/14/20		0.90%	60,000	101.02	$60,613	99.92	$59,949	$1,320	1.86
TOYOTA MTR CRED COR NT 4.25% 1/11/21		1.18%	75,000	106.44	$79,826	107.35	$80,509	$3,188	2.21
WELLS FARGO CO NT 3% 1/22/21		1.06%	70,000	102.27	$71,591	99.83	$69,882	$2,100	2.28
DUKE REALTY NT 3.875% 2/15/21		0.46%	30,000	104.22	$31,265	99.75	$29,924	$1,163	2.50
EXXON MOBIL CORP NT 2.222% 3/1/21		0.75%	50,000	100.76	$50,378	100.00	$50,000	$1,111	1.99
KINDER MORGAN NT 3.5% 3/1/21		0.46%	30,000	102.48	$30,743	99.49	$29,848	$1,050	2.70
AIR LEASE CORP NT 3.875% 4/1/21		0.46%	30,000	104.44	$31,333	99.80	$29,941	$1,163	2.51
NBCUNIVERSAL MEDIA NT 4.375% 4/1/21		0.88%	55,000	107.62	$59,189	111.69	$61,427	$2,406	2.11

Bond Yield is Market Yi

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A division of Commerce Bank

Portfolio Holdings - As of September 30, 2017

	Ticker	% of Portfolio	Quantity	Price	Market Value	Unit Cost	Total Cost	Est. Ann. Income	Yi
HORMEL FOODS CORP NT 4.125% 4/15/21		0.86%	55,000	106.13	$58,374	108.85	$59,869	$2,269	2.3
AMERICAN EXPRESS NT 2.25% 5/5/21		1.11%	75,000	99.85	$74,891	100.10	$75,072	$1,688	2.2
NATL RETAIL PPTY NT 5.5% 7/15/21		0.49%	30,000	109.41	$32,824	113.38	$34,015	$1,650	2.7
BK OF NY MELLON NT 3.55% 9/23/21		1.08%	70,000	104.59	$73,212	102.17	$71,519	$2,485	2.3
INTEL CORP NT 3.3% 10/1/21		0.85%	55,000	104.70	$57,584	101.97	$56,082	$1,815	2.0
VERIZON COMM NT 3% 11/1/21		0.38%	25,000	102.05	$25,513	99.70	$24,925	$750	2.4
AIR PROD & CHEMICALS NT 3% 11/3/21		0.84%	55,000	103.02	$56,661	100.08	$55,044	$1,650	2.2
BANK OF AMERICA NT V/R 4/24/23		0.67%	45,000	100.43	$45,195	100.00	$45,000	$1,296	2.7
ABB FINANCE USA NT 2.875% 5/8/22		1.06%	70,000	101.97	$71,376	102.85	$71,995	$2,013	2.4
TRANSCANADA PIPE NT 2.5% 8/1/22		1.04%	70,000	99.99	$69,992	100.38	$70,266	$1,750	2.5
CME GROUP INC NT 3% 9/15/22		0.46%	30,000	102.73	$30,819	98.95	$29,684	$900	2.4
PECO ENERGY CO NT 2.375% 9/15/22		1.04%	70,000	99.95	$69,963	98.80	$69,158	$1,663	2.3
VISA INC NT 2.8% 12/14/22		0.83%	55,000	102.25	$56,240	99.86	$54,924	$1,540	2.3
TOTAL CAP CANADA NT 2.75% 7/15/23		0.90%	60,000	100.98	$60,589	98.33	$58,999	$1,650	2.5
HOWARD HUGHES MEDICAL NT 3.5% 9/1/23		0.86%	55,000	105.28	$57,906	100.84	$55,461	$1,925	2.5
LOWES COMPANIES NT 3.875% 9/15/23		0.87%	55,000	106.98	$58,841	99.40	$54,671	$2,131	2.5
21ST CENTURY FOX NT 4% 10/1/23		0.47%	30,000	106.01	$31,804	99.40	$29,819	$1,200	2.9
MID AMERICA APT LP NT 4.3% 10/15/23		0.39%	25,000	106.04	$26,510	99.05	$24,762	$1,075	3.1
MOSAIC CO NT 4.25% 11/15/23		0.38%	25,000	103.85	$25,961	99.79	$24,948	$1,063	3.5
LA LAND & EXPL DEB 7.65% 12/01/23		0.80%	45,000	119.83	$53,923	129.94	$58,473	$3,443	3.9
FEDERAL REALTY NT 3.95% 1/15/24		0.85%	55,000	104.88	$57,686	99.02	$54,460	$2,173	3.0
HEALTH CARE REIT NT 4.5% 1/15/24		0.40%	25,000	107.37	$26,842	98.96	$24,740	$1,125	3.1
SPECTRA ENERGY NT 4.75% 3/15/24		0.48%	30,000	108.81	$32,644	99.77	$29,930	$1,425	3.1
GENERAL MOTORS FIN NT 3.95% 4/13/24		0.53%	35,000	102.42	$35,847	99.83	$34,941	$1,383	3.5
VOYA FINL NT 3.125% 7/15/24		0.51%	35,000	98.69	$34,542	99.70	$34,895	$1,094	3.3
DUKE ENERGY FL NT 1.731% 9/1/22		0.85%	60,000	95.38	$57,226	100.00	$59,999	$1,039	2.7
GOLDMAN SACHS NT V/R 9/29/25		0.74%	50,000	100.13	$50,065	100.00	$50,000	$1,636	3.2
PRAXAIR INC NT 2.65% 2/5/25		1.02%	70,000	98.13	$68,691	100.09	$70,065	$1,855	2.9

Bond Yield is Market Yi

Attachment: Commerce Bank Report (Commerce Bank Report)

Portfolio Holdings - As of September 30, 2017

	Ticker	% of Portfolio	Quantity	Price	Market Value	Unit Cost	Total Cost	Est. Ann. Income	Yi
NORTHERN TR CORP NT 3.95% 10/30/25		0.86%	55,000	106.15	$58,381	100.35	$55,194	$2,173	3.0
PNC BANK NA NT 4.2% 11/1/25		0.87%	55,000	107.26	$58,992	99.97	$54,984	$2,310	3.1
METLIFE NT 3.6% 11/13/25		0.85%	55,000	103.97	$57,186	99.99	$54,996	$1,980	3.0
HENRY J KAISER FMY NT 3.356% 12/1/25		0.87%	60,000	98.11	$58,866	100.00	$60,000	$2,014	3.6
VALSPAR CORP NT 3.95% 1/15/26		0.46%	30,000	103.88	$31,165	99.56	$29,868	$1,185	3.3
US BANCORP NT 3.1% 4/27/26		1.03%	70,000	99.53	$69,673	99.66	$69,763	$2,170	3.1
ILLINOIS TOOL NT 2.65% 11/15/26		0.87%	60,000	97.53	$58,520	99.69	$59,811	$1,590	2.9
REALTY INCOME NT 3% 1/15/27		0.42%	30,000	95.24	$28,573	98.67	$29,601	$900	3.6
BP CAPITAL MARKETS NT 3.279% 9/19/27		1.48%	100,000	99.90	$99,903	100.00	$100,000	$3,279	3.2
CITIGROUP INC NT 4.125% 7/25/28		0.46%	30,000	102.89	$30,868	99.69	$29,907	$1,238	3.8
CBS/VIACOM CORP NT 7.875% 7/30/30		0.51%	25,000	137.14	$34,285	134.73	$33,684	$1,969	4.1
AT&T CORP NT V/R 11/15/31		1.04%	50,000	140.80	$70,402	136.21	$68,107	$4,125	4.3
BOEING CO NT 8.625% 11/15/31		0.82%	36,000	154.39	$55,580	146.71	$52,815	$3,105	3.6
VALERO ENERGY NT 7.5% 4/15/32		0.49%	25,000	131.66	$32,914	129.76	$32,440	$1,875	4.5
LUBRIZOL CORP NT 6.5% 10/1/34		0.88%	45,000	131.58	$59,211	133.57	$60,108	$2,925	3.9
TRUSTEES OF UN CLG NT 4.877% 7/7/35		0.98%	60,000	110.39	$66,232	100.00	$60,000	$2,926	4.0
NORTHERN STATES PWR NT 6.25% 6/1/36		0.88%	45,000	132.04	$59,419	139.54	$62,791	$2,813	3.8
3M COMPANY NT 5.7% 3/15/37		0.97%	50,000	130.94	$65,471	118.55	$59,275	$2,850	3.5
JPMORGAN CHASE NT 5.5% 10/15/40		0.99%	55,000	122.02	$67,112	107.34	$59,034	$3,025	4.0
BURLINGTON NORTH NT 4.95% 9/15/41		0.68%	40,000	115.40	$46,161	104.25	$41,701	$1,980	3.9
CANADIAN PAC RR NT 5.75% 1/15/42		0.46%	25,000	123.06	$30,765	124.17	$31,042	$1,438	4.2
ANHEUSER-BUSCH NT 4% 1/17/43		0.81%	55,000	100.03	$55,019	89.98	$49,488	$2,200	4.0
MIDAMERICAN ENERGY NT 4.8% 9/15/43		0.86%	50,000	116.30	$58,151	99.53	$49,764	$2,400	3.8
SOUTHERN CAL EDISON NT 4.65% 10/1/43		0.85%	50,000	115.18	$57,588	99.51	$49,756	$2,325	3.7
AMERICAN INTL GRP NT 4.5% 7/16/44		0.46%	30,000	104.36	$31,309	99.40	$29,819	$1,350	4.2
PROGRESSIVE CORP NT 3.7% 1/26/45		0.80%	55,000	98.22	$54,022	98.05	$53,926	$2,035	3.8
NORFOLK SOUTHERN NT 4.45% 6/15/45		0.55%	35,000	106.90	$37,416	107.85	$37,747	$1,558	4.0
TRAVELERS COS INC NT 4.3% 8/25/45		0.88%	55,000	108.25	$59,539	99.22	$54,569	$2,365	3.8

Bond Yield is Market Yi

Portfolio Holdings - As of September 30, 2017

	Ticker	% of Portfolio	Quantity	Price	Market Value	Unit Cost	Total Cost	Est. Ann. Income	Yi
TRI-STATE GENERATION NT 4.25% 6/1/46		0.74%	50,000	100.31	$50,153	98.31	$49,157	$2,125	4.2
Total for Credit		**59.99%**			**$4,051,970**		**$3,987,227**	**$146,100**	**2.9**
Mortgage									
MASTR 2003-12 CL 5A1 4.5% 12/25/18		0.06%	4,382	100.18	$4,390	102.56	$4,494	$197	3.9
GSR 2004-2F CL 12A1 4.5% 9/25/19		0.04%	2,758	100.79	$2,780	101.63	$2,803	$124	4.1
FNMA POOL # 735604 5% 6/1/20		0.15%	10,192	102.44	$10,441	106.47	$10,851	$510	4.0
FNMA POOL # AU6690 2.5% 9/1/28		0.63%	42,391	100.76	$42,711	102.25	$43,345	$1,060	2.4
FNMA POOL # AL6326 2.5% 8/1/28		0.51%	34,553	100.34	$34,670	102.00	$35,244	$864	2.4
IMM 2004-10 CL 4A1 V/R 3/25/35		0.60%	41,311	98.37	$40,639	98.00	$40,485	$815	0.9
IMM 2005-6 CL 2A2 V/R 10/25/35		0.31%	21,225	98.89	$20,989	95.50	$20,270	$432	1.2
FNR 2012-114 CL ND 2% 10/25/41		0.91%	64,239	96.11	$61,740	95.00	$61,027	$1,285	2.2
FHLMC POOL # Q16613 3% 3/1/43		1.00%	66,915	101.02	$67,599	101.36	$67,824	$2,007	2.9
FHR 4272 CL DG 3% 4/15/43		0.39%	25,938	101.06	$26,213	101.75	$26,392	$778	2.9
FNR 2015-2 CL PA 2.25% 3/25/44		0.73%	49,621	99.02	$49,134	101.23	$50,234	$1,116	2.3
FNMA POOL #AS4374 3.5% 2/1/45		0.81%	52,666	103.81	$54,673	103.05	$54,270	$1,843	3.2
FNR 2016-9 CL D 3% 3/25/46		0.79%	53,404	100.23	$53,525	103.16	$55,089	$1,602	2.9
Total for Mortgage		**6.95%**			**$469,504**		**$472,330**	**$12,634**	**2.5**
Tax Exempt Revenue									
RIVER CITY INC KY 2.75% 12/1/33		0.93%	70,000	89.86	$62,901	84.73	$59,312	$1,925	3.5
Total for Tax Exempt Revenue		**0.93%**			**$62,901**		**$59,312**	**$1,925**	**3.5**
Taxable Muni Bonds									
SAN MARCOS TX TXBL GO 1.75% 2/15/18		0.74%	50,000	99.97	$49,987	100.00	$50,000	$875	1.8
UNIV PTTSBGH PA TXBL 1.829% 9/15/19		1.04%	70,000	100.23	$70,158	100.00	$70,000	$1,280	1.7
CINCINNATI OH SD TXBL 2.05% 12/15/19		0.89%	60,000	99.81	$59,885	100.00	$60,000	$1,230	2.1
UNIV OF N TX TXBL 2.303% 4/15/21		1.11%	75,000	100.40	$75,297	100.00	$75,000	$1,727	2.1
MONTGOMERY CO VA TAX 3.350% 6/1/21		0.85%	55,000	104.25	$57,339	100.00	$55,000	$1,843	2.1

Bond Yield is Market Yi

Portfolio Holdings - As of September 30, 2017

	Ticker	% of Portfolio	Quantity	Price	Market Value	Unit Cost	Total Cost	Est. Ann. Income	Yie
TX ST TXBL GO 2.315% 10/1/21		0.90%	60,000	100.94	$60,562	100.00	$60,000	$1,389	2.07
IN BD BK TXBL 2.263% 2/1/22		1.10%	75,000	99.48	$74,612	100.00	$75,000	$1,697	2.39
PALM BEACH CO FL TAX 4% 11/1/25		0.86%	55,000	105.45	$57,995	98.89	$54,390	$2,200	3.23
MINNEAPOLIS MN TXBL GO 4.379% 3/1/34		0.80%	50,000	107.80	$53,899	100.00	$50,000	$2,190	3.74
Total for Taxable Muni Bonds		**8.29%**			**$559,733**		**$549,390**	**$14,431**	**2.36**
Treasury									
U S TNOTE 1.375% 8/31/23		2.14%	150,000	96.23	$144,341	94.19	$141,287	$2,063	2.05
U S TREASURY NT 1.625% 2/15/26		2.11%	150,000	95.10	$142,644	92.79	$139,190	$2,438	2.27
U S TREASURY BOND 2.75% 8/15/42		1.02%	70,000	98.82	$69,173	93.98	$65,789	$1,925	2.82
U S TREASURY NT 3.125% 8/15/44		0.94%	60,000	105.52	$63,314	112.42	$67,451	$1,875	2.83
Total for Treasury		**6.21%**			**$419,472**		**$413,716**	**$8,300**	**2.37**
TOTAL FOR FIXED INCOME INVESTMENTS		**95.94%**			**$6,480,102**		**$6,410,133**	**$208,003**	**2.76**
Grand Total		**100.00%**			**$6,754,380**		**$6,684,411**	**$210,897**	**2.69**

Attachment: Commerce Bank Report (Commerce Bank Report)

The Commerce Trust Company
A division of Commerce Bank

DISCUSSION (ID # 2694)

FY 18 Actuarial Valuation

Conduent HR Consulting Services
Wealth Consulting

City of Creve Coeur

Retirement Plan for Employees of the City of Creve Coeur

Actuarial Valuation Report

Plan Year July 1, 2017 – June 30, 2018

September 2017

CONDUENT
231 S. Bemiston Avenue
Suite 400
St. Louis, MO 63105

September 2017

Board of Trustees
Retirement Plan
City of Creve Coeur
300 N. New Ballas Road
St. Louis, Missouri 63141

Dear Members of the Board,

Conduent has been retained to complete the actuarial valuation for the Retirement Plan for Employees of the City of Creve Coeur for the plan year beginning July 1, 2017. This report presents the results of the valuation.

The computations herein were performed as of July 1, 2017. They were determined on the basis of employee data and financial data furnished by the City. These data elements were not audited by Conduent but were reviewed for consistency. The accuracy of the valuation results is dependent upon the validity of the underlying participant and financial data provided.

All actuarial assumptions and methods are the same as those used in the previous valuation. A summary of the assumptions and methods is found in Schedule G. These assumptions have been adopted based upon a continuing review of the emerging experience. There have been no changes in plan provisions since the previous valuation and a brief summary of key plan provisions is presented in Schedule H.

Comments on the Valuation Results

The employer's normal cost decreased from $223,035 as of July 1, 2016 to $207,438 as of July 1, 2017. As a percentage of covered payroll, the normal cost decreased from 5.84% to 5.83%. The employee contribution rate remained 3.0%.

The recommended contribution for 2017-2018, based on the normal cost plus a 10-year amortization of the unfunded actuarial liability as of July 1, 2015 and a 15-year amortization of the incremental change since July 1, 2015, is $1,159,936 (as of July 1, 2017). The recommended contribution increased nominally from $1,139,751 in the prior year.

The overall plan experience for the 2016-2017 plan year resulted in an actuarial loss to the plan of $339,294. The experience may be broken into two components: an investment component and a non-investment component. The investment component was a loss of $567,799, due to the fact that the rate of return on the actuarial value of fund assets was 4.47%, as compared to the assumed rate of 7.0%. The return on the market value of assets was approximately 11.43%. Since the actuarial valuation is based upon assets which are smoothed to reduce volatility associated with varying investment results, because of the recognition of previously deferred losses the annual return based upon the actuarial value of assets was below the valuation rate of 7% even though the return on a market value of assets basis was 11.43%. There was also a liability gain of $228,505 which is chiefly attributable to salary growth experience less than assumed.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded rations and unfunded actuarial liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded stats of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Funded Level

Based on a 7.0% interest rate, the present value of current accumulated benefits exceeds the market value of plan assets by approximately $3.6 million. The accumulated benefit funded ratio increased from 81% to 87%.

GASB

The required information for GASB Statement 67 and 68, which applies for financial disclosures with respect to the plan as of June 30, 2017, will be presented in a separate communication as needed.

Purpose of This Report

This report is prepared for the Pension Board of Trustees of the City of Creve Coeur for use in its review of the operation of this plan. It is expected that the Board will use the results of this report for the purpose of determining contributions to be made to the plan, as well as the funding status of plan benefits. The report is to be used in the preparation of an audited financial report prepared by the plan accountant, if any. The use of this report by other parties and/or for other purposes is not recommended without advance review of the appropriateness of such application by Conduent. The attached pages should not be provided without a copy of this cover letter.

Actuarial Status of the Plan

The actuarial assumptions and methods used to value the plan are individually and in the aggregate reasonable and, in combination, represent my best estimate of anticipated experience under the plan. The cost and actuarial exhibits presented in this report were determined in accordance with generally accepted actuarial procedures and appropriately disclose the actuarial position of the plan. Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Because of limited scope, no analysis of the potential range of such future differences was performed.

Actuarial Certification

This report was prepared under the supervision of Wendy Ludbrook, a Fellow of the Society of Actuaries and Member of the American Academy of Actuaries, who has met the Qualification Standards of the American Academy of Actuaries to render the actuarial option contained herein. She is available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

CONDUENT

Wendy Ludbrook

Wendy Ludbrook, F.S.A., M.A.A.A.

Senior Consultant, Wealth Consulting Actuary

Conduent

Contents

CONDUENT

Schedule A: Contribution Schedule

(For the 2016 / 2017 Plan Year)

	As of 7/1/2017	As of 6/30/2018
Funding Policy Contribution:		
Amortization of Unfunded Actuarial Liability as of July 1, 2015 over 10 Years plus any incremental change subsequent to that date over 15 years, plus Normal Cost	$ 1,159,936	$ 1,241,132*

* This is the beginning of the year contribution with 7.0% interest to the end of the plan year.

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Schedule B: Summary of Valuation Results

(As of July 1 of Applicable Year)

		2016	2017
1.	Number of Participants		
	Active	50	46
	Retired & Beneficiaries	68	72
	Vested Terminations	30	29
	Total	148	147
2.	Covered Payroll	$ 3,816,272	$ 3,557,984
3.	Annual Benefits Payable to Retired Participants and Beneficiaries	$ 1,487,033	$ 1,544,165
4.	Actuarial Liability - Entry Age Normal		
	Active	$ 12,055,864	$ 12,163,546
	Retired & Beneficiaries	15,591,791	16,014,879
	Vested Terminations	1,934,052	2,007,664
	Total	$ 29,581,707	$ 30,186,089
5.	Plan Assets - Actuarial Value Basis	$ 23,220,080	$ 24,015,386
6.	Unfunded Actuarial Liability (UAL)	$ 6,361,627	$ 6,170,703
	Outstanding UAL from July 1, 2015	$ 6,463,761	$ 5,924,125
	Outstanding UAL after July 1, 2015	$ (102,134)	$ 246,578
7.	Total Normal Cost	$ 337,523	$ 314,178
8.	Expected Employee Contributions	$ 114,488	$ 106,740
	As a Percentage of Covered Payroll	3.00%	3.00%
9.	Employer Normal Cost	$ 223,035	$ 207,438
	As a Percentage of Covered Payroll	5.84%	5.83%
10.	10-Year Amortization of UAL from July 1, 2015	$ 927,196	$ 927,196
11.	15-Year Amortization of Additional UAL after 7/1/15	$ (10,480)	$ 25,302
12.	Total Employer Cost (with Amortization of Unfunded Actuarial Liability)	$ 1,139,751	$ 1,159,936
	As a Percentage of Covered Payroll	29.9%	32.6%
13.	Funded Ratio (5) / (4)	78.5%	79.6%

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Schedule C: Valuation of Accumulated Plan Benefits

(As of July 1)

		2016	2017
A.	Actuarial Present Value of Accumulated Plan Benefits:		
	1. Vested Benefits		
	a. Retired Participants and Beneficiaries Receiving Payments	$ 15,591,791	$ 16,014,879
	b. Vested Deferred	1,934,052	2,007,664
	c. Active	8,912,928	9,287,367
	Total	$ 26,438,771	$ 27,309,910
	2. Non-Vested Benefits	$ 636,211	$ 526,131
	3. Total Actuarial Present Value of Accumulated Plan Benefits	$ 27,074,982	$ 27,836,041
B.	Plan Assets - - Market Value Basis	$ 21,987,225	$ 24,250,103
C.	Accumulated Benefit Funded Ratio (B/A)	81%	87%
D.	Number of Active Employees Fully Vested	50	46
E.	Number of Active Employees Partially Vested	0	0
	Interest Rate	7.0%	7.0%

Changes in the Actuarial Present Value of Accumulated Plan Benefits During the 2016 – 2017 Plan Year

Actuarial Present Value of Accumulated Plan Benefits as of July 1, 2016		$ 27,074,982
Increase for Interest	$ 1,841,777	
Benefit Payments	$ (1,544,910)	
Benefits Accumulated and Other	$ 464,792	
Assumption Changes	$ 0	
Subtotal		$ 761,059
Actuarial Present Value of Accumulated Plan Benefits as of July 1, 2017		$ 27,836,041

Schedule D: Pension Assets

Assets as of 7/1/2016:

Commerce	$ 6,246,359
Schwab	$ 15,740,866
Total	$ 21,987,225

Assets as of 7/1/2017:

Commerce	$ 7,127,531
Schwab	$ 17,122,572
Total	$ 24,250,103

Development of 6/30/2017 Asset Balance

Beginning Balance - 7/1/2016	$ 21,987,225
Employer Contributions for 2016-2017 Plan Year	$ 1,200,992
Employee Contributions for 2016-2017 Plan Year	$ 107,272
Investment Income	$ 566,466
Realized and Unrealized Gains/(Losses)	$ 1,998,900
Benefit Payments	$ (1,544,910)
Expenses	$ (65,842)
Ending Balance - 6/30/2017	$ 24,250,103

The annual rate of return for the fund, net of expenses, is 11.43%.

Development of Actuarial Value of Assets

Actuarial Value 7/1/2016	$ 23,220,080
Employer Contributions	$ 1,200,992
Employee Contributions	$ 107,272
Expected Investment Income	$ 1,514,386
Benefit Payments	$ (1,544,910)
1/3 of Asset Gain/(Loss) for 2014-2015 (Total = $(1,166,327))	$ (388,775)
1/3 of Asset Gain/(Loss) for 2015-2016 (Total = $(1,266,118))	$ (422,039)
1/3 of Asset Gain/(Loss) for 2016-2017 (Total = $985,140)	$ 328,380
Actuarial Value 7/1/2017	$ 24,015,386

The annual rate of return for the actuarial value, net of expenses, is 4.47%.

Schedule E: Summary of Investment Yield Performance

Market Value

Year	Value at July 1st of Year	Net Investment Increase	Annual Rate of Return
1996	$ 7,506,635	$ 1,364,803	18.08%
1997	$ 8,958,881	$ 1,557,487	17.31%
1998	$10,595,433	$ 896,648	8.46%
1999	$11,500,658	$ 1,063,706	9.27%
2000	$12,519,833	$ (718,764)	(5.76)%
2001	$11,701,538	$ (1,260,504)	(10.64)%
2002	$10,734,082	$ 172,200	1.59%
2003	$11,097,976	$ 1,504,361	13.39%
2004	$12,869,365	$ 804,065	6.21%
2005	$13,846,042	$ 1,196,773	8.62%
2006	$15,122,849	$ 2,523,493	16.67%
2007	$17,676,455	$ (1,414,603)	(8.15)%
2008	$15,626,437	$ (2,838,994)	(18.25)%
2009	$12,646,331	$ 1,540,884	12.16%
2010	$14,236,005	$ 2,740,399	19.62%
2011	$16,439,757	$ 37,260	0.23%
2012	$16,444,937	$ 2,093,063	12.87%
2013	$18,172,067	$ 3,245,641	17.86%
2014	$21,428,602	$ 426,117	1.99%
2015	$21,810,257	$ 521,339	1.15%
2016	$21,987,226	$ 2,499,524	11.43%
2017	$24,250,103		

The average rate of return for the last twenty years is 5.6%, and for the last ten years is 4.9%.

Annual Rate of Return is computed assuming investment yield is received at end of year and on the actual or approximate date of contributions, benefit payments, and expenses.

Schedule F: Development of Actuarial Experience Gain (Loss)

A.	Asset gain (loss)		
	1.	Actuarial value of assets 7/1/2016	$ 23,220,080
	2.	Contributions (Total)	1,308,264
	3.	Benefit payments	(1,544,910)
	4.	Interest on (1), (2), and (3) at 7.0%	1,599,751
	5.	Expected actuarial value of assets as 7/1/2017	$ 24,583,185
	6.	Actual actuarial value of assets as of 7/1/2017	24,015,386
	7.	Gain (loss) due to assets: (6) - (5)	(567,799)
B.	Liability gain (loss)		
	1.	Actuarial liability as of 7/1/2016	$ 29,581,707
	2.	Normal cost as of 7/1/2016	337,523
	3.	Benefit payments	(1,544,910)
	4.	Interest on (1), (2), and (3) at 7.0%	2,040,274
	5.	Expected actuarial liability as of 7/1/2017	$ 30,414,594
	6.	Actual actuarial liability as of 7/1/2017 (prior to assumption changes)	30,186,089
	7.	Gain (loss) due to liabilities: (5) - (6)	228,505
C.	Total actuarial gain (loss): A + B		(339,294)

Schedule G: Actuarial Assumptions

Mortality: RP-2000 Combined Healthy Table with a 70% Blue Collar adjustment with a fully generational projection of mortality improvement using Scale BB.

Interest Rate: 7.0%, net of expenses.

Salary Increase: Current Year: 4.0% per annum.

Prior Year: 4.0% per annum.

Turnover: Sample rates are as follows:

Age	Percent Turnover
25	10%
35	8%
45	4%
55	0%
65	0%

Disability: None assumed.

Retirement: For uniformed police officers, rates are as follows:

Age	Percent Retired
Under 55	0%
55	60%
56-61	5%
62 and over	100%

For other participants, 60% retirement is assumed at Normal Retirement Age or Unreduced Early Retirement Age, if the participant is eligible prior to Normal Retirement Age first. A retirement rate of 100% is assumed at age 65 with retirement rates of 5% between the Unreduced Early Retirement Age (if applicable) and age 65.

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

Expense Provision: No explicit loads. The interest rate is net of administrative expenses which are anticipated to be approximately .10% of the market value of assets.

Schedule G: Actuarial Assumptions (continued)

Valuation Method:

Entry Age Normal. Benefits are projected and spread so that the total normal cost will be a level percentage of salaries from date of hire to date of termination. The normal cost assigned to the City reflects the schedule of mandatory employee contributions, so as the employee contributions increase as scheduled, the employer normal cost will decrease. Due to the two-year eligibility requirement, new entrants to the Plan display a positive Actuarial liability for service from date of hire to date of entry.

<u>Summary of Changes from the July 1, 2016 Valuation</u>

None.

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Schedule H: Brief Summary of Retirement Plan Provisions

Plan Dates:

Adoption: Ordinance 5203 – Restatement of plan adopted July 11, 2011

Amendments: Ordinance 5267 – August, 2012

Eligibility for Participation:

A full-time employee of the City becomes a Participant on the July 1 following attainment of age 21 and 2 years of continuous service. Employees hired after June 1, 2006 are not eligible to participate.

Credited Service:

Years and completed calendar months of uninterrupted full-time employment measured from date of hire to the date of:

A. termination of employment, or

B. interruption of Credited Service, if earlier.

Credited Service is subject to special rules regarding leaves of absence, transfers and re-employment.

Final Average Monthly Earnings:

A Participant's monthly rate of compensation, averaged over the 60 consecutive months out of the last 120 months preceding retirement or Interruption of Service, if earlier, which give the highest monthly rate. Compensation shall include base pay, but exclude bonuses, commissions, overtime pay, expense allowances and similar items.

Normal Retirement Date:

The first day of the month coincident with or next following attainment of age 55 if the Participant is a uniformed police officer. The first day of the month coincident with or next following attainment of age 65 if the Participant is not a uniformed police officer.

Unreduced Early Retirement Date:

The first day of the month coincident with or next following the date on which the sum of age and Credited Service equals 85, but in no case later than Normal Retirement Date.

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Schedule H: Brief Summary of Retirement Plan Provisions (continued)

Amount of Normal Retirement Benefit:

The product of A times B below:

A. 1.7% of Final Average Monthly Earnings (or 2.0% if elected by the individual participant as of July 1, 2001 in lieu of participating in the City's defined contribution plan.)

B. Years of Credited Service, not to exceed thirty (30) years.

Notwithstanding the above, for an employee hired before July 1, 1994, the greater of the amount determined above and the amount equal to multiplying C by D below, then adding E:

C. 37% of Final Average Monthly Earnings

D. Credited Service, not in excess of twenty (20) years, divided by twenty

E. Eight dollars ($8.00) multiplied by Credited Service.

For employees hired before October 24, 1988, sixteen (16) shall be substituted for twenty (20) in subsection D.

Early Retirement Eligibility:

20 years of Credited Service. Benefits may commence at age 50 or later.

Amount of Early Retirement Benefit:

Actuarial equivalent of Normal Retirement Benefit, with Final Average Monthly Earnings and Credited Service determined as of Early Retirement Date.

Amount of Late Retirement Benefit:

Calculated in same manner as Normal Retirement Benefit, but recognizing service and compensation at Late Retirement Date.

Schedule H: Brief Summary of Retirement Plan Provisions (continued)

Form of Payment:

The benefits calculated above are payable for the life of the Participant, with 120 monthly payments guaranteed. Optional forms of equivalent payments are available. These are:

A. monthly income while both Participant and spouse are living, with one-half (1/2), two thirds (2/3) or full continuance to the surviving spouse following the death of the Participant; and

B. income for the life of the Participant with no further payments following the Participant's death.

Vesting under Plan:

Participant is vested in retirement benefits according to the following table:

Sum of Participant's Age as of Last Birthday and Years of Credited Service	Vesting Service
50	50%
51	60%
52	70%
53	80%
54	90%
55 and thereafter	100%

Notwithstanding the above table, a Participant with 8 or more years of Credited Service is fully vested on and after December 11, 1989.

Vested Deferred Retirement Benefit:

Payable at Normal Retirement Date to any fully or partially vested Participant who terminates prior to eligibility for Normal or Early Retirement.

Amount of Vested Deferred Benefit:

The product of A times B times G below:

A. 1.7% (or 2.0% if elected by the individual participant as of July 1, 2001) of Final Average Monthly Earnings determined as of the date of Interruption of Service

Schedule H: Brief Summary of Retirement Plan Provisions (continued)

Amount of Vested Deferred Benefit: (Continued)

B. Years of Credited Service to the date of Interruption of Service, not to exceed thirty (30) years.

Notwithstanding the above, for an employee hired before July 1, 1994, the greater of the amount determined by multiplying A by B above and the amount equal to multiplying C by D by E below, then adding F. The greater amount is then multiplied by G:

C. 37% of Final Average Monthly Earnings determined as of the date of Interruption of Service

D. Credited Service to the date of Interruption of Service divided by Credited Service projected to Normal Retirement Date

E. Credited Service projected to Normal Retirement Date, not in excess of twenty (20) years, divided by twenty

F. Eight dollars ($8.00) multiplied by Credited Service to the date of Interruption of Service

G. The applicable vesting percentage.

For employees hired before October 24, 1988, sixteen (16) shall be substituted for twenty (20) in subsection E.

Pre-retirement Death Benefit:

Payable with respect to a Participant who separated from service on or after attaining Early Retirement Age but has not commenced benefits, or who continues in employment after Normal Retirement Date, or who is actively employed and vested and has not reached Normal Retirement Age, and dies.

If the Participant is eligible for retirement at date of death, the monthly benefit is payable to the surviving spouse as if the Participant retired at date of death, elected a 2/3 joint and survivor payment form and died immediately. If there is no surviving spouse, the monthly benefit is the amount under the life with 120 payments guaranteed payment form, and is payable for 120 months to the designated beneficiary.

If the Participant is not eligible for retirement, the benefit is payable to a surviving spouse as if the Participant separated from employment on date of death, survived to the earliest retirement date, elected to begin receiving the 2/3 joint and survivor payment form, and died immediately. If there is no surviving spouse, no benefit is payable.

DROP Program:

Effective September 1, 2001 – August 31, 2008, a Participant eligible for Normal Retirement or Unreduced Early Retirement benefits may elect to enter a DROP program for a period of up to 36 months (or 60 months, effective August 1, 2004, or 72 months, effective September, 2006). Effective January 1, 2009 – December 31, 2011, a Participant eligible for Normal Retirement or Unreduced Early Retirement benefits may elect to enter a DROP program for a period of up to 36 months. During the DROP period the monthly payments otherwise due to the Participant as a retiree will be placed into a DROP account. At the end of the DROP period the account, credited with 5% interest, will be paid to the Participant as an annuity or as a lump sum.

Schedule H: Brief Summary of Retirement Plan Provisions (continued)

Employee Contributions:

Effective July 1, 2011, active Participants (excluding DROP Participants) must make required contributions in order to receive credited service, as follows:

- July 1, 2011: 1% of base wages including any longevity pay
- On each July 1 thereafter, the contribution rate increases by 0.5% until the rate becomes 3%.

Refund of Contributions:

Eligibility: Termination of employment when no vested benefit is payable

Amount: Accumulated employee contributions with 5% interest

Note: In addition, if the aggregate of benefit payments made to a Participant, spouse and/or beneficiary is less than the employee contributions with interest at date of commencement, the difference shall be payable to the beneficiary as an additional death benefit.

Retiree COLA:

Effective January 1, 2002, each retiree (and beneficiary) was given a cost-of-living adjustment. The increase in benefit was equal to 1.75% multiplied by the number of full years since the individual's (or for a beneficiary, the original participant's) retirement date.

Summary of Changes from the July 1, 2016 Valuation

None.

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Schedule I: Statistical Information

Age by Salary

	Under 30,000	30,000 - 34,999	35,000 - 39,999	40,000 - 44,999	45,000 - 49,999	50,000 - 54,999	55,000 - 59,999	60,000 - 64,999	65,000 - 69,999	70,000 - 74,999	75,000 - 79,999	Over 80,000	Total
Under 20	-	-	-	-	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	2	-	2
40-44	-	-	-	-	-	-	-	-	-	2	2	1	5
45-49	-	-	-	-	1	-	-	-	1	2	1	2	7
50-54	-	-	-	-	-	3	1	1	-	3	1	3	12
55-59	-	-	-	-	4	1	2	-	-	1	-	4	12
60-64	-	-	-	-	-	1	-	1	-	1	-	2	5
65-69	-	-	-	-	1	-	-	-	-	2	-	-	3
70+	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	6	5	3	2	1	11	6	12	46

Schedule I: Statistical Information (continued)

Service by Salary

	Under 30,000	30,000 - 34,999	35,000 - 39,999	40,000 - 44,999	45,000 - 49,999	50,000 - 54,999	55,000 - 59,999	60,000 - 64,999	65,000 - 69,999	70,000 - 74,999	75,000 - 79,999	Over 80,000	Total
0-1	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	3	1	-	1	1	3	2	-	11
15-19	-	-	-	-	1	1	-	-	-	3	2	4	11
20-24	-	-	-	-	-	2	1	-	-	2	1	3	9
25-29	-	-	-	-	2	1	1	1	-	2	1	1	9
30-34	-	-	-	-	-	-	1	-	-	1	-	3	5
35-39	-	-	-	-	-	-	-	-	-	-	-	1	1
40+	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	6	5	3	2	1	11	6	12	46

Schedule I: Statistical Information (continued)

Age by Service

	0-1	2	3	4	5	6	7	8	9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
Under 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2
40-44	-	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	5
45-49	-	-	-	-	-	-	-	-	-	3	1	3	-	-	-	-	7
50-54	-	-	-	-	-	-	-	-	-	2	3	2	4	1	-	-	12
55-59	-	-	-	-	-	-	-	-	-	1	2	2	4	3	-	-	12
60-64	-	-	-	-	-	-	-	-	-	-	2	-	1	1	1	-	5
65-69	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	3
70+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	11	11	9	9	5	1	-	46

Attachment: FY 18 Actuarial Valuation (FY 18 Actuarial Valuation)

Meeting: 10/17/17 05:30 PM
Department: Finance Department
Category: Report
Prepared By: Sherry Hall
Department Head: Lori Obermoeller

Fy 18 Gasb 67-68

CONDUENT
231 S. Bemiston Avenue
Suite 400
St. Louis, MO 63105

October 5, 2017

Board of Trustees
Retirement Plan
City of Creve Coeur
300 N. New Ballas Road
St. Louis, Missouri 63141

RE: Retirement Plan for Employees of the City of Creve Coeur GASB 67 and 68 Disclosures for Plan Year Ending June 30, 2017 Based on Valuation Date of July 1, 2017

Board Members,

We have prepared selected required accounting information for Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 for the Retirement Plan for Employees of the City of Creve Coeur for fiscal year ending June 30, 2017 based on a plan valuation date of July 1, 2017.

Please note that GASB Statement No. 25 (*Financial Reporting for Defined Benefit Pension Plans*) is applicable for fiscal years ending prior to 2015 and has been replaced by GASB Statement No. 67 (*Financial Reporting for Pension Plans)* for fiscal years ending 2015 and later. Similarly, GASB Statement No. 27 (*Accounting for Pensions by State and Local Governmental Employers*) is applicable for fiscal years ending prior to 2016 and has been replaced by GASB Statement No. 68 (*Accounting and Financial Reporting for Pensions*) for fiscal years ending 2016 and later.

GASB Statement No. 67

GASB Statement No. 67 set forth certain items of information to be disclosed in the financial statements of the Plan.

1. Following is the schedule of Net Pension Liability.

Net Pension Liability (Asset)

	2017	**2016**
Total Pension Liability	$ 30,348,312	$ 29,770,889
Plan Fiduciary Net Position	24,250,103	21,987,225
Net Pension Liability (Asset)	$ 6,098,209	$ 7,783,664
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)	79.91%	73.85%

Attachment: FY 18 GASB 67-68 (Fy 18 Gasb 67-68)

2. Following is the sensitivity of the net pension liability to changes in the discount rate.

Sensitivity of the Net Pension Liability
To Changes in the Discount Rate

	1% Decrease	Current	1% Increase
Discount Rate	6.00%	7.00%	8.00%
Net Pension Liability (Asset)	9,478,758	6,098,209	3,231,054

3. The discount rate used to measure the total pension liability was 7.00%. Based on this assumption, the Plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. A municipal bond rate of 3.13% was used in the development of the blended GASB discount rate after that point. The 3.13% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2017. Based on the long-term rate of return of 7.00% and the municipal bond rate of 3.13%, the blended GASB discount rate remained at 7.00%, as the point where the Plan's fiduciary net position became insufficient to make all projected future benefit payments was near the very end of the benefit payment stream. Please see the Appendix A for additional detail.

A schedule of changes in the net pension liability for the year ending June 30, 2017 is provided in Appendix B. The total pension liability as of June 30, 2017 was determined by rolling forward the Plan's total pension liability as of July 1, 2016 to June 30, 2017 using the actuarial assumptions outlined below.

The plan sponsor selected the assumptions used for the accounting results in this letter. We believe that these assumptions are reasonable and comply with the requirements of GASB Statement No. 67 and No. 68 as applicable. We prepared this letter in accordance with the requirements of this standard.

Conduent performed the valuation using participant data and financial data supplied by the City. Conduent reviewed the data for reasonableness and consistency with data for the prior valuation, but performed no audit of the data. The results of the valuation are dependent on the accuracy of the data.

Full summaries of the census data, assumptions, methods and plan provisions used in the preparation of this required accounting information were provided in October, 2017 in the City of Creve Coeur Actuarial Valuation Report prepared as of July 1, 2017. The report sets forth the various assumptions used to determine the anticipated contributions used in the cash flow analysis as well as used to determine the total pension liability set forth above. The demographic as well as the economic assumptions with respect to investment yield, salary increase and inflation have been based upon a review of the existing portfolio structure as well as recent and anticipated experience.

The primary purpose of this letter is to provide information for the City of Creve Coeur. Use of this report for any other purposes or by anyone other than the City and its auditors may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. The attached pages should not be provided without a copy of this cover letter. No one may make any representations or warranties based on any statements or conclusions contained in this report without Conduent's written consent.

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Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Conduent performed no analysis of the potential range of such future differences other than the sensitivity to changes in the discount rate required by GASB Statements No. 67 and No. 68.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

Please let me know if you have questions or require additional information.

Sincerely,

Wendy Ludbrook

Wendy T. Ludbrook, F.S.A.
Senior Retirement Consulting Actuary
Conduent

Appendix A, Table 1 – Projection of Fiduciary Net Position

Year Ending	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position
6/30/2017	$ 21,987,225	$ 1,308,264	$ 1,544,910	$ 2,499,524	$ 24,250,103
6/30/2018	24,250,103	1,327,724	1,744,291	1,679,644	25,513,180
6/30/2019	25,513,180	1,320,370	1,894,105	1,762,859	26,702,304
6/30/2020	26,702,304	1,280,423	1,982,594	1,841,844	27,841,978
6/30/2021	27,841,978	1,288,678	2,015,495	1,920,900	29,036,061
6/30/2022	29,036,061	1,291,096	2,072,314	2,002,585	30,257,428
6/30/2023	30,257,428	1,283,697	2,179,209	2,084,269	31,446,185
6/30/2024	31,446,185	1,250,434	2,316,275	2,161,946	32,542,291
6/30/2025	32,542,291	1,223,738	2,508,834	2,231,300	33,488,494
6/30/2026	33,488,494	236,476	2,629,755	2,259,837	33,355,052
6/30/2027	33,355,052	206,045	2,718,805	2,246,636	33,088,928
6/30/2028	33,088,928	194,205	2,741,007	2,227,016	32,769,142
6/30/2029	32,769,142	186,298	2,799,371	2,202,451	32,358,520
6/30/2030	32,358,520	139,442	2,942,263	2,167,386	31,723,085
6/30/2031	31,723,085	129,376	2,988,491	2,121,299	30,985,269
6/30/2032	30,985,269	117,382	3,001,660	2,068,943	30,169,934
6/30/2033	30,169,934	99,055	3,039,193	2,010,075	29,239,871
6/30/2034	29,239,871	88,646	3,001,464	1,946,086	28,273,139
6/30/2035	28,273,139	86,684	2,946,381	1,880,267	27,293,709
6/30/2036	27,293,709	74,577	2,923,207	1,812,138	26,257,217
6/30/2037	26,257,217	72,331	2,865,134	1,741,593	25,206,007
6/30/2038	25,206,007	63,594	2,855,832	1,668,071	24,081,840
6/30/2039	24,081,840	54,693	2,795,856	1,591,229	22,931,907
6/30/2040	22,931,907	48,562	2,731,670	1,512,770	21,761,568
6/30/2041	21,761,568	45,919	2,643,927	1,433,814	20,597,374
6/30/2042	20,597,374	41,136	2,563,151	1,354,936	19,430,295
6/30/2043	19,430,295	38,623	2,460,217	1,276,733	18,285,434
6/30/2044	18,285,434	33,915	2,380,324	1,199,180	17,138,205
6/30/2045	17,138,205	29,492	2,290,097	1,121,891	15,999,491
6/30/2046	15,999,491	27,287	2,181,716	1,045,835	14,890,897
6/30/2047	14,890,897	25,203	2,074,331	971,856	13,813,625
6/30/2048	13,813,625	23,240	1,961,638	900,257	12,775,484
6/30/2049	12,775,484	21,391	1,852,237	831,288	11,775,926
6/30/2050	11,775,926	19,655	1,740,623	765,100	10,820,058
6/30/2051	10,820,058	18,029	1,632,470	701,854	9,907,470
6/30/2052	9,907,470	16,508	1,525,095	641,615	9,040,498
6/30/2053	9,040,498	15,091	1,420,955	584,462	8,219,096
6/30/2054	8,219,096	13,773	1,317,727	530,470	7,445,613
6/30/2055	7,445,613	12,550	1,217,650	479,728	6,720,241
6/30/2056	6,720,241	11,418	1,121,908	432,207	6,041,958

Attachment: FY 18 GASB 67-68 (Fy 18 Gasb 67-68)

CONDUENT

Appendix A, Table 1 – Projection of Fiduciary Net Position

Year Ending	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings	Projected Ending Fiduciary Net Position
6/30/2057	$ 6,041,958	$ 10,373	$ 1,029,624	$ 387,867	$ 5,410,574
6/30/2058	5,410,574	9,410	941,031	346,685	4,825,638
6/30/2059	4,825,638	8,526	856,280	308,625	4,286,508
6/30/2060	4,286,508	7,715	775,904	273,624	3,791,943
6/30/2061	3,791,943	6,975	700,227	241,583	3,340,274
6/30/2062	3,340,274	6,302	629,311	212,383	2,929,648
6/30/2063	2,929,648	5,691	563,475	185,883	2,557,747
6/30/2064	2,557,747	5,138	502,647	161,924	2,222,162
6/30/2065	2,222,162	4,639	446,534	140,347	1,920,614
6/30/2066	1,920,614	4,189	395,112	120,992	1,650,684
6/30/2067	1,650,684	3,786	348,136	103,699	1,410,032
6/30/2068	1,410,032	3,423	305,341	88,314	1,196,428
6/30/2069	1,196,428	3,098	266,666	74,681	1,007,541
6/30/2070	1,007,541	2,808	231,629	62,655	841,376
6/30/2071	841,376	2,549	199,881	52,106	696,150
6/30/2072	696,150	2,317	171,298	42,916	570,085
6/30/2073	570,085	2,112	145,576	34,970	461,591
6/30/2074	461,591	1,928	122,532	28,162	369,149
6/30/2075	369,149	1,767	102,108	22,388	291,196
6/30/2076	291,196	1,623	84,161	17,544	226,202
6/30/2077	226,202	1,497	68,512	13,528	172,715
6/30/2078	172,715	1,384	55,004	10,245	129,340
6/30/2079	129,340	1,286	43,447	7,603	94,781
6/30/2080	94,781	1,199	33,689	5,517	67,808
6/30/2081	67,808	1,123	25,742	3,900	47,090
6/30/2082	47,090	1,056	19,348	2,667	31,465
6/30/2083	31,465	996	14,329	1,744	19,876
6/30/2084	19,876	943	10,436	1,065	11,448
6/30/2085	11,448	895	7,467	575	5,451
6/30/2086	5,451	852	5,231	231	1,303
6/30/2087	1,303	813	3,584	-	-
6/30/2088	-	-	2,392	-	-
6/30/2089	-	-	1,564	-	-
6/30/2090	-	-	1,011	-	-
6/30/2091	-	-	645	-	-
6/30/2092	-	-	406	-	-
6/30/2093	-	-	253	-	-
6/30/2094	-	-	155	-	-
6/30/2095	-	-	94	-	-
6/30/2096	-	-	56	-	-
6/30/2097	-	-	33	-	-
6/30/2098	-	-	19	-	-
6/30/2099	-	-	11	-	-
6/30/2100	-	-	7	-	-
6/30/2101	-	-	4	-	-
6/30/2102	-	-	2	-	-
6/30/2103	-	-	-	-	-

Appendix A, Table 2 – Actuarial Present Values of Projected Benefit Payments

Year Ending	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Funded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments at 7.00%	Present Value of Unfunded Funded Benefit Payments at 3.13%	Present Value of Benefit Payments Using Single Discount Rate 7.00%
6/30/2017	$ 21,987,225	$ 1,544,910	$ 1,544,910	$ -	$ 1,489,316	$ -	$ 1,489,316
6/30/2018	24,250,103	1,744,291	1,744,291	-	1,571,516	-	1,571,516
6/30/2019	25,513,180	1,894,105	1,894,105	-	1,594,851	-	1,594,851
6/30/2020	26,702,304	1,982,594	1,982,594	-	1,560,149	-	1,560,149
6/30/2021	27,841,978	2,015,495	2,015,495	-	1,482,281	-	1,482,281
6/30/2022	29,036,061	2,072,314	2,072,314	-	1,424,362	-	1,424,362
6/30/2023	30,257,428	2,179,209	2,179,209	-	1,399,845	-	1,399,845
6/30/2024	31,446,185	2,316,275	2,316,275	-	1,390,553	-	1,390,553
6/30/2025	32,542,291	2,508,834	2,508,834	-	1,407,620	-	1,407,620
6/30/2026	33,488,494	2,629,755	2,629,755	-	1,378,939	-	1,378,939
6/30/2027	33,355,052	2,718,805	2,718,805	-	1,332,368	-	1,332,368
6/30/2028	33,088,928	2,741,007	2,741,007	-	1,255,372	-	1,255,372
6/30/2029	32,769,142	2,799,371	2,799,371	-	1,198,226	-	1,198,226
6/30/2030	32,358,520	2,942,263	2,942,263	-	1,176,999	-	1,176,999
6/30/2031	31,723,085	2,988,491	2,988,491	-	1,117,282	-	1,117,282
6/30/2032	30,985,269	3,001,660	3,001,660	-	1,048,790	-	1,048,790
6/30/2033	30,169,934	3,039,193	3,039,193	-	992,434	-	992,434
6/30/2034	29,239,871	3,001,464	3,001,464	-	915,994	-	915,994
6/30/2035	28,273,139	2,946,381	2,946,381	-	840,359	-	840,359
6/30/2036	27,293,709	2,923,207	2,923,207	-	779,205	-	779,205
6/30/2037	26,257,217	2,865,134	2,865,134	-	713,762	-	713,762
6/30/2038	25,206,007	2,855,832	2,855,832	-	664,901	-	664,901
6/30/2039	24,081,840	2,795,856	2,795,856	-	608,353	-	608,353
6/30/2040	22,931,907	2,731,670	2,731,670	-	555,501	-	555,501
6/30/2041	21,761,568	2,643,927	2,643,927	-	502,484	-	502,484
6/30/2042	20,597,374	2,563,151	2,563,151	-	455,264	-	455,264
6/30/2043	19,430,295	2,460,217	2,460,217	-	408,394	-	408,394
6/30/2044	18,285,434	2,380,324	2,380,324	-	369,282	-	369,282
6/30/2045	17,138,205	2,290,097	2,290,097	-	332,041	-	332,041
6/30/2046	15,999,491	2,181,716	2,181,716	-	295,633	-	295,633
6/30/2047	14,890,897	2,074,331	2,074,331	-	262,693	-	262,693
6/30/2048	13,813,625	1,961,638	1,961,638	-	232,170	-	232,170
6/30/2049	12,775,484	1,852,237	1,852,237	-	204,880	-	204,880
6/30/2050	11,775,926	1,740,623	1,740,623	-	179,938	-	179,938
6/30/2051	10,820,058	1,632,470	1,632,470	-	157,718	-	157,718
6/30/2052	9,907,470	1,525,095	1,525,095	-	137,705	-	137,705
6/30/2053	9,040,498	1,420,955	1,420,955	-	119,908	-	119,908
6/30/2054	8,219,096	1,317,727	1,317,727	-	103,922	-	103,922
6/30/2055	7,445,613	1,217,650	1,217,650	-	89,748	-	89,748
6/30/2056	6,720,241	1,121,908	1,121,908	-	77,281	-	77,281

Appendix A, Table 2 – Actuarial Present Values of Projected Benefit Payments

Year Ending	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Funded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments at 7.00%	Present Value of Unfunded Funded Benefit Payments at 3.13%	Present Value of Benefit Payments Using Single Discount Rate 7.00%
6/30/2057	$ 6,041,958	$ 1,029,624	$ 1,029,624	$ -	$ 66,284	$ -	$ 66,284
6/30/2058	5,410,574	941,031	941,031	-	56,618	-	56,618
6/30/2059	4,825,638	856,280	856,280	-	48,148	-	48,148
6/30/2060	4,286,508	775,904	775,904	-	40,775	-	40,775
6/30/2061	3,791,943	700,227	700,227	-	34,390	-	34,390
6/30/2062	3,340,274	629,311	629,311	-	28,885	-	28,885
6/30/2063	2,929,648	563,475	563,475	-	24,172	-	24,172
6/30/2064	2,557,747	502,647	502,647	-	20,152	-	20,152
6/30/2065	2,222,162	446,534	446,534	-	16,731	-	16,731
6/30/2066	1,920,614	395,112	395,112	-	13,836	-	13,836
6/30/2067	1,650,684	348,136	348,136	-	11,393	-	11,393
6/30/2068	1,410,032	305,341	305,341	-	9,339	-	9,339
6/30/2069	1,196,428	266,666	266,666	-	7,622	-	7,622
6/30/2070	1,007,541	231,629	231,629	-	6,188	-	6,188
6/30/2071	841,376	199,881	199,881	-	4,990	-	4,990
6/30/2072	696,150	171,298	171,298	-	3,997	-	3,997
6/30/2073	570,085	145,576	145,576	-	3,175	-	3,175
6/30/2074	461,591	122,532	122,532	-	2,497	-	2,497
6/30/2075	369,149	102,108	102,108	-	1,945	-	1,945
6/30/2076	291,196	84,161	84,161	-	1,498	-	1,498
6/30/2077	226,202	68,512	68,512	-	1,140	-	1,140
6/30/2078	172,715	55,004	55,004	-	855	-	855
6/30/2079	129,340	43,447	43,447	-	631	-	631
6/30/2080	94,781	33,689	33,689	-	458	-	458
6/30/2081	67,808	25,742	25,742	-	327	-	327
6/30/2082	47,090	19,348	19,348	-	229	-	229
6/30/2083	31,465	14,329	14,329	-	159	-	159
6/30/2084	19,876	10,436	10,436	-	108	-	108
6/30/2085	11,448	7,467	7,467	-	72	-	72
6/30/2086	5,451	5,231	5,231	-	47	-	47
6/30/2087	1,303	3,584	1,303	2,281	11	259	30
6/30/2088	-	2,392	-	2,392	-	264	19
6/30/2089	-	1,564	-	1,564	-	167	12
6/30/2090	-	1,011	-	1,011	-	105	7
6/30/2091	-	645	-	645	-	65	4
6/30/2092	-	406	-	406	-	40	2
6/30/2093	-	253	-	253	-	24	1
6/30/2094	-	155	-	155	-	14	1
6/30/2095	-	94	-	94	-	8	-
6/30/2096	-	56	-	56	-	5	-

Appendix B – Schedule of Changes in System's Net Pension Liability and Related Ratios

	2017	2016
Total pension liability		
Service cost	$ 409,425	$ 424,445
Interest	2,057,229	1,994,674
Changes of benefit terms	0	0
Differences between expected and actual experience	(279,359)	21,701
Changes of assumptions	0	0
Benefit payments	(1,609,872)	(1,457,024)
Net change in total pension liability	577,423	983,796
Total pension liability-beginning	29,770,889	28,787,093
Total pension liability-ending (a)	30,348,312	29,770,889
Plan fiduciary net pension		
Contributions - employer	$ 1,200,992	$ 1,270,402
Contributions - employee	107,272	112,251
Net investment income	2,499,524	251,339
Benefit payments, including refunds of employee contributions	(1,544,910)	(1,457,024)
Administrative expense	0	0
Other	0	0
Net change in plan fiduciary net position	2,262,878	176,968
Plan fiduciary net position-beginning	21,987,225	21,810,257
Plan fiduciary net position-ending (b)	24,250,103	21,987,225
System's net pension liability-ending (a)-(b)	6,098,209	7,783,664
Plan fiduciary net position as a percentage of the total pension liability	79.91%	73.85%
Covered-employee payroll	3,557,984	3,816,272
Net pension liability as a percentage of covered-employee payroll	171.4%	204.0%

Notes to Schedule:

A. Benefit changes

None.

B. Changes of assumptions

The Municipal Bond Rate assumption changed from 2.71% to 3.13%. This change had no impact on the results.

Attachment: FY 18 GASB 67-68 (Fy 18 Gasb 67-68)

CONDUENT

Appendix B – Pension Expense and Calculation of Projected Earnings

		2016		2015
Pension Expense for the Fiscal Year Ended June 30, 2016				
Service cost	$	409,425	$	424,445
Interest cost on Total Pension Liability		2,057,229		1,994,674
Differences between expected and actual experience		(98,769)		31,144
Changes of assumptions		551,978		640,345
Contributions - employee		(107,272)		(112,251)
Projected earnings on plan investments		(1,530,963)		(1,524,159)
Differences between projected and actual earnings		296,730		490,442
Administrative expense		0		0
Other		0		0
Total Pension Expense		1,578,358		1,944,640

Calculation of Projected Earnings on Plan Investments

Plan Fiduciary Net Position – Beginning of Year	$	21,987,225	$	21,810,257
Contributions - employer		1,200,992		1,270,402
Contributions - employee		107,272		112,251
Benefit payments, including refunds of employee contributions		(1,544,910)		(1,457,024)
Administrative expense		0		0
Other		0		0
Total Projected Earnings *		1,530,963		1,524,159
Actual Earnings		2,499,524		251,339
Earnings (Gain)/Loss		(968,561)		1,272,820

Attachment: FY 18 GASB 67-68 (Fy 18 Gasb 67-68)

Appendix C, Table 1: Amortization of Differences between Expected and Actual Liability Experience

Measurement Year End	2015	2016	2017	2018	2019
Amount Established	$ 64,357	$ 21,701	$ (279,359)		
Recognition Period	2.86	2.51	2.20		
Annual Recognition	$ 22,487	$ 8,657	$ (126,809)		

Measurement Year End	Amount Recognized					Outflows	Inflows	Total
	2015	2016	2017	2018	2019			
2015	$ 22,487	$ -	$ -	$ -	$ -	$ 22,487	$ -	$ 22,487
2016	22,487	8,657	-	-	-	31,144	-	31,144
2017	19,383	8,657	(126,809)	-	-	28,040	(126,809)	(98,769)
2018	-	4,387	(126,809)	-	-	4,387	(126,809)	(122,422)
2019	-	-	(25,741)	-	-	-	(25,741)	(25,741)
2020	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-

Measurement Year End	Deferred Balance					Outflows	Inflows	Total
	2015	2016	2017	2018	2019			
2015	$ 41,870	$ -	$ -	$ -	$ -	$ 41,870	$ -	$ 41,870
2016	19,383	13,044	-	-	-	32,427	-	32,427
2017	-	4,387	(152,550)	-	-	4,387	(152,550)	(148,163)
2018	-	-	(25,741)	-	-	-	(25,741)	(25,741)
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-

Appendix C, Table 2: Amortization of Changes in Assumptions

Measurement Year End	2015	2016	2017	2018	2019
Amount Established	$ 1,832,668	$ -	$ -		
Recognition Period	2.86	2.51	2.20		
Annual Recognition	$ 640,345				

Measurement Year End	Amount Recognized					Outflows	Inflows	Total
	2015	2016	2017	2018	2019			
2015	$ 640,345	$ -	$ -	$ -	$ -	$ 640,345	$ -	$ 640,345
2016	640,345	-	-	-	-	640,345	-	640,345
2017	551,978	-	-	-	-	551,978	-	551,978
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-

Measurement Year End	Deferred Balance					Outflows	Inflows	Total
	2015	2016	2017	2018	2019			
2015	$ 1,192,323	$ -	$ -	$ -	$ -	$ 1,192,323	$ -	$ 1,192,323
2016	551,978	-	-	-	-	551,978	-	551,978
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-

Appendix C, Table 3: Amortization of Differences between Projected and Actual Earnings

Measurement Year End	2015	2016	2017	2018	2019
Amount Established	$ 1,179,391	$ 1,272,820	$ (968,561)		
Recognition Period	5.00	5.00	5.00		
Annual Recognition	$ 235,878	$ 254,564	$ (193,712)		

Measurement Year End	Amount Recognized					Outflows	Inflows	Total
	2015	2016	2017	2018	2019			
2015	$ 235,878	$ -	$ -	$ -	$ -	$ 235,878	$ -	$ 235,878
2016	235,878	254,564	-	-	-	490,442	-	490,442
2017	235,878	254,564	(193,712)	-	-	490,442	(193,712)	296,730
2018	235,878	254,564	(193,712)	-	-	490,442	(193,712)	296,730
2019	235,878	254,564	(193,712)	-	-	490,442	(193,712)	296,730
2020	1	254,564	(193,712)	-	-	254,565	(193,712)	60,853
2021	-	-	(193,712)	-	-	-	(193,712)	(193,712)

Measurement Year End	Deferred Balance					Outflows	Inflows	Total
	2015	2016	2017	2018	2019			
2015	$ 943,513	$ -	$ -	$ -	$ -	$ 943,513	$ -	$ 943,513
2016	707,635	1,018,256	-	-	-	1,725,891	-	1,725,891
2017	471,757	763,692	(774,849)	-	-	1,235,449	(774,849)	460,600
2018	235,879	509,128	(581,137)	-	-	745,007	(581,137)	163,870
2019	1	254,564	(387,425)	-	-	254,565	(387,425)	(132,860)
2020	-	-	(193,713)	-	-	-	(193,713)	(193,713)

Employee Pension Board of Trustees
Pension Board Meeting Minutes
July 18, 2017
5:30 PM
Administrative Conference Room
City of Creve Coeur
300 N. New Ballas Road

I. Call Meeting to Order

The meeting was called to order by Chairman Sullivan at 5:30 PM.

II. Introduction of New Finance Director

Mr. Perkins introduced the new finance director to the Board.

III. Investment Advisors-Quarterly Reports

Commerce Bank gave their presentation followed by Fiduciary Advisors. The presentations are attached for reference.

IV. Approval of Meeting Minutes

Chairman Sullivan asked for comments or corrections for the meeting minutes of June 8, 2017 which there were none. Jon McIntosh motioned to approve the meeting minutes of June 8, 2017. David Caldwell seconded the motion. All present voted aye, motion passed.

V. Discussion on Cost of Living Allowance for Retirees

Ms. Obermoeller began discussion of a Cost of Living Allowance (COLA) for members of the pension plan that are currently retired and receiving benefits. If a COLA could be provided it would increase liabilities substantially.

Mr. Perkins commented that his office has received some requests requesting a COLA. The previous COLA was provided many years ago. The pension plan must be funded at least 80% before any benefit enhancements could be done. Ms. Lawrence was concerned about the annual cost; however, Mr. Caldwell noted the smoothing options didn't have to be done rather having the information available would be useful. Mr. Caldwell also commented that perhaps the wording of the plan be changed to include a COLA. It would not be a guarantee that one would be given just that it would be stated in the plan so it would be possible to do so. Currently there is nothing in the Plan that says a COLA can or cannot be given.

VI. LAGERS Update

Chairman Sullivan inquired if there was anyone on the Board who felt the plan should not move to LAGERS. He wanted to be sure that no one had changed their mind from the previous meeting. No one commented their opinion had changed.

Ms. Lawrence asked Mr. Perkins if the citizen's petition was ever submitted for the Defined Contribution (DC plan). Mr. Perkins commented that it had not. Mr. Perkins then commented he has talked to the LAGERS representative about moving this plan to LAGERS and it is approximately a year before they would be ready.

Mr. McIntosh indicated that Mr. Kempler was at the MAPERS conference and commented he would be happy to come to the board and answer any questions that the Board has. Mr. Perkins commented to have him in in another quarter then they will be a little further along. Mr. McIntosh if he came and the board asked questions it would make us more comfortable before making a recommendation to the council.

Mr. Perkins left the meeting at 6:25 p.m.

Ms. Obermoeller asked if the Board wanted to schedule a meeting with the LAGERS representative. Chairman Sullivan and Mr. McIntosh agreed that the representative should come to a meeting in the near future to answer the Board's questions.

Mr. Potashnick inquired if the city were unable to make the required contribution if LAGERS would take tax money to cover the contribution. Which was answered yes this plan would not be subservient to the other plan. Chairman Sullivan commented that what would this board do if it became part of lagers. If a part of lagers they would making those decisions or if we would have input. This board recommends the contribution. Council can accept or reject that suggestion. Many questions were raised that pertained to LAGERS. It was decided to have a special meeting which would only be for discussion with the LAGERS representative. The Board will e-mail questions to the finance director to be incorporated into the questions brought up at the meeting. The finance director will forward a list of these questions to each Board member for any questions to be added. The lists should be returned to the finance director in 48 hours. It will then be determined if a subcommittee needs to be form.

Questions raised at the pension meeting:

- Would the Board have any role if LAGERS was administrating the Plan and would they determine the actuarial assumptions?
- If LAGERS is going to be responsible as fiduciaries of the plan and they have the means to force the City to make whatever contribution they believe is sufficient does it matter what assumptions the Board comes up with if we know LAGERS is going to make the decisions?
- What would happen if LAGERS were to drop the assumptions what would the City have to do if the contribution required became too high? Can the assumptions on the current plan be changed by LAGERS?
- If we contribute to LAGERS and we have 10-year amortization and they have 30 does that mean they would change the amortization of this plan to 30 years?
- If the current plan runs out of money do they take money from the general pot to service the obligation?
- Do we know LAGERS does sub-accounting so any excess payments made go to us and not a shared pot?

The date for the special meeting was tentatively set for Tuesday, August 29, 2017

VII. Pension Plan Audit Update

Ms. Obermoeller informed the Board that she had requested a verbal bid from Hochschild, Bloom LLP and Schowalter and Jabouri to perform the pension audit. She asked the Board if it wanted to do an audit every year? Mr. Caldwell and Mr. Potashnick both commented the report was confusing and when asking the auditors questions they could not be answered. Mr. Potashnick asked if the audit is required to be done every year. Ms. Obermoeller commented that the city she previously worked for did not do a pension audit annually. She had talked to the auditor asking if it was necessary every year and was told no. It is an interpretation of State Statute. The City's audit includes the pension plan so that is how some get by without doing a separate audit.

Mr. Karasick inquired who on the Board receives the investment statements monthly. Everyone gets a report from Commerce but not the Schwab report. Someone on the board should be receiving all investment reports to review. Mr. Potashnick suggested that the chief financial officer review the reports and provide the Board, on a quarterly basis, copies of those reports with her notice that all in the reports is correct. Mr. Karasick commented at least one person on the board should be getting the monthly reports even if it is just to verify that the money is in the account. Mr. Sullivan commented that the Board should be able to delegate that responsibility.

Mr. Potashnick motioned that an agenda item be added for each meeting which would include an officer's certificate reporting on the financial statements that have been issued since last meeting. Mr. McIntosh seconded the motion. All present voted aye, motion passed.

Ms. Obermoeller confirmed with the Board that they would like her to get an opinion on doing a pension audit every year. The next regular meeting of the Board is not until October and waiting until then to make a decision would make the audit very late. Mr. McIntosh made a motion to allow the chairman and the finance director of making the decision as long it is not required by the city attorney or state auditor. Mr. McIntosh amended his motion "as long as it is not required by the state auditor. Ms. Lawrence seconded the motion, all presented voted aye, motion passed. Mr. Potashnick suggested and Mr. Unser agreed that the decision of the state auditor on whether a pension audit is required should be provided in writing.

VIII. Informational - Invoices Paid and Retirements since Last Meeting

IX. Other Business

There was no other business for discussion.

X. Adjournment

Mr. Potashnick motion to adjourn the meeting. Mr. McIntosh seconded the motion. All present voted aye, motion passed. The meeting adjourned at 7:17 PM.

Employee Pension Board of Trustees
Pension Board Meeting Minutes
August 29, 2017
5:30 PM
Administrative Conference Room
City of Creve Coeur
300 N. New Ballas Road

I. Call Meeting to Order

II. Meeting with LAGERS Representative

LAGERS is a non-profit public pension system of the State of Missouri to provide retirement, disability, and survivors' benefits to Missouri's local government employees. At this time LAGERS has taken on one legacy plan which has only retirees. No plan has been transferred that contains active and retired such as the city's.

For LAGERS to take over the administration of the legacy plan, it must be frozen, meaning no new employees will be added to the plan. The City may be able to convert all employee service, past and present, into LAGERS covered service.

An in-depth review would be completed on the legacy plan document and LAGERS would come back to the Board with any recommended changes and give an overview of the costs associated and an actuarial valuation completed. Once LAGERS has taken over management of the legacy plan this Board would no longer be the fiduciary of the plan.

For a COLA to be administered it has to be stated in the plan document, before LAGERS starts administering the plan, and be funded at least 80%. If there is currently no language in the plan about a COLA, the LAGERS COLA language may be incorporated into the plan before the transition is made.

LAGERS amortization period is a 20-year closed period. The City's is currently 10 years. If a sponsor wanted they could make additional contributions if they so choose.

This legacy plan would have its own "bucket" for accounting purposes which is done with all LAGERS employers. Creve Coeur would have the Creve Coeur's bucket and the Creve Coeur legacy plan bucket, and they would be separate. Kelly Sullivan asked if the contribution to the legacy bucket would be cash from liquidating the plan's assets and be invested according to LAGERS guidelines? All assets would be rolled over to LAGERS and they would invest those as a part of their portfolio.

Ms. Lawrence inquired about the composition of LAGERS Board. Mr. Kempker stated that the Board is comprised of 3 employer trustees and 4 member trustees. Trustees are elected at the annual meeting. To have the finance director on the board someone would have to nominate her with a second. That would put her on the ballot.

Mr. Kempker stated that State Statute 70.621 was added to the LAGERS statutes which allows LAGERS to administer the legacy plans. That statute is noted below.

70.621 Political subdivisions may opt to have LAGERS administer prior non-LAGERS retirement plan, when, procedure.

70.621. 1. In the event a political subdivision has a plan in effect for all or part of its employees similar in purpose to the Missouri local government employees' retirement system, and in the further event such a political subdivision is an employer in the system, at the request of the political subdivision the board of the system may, at its sole discretion, enter into an agreement with such an employer whereby the system assumes all duties and responsibilities of operating the employer's prior plan.

2. After making the necessary changes to the statute, city ordinance, city charter, or governing documents of the employer's prior plan and upon receiving a concurring resolution from the board of trustees of the prior plan after a simple majority vote of the active employees of the prior plan, such employer may enter into an agreement with the board of the system to operate the employer's prior plan so long as an election has been made to cover new employees under section 70.630. Upon entering into such agreement, the employer shall irrevocably delegate and cede all operational duties and responsibilities to the system. Upon entering into such an agreement, the board of the system shall become the governing board of the employer's prior plan. The employer's prior plan shall be administered as a frozen prior plan by the system and shall continue to operate under its existing governing documents in all other respects.

3. Where an agreement authorized by this section is entered into by an employer and the system, the employer shall continue to have sole responsibility for the full funding of its prior plan including all related expenses. If any employer fails to make any payment due under the prior plan, the provisions of section 70.735 shall apply.

4. The system shall formulate and adopt rules and regulations for the government of its own proceedings relating to this section and for the administration of this section, as the board may deem necessary.

(L. 2016 H.B. 1443)

For the legacy plan to be taken over by LAGERS there has to be a simple majority of the active members of the plan vote for LAGERS to be the administrator. After that the pension board must approve for LAGERS to be the administrator.

There will be upfront fees for an actuarial study and programming the system.

Mr. Caldwell asked if the City wanted to fund the plan on a different basis would the City have to do its own valuation report. Mr. Caldwell also asked when LAGERS does their valuation. Mr. Kempker stated LAGERS does valuations in July. LAGERS will send those reports and inform the City what its contribution rate will be for the coming year. The recommended contribution would lag the data by a year. One of the goals for the funding of LAGERS is to ensure the plan is on track and trending toward being 100% funded. They try to provide some stability in the contribution rates and building in some sort of risk mitigation so the employer can plan ahead. This is accomplished by a 5-year smoothing of gains and losses which will apply to the legacy plan.

At a point in time there will be no active participants in the plan, all will be retired. At that time, if there is any excess money, that money would be transferred to the benefit reserve plan. The reserve plan is where retiree benefits are paid. Once the money is in the benefit reserve fund it is LAGERS board's responsibility to make sure that the fund is adequately funded so all retirees can continue to receive payment for the rest of their life.

Mr. Caldwell commented it would be useful to do a survey of the active employees in the DB plan if they want to move the administration to LAGERS. Ms. Lawrence asked if Mr. Karasick would talk to the individuals that handle the investments at LAGERS. Ms. Obermoeller noted that LAGERS' annual conference is being held in October if anyone would like to attend. Mr. Karasick thought it would be a good idea for at least one Board member to attend. Mr. Karasick also mentioned that the options that are available be presented to the active employees in the DB plan and let them make the decision on whether or not this plan is moved to LAGERS. Also, let the employees know how the Board will be voting to which Ms. Lawrence agreed and added a meeting should be held with the active employees. Mr. Unser stated he thought Mr. Perkins had already mentioned as we proceed with the transition that the active members be involved.

Mr. Sullivan commented the question to be answered is "do we believe LAGERS will perform the fiduciary duties better than this board." Mr. Unser commented that 2 questions that the employees thought were important were answered tonight - years of service rolls over and no years of service need to be purchased and does the 3% contribution by the employees change with the answer being no, it will not.

Mr. Karasick inquired if the Board's current advisors could give a Monte Carlo Risk Analysis of the current portfolio as of June 30, 2017. This analysis lets you know what exposure there is and how risky is the portfolio when compared to LAGERS.

Lagers Questions

III. Approval of Meeting Minutes

Approval of the meeting minutes was deferred to the next meeting.

Meeting Minutes

Summary: Attached for review and approval are the minutes from the July 18, 2017 Employee Pension Fund Board of Trustees meeting.

IV. Annual Report

Discussion of the annual report was deferred until the next meeting.

Pension Fund Annual Report

V. Pension Audit

Does the pension board want to do an audit that is separate from the City? After a short discussion Mr. Caldwell motioned to not do a pension audit this year. Mr. Sullivan seconded the motion with all present voting aye, motion passed

Ms. Obermoeller stated she did reach out to other municipalities who had a Defined Benefit plan inquiring if they did an annual audit with only one city replying yes. Mr. Potashnick requested that the municipalities that were contacted be included in the minutes. Mr. Potashnick requested the finance director give a report to the finance committee in regards to not doing the audit.

Audit Information

VI. Commerce Bank Discussion

This discussion was deferred until the next meeting.

VII. Adjournment

Mr. Potashnick motioned to adjourn the meeting. Ms. Lawrence seconded the motion, all present voted aye, motion passed. The meeting adjourned at 7:50 p.m.

Employee Pension Board of Trustees
City of Creve Coeur
Creve Coeur, MO 63141

Meeting: 10/17/17 05:30 PM
Department: Finance Department
Category: Report
Prepared By: Sherry Hall

SCHEDULED

Department Head: Lori Obermoeller

STAFF REPORT

Annual Pension Report

Retirement

CCERDBP

Creve Coeur Employee Retirement Defined Benefit Plan

Annual Report Fiscal Year Ending June 30, 2016

Dear Participants, City Council and Residents,

On behalf of the City of Creve Coeur, I am pleased to present the Creve Coeur Employee Retirement Defined Benefit Plan (CCERDBP) Annual Financial Report of FY2016. This is the second annual report that provides information concerning the status of the retirement plan. The Board of Trustees are responsible for the administration of the retirement plan, the investment policies and monitoring the investment performance of its investment managers.

During the past year, the City has seen a continued increase in the funding level of the plan. Since a low point of $12.6 million assets following the 2008-2009 market decline, the plan assets have risen to $21.9 million in FY2016. This resulted from increased City contributions, employee contributions, and the investment performance.

The Pension Board meets regularly with its investment managers to discuss investment policies and fund performance. Commerce Bank manages the fixed income investments, and Fiduciary Advisors was selected by the Pension Board in 2013 to manage the equity investments.

The Pension Board also meets with the plan actuary Conduent to review the ability of the fund to meet its future obligations to retirees. As a result of the actuarial evaluations, the Pension Board made two changes in 2015 to the actuarial assumptions used to determine the contributions to the plan which are recommended to the City Council. First, the assumption for future investment performance was decreased from 7.5% to 7.0%. Second, the Pension Board changed the amortization of the 7/1/15 unfunded liability from a 15-year rolling time period to a fixed 10-year period ending 6/30/2025. This change is to ensure that the current unfunded liability will be eliminated by the time the vast majority of current participants have retired. (The plan has been closed to new employees since June, 2006).

A key measurement of the ability of the fund to meet future obligations is the Funded Ratio. The Funded Ratio relates the size of the unfunded liabilities to the total actuarial liabilities of the fund. The Funded Ratio is affected by the amount of City and employee contributions, benefit payments, investment performance, and actuarial assumptions such as mortality. From a recent low of 62.5% in 2011, the Funded Ratio increased to 75.9% for 2015 and stood at 78.5% for 2016.

For the fiscal year ending June 30, 2016, the equity portion of the Creve Coeur Pension portfolio was slightly down 0.3%. This compares to the equity portfolio's primary policy index which was down 1.1% and the secondary policy index which was down 1.7%. During this time period, large cap stocks (S&P 500 index) were up 3.99%, but investments in small cap stocks (Russell 2000 index) were down 6.73% and foreign stocks (MSCI EAFE index) were down 10.16%

For the year ended June 30, 2016, the global financial markets were faced with significant volatility. This was caused by weakness in the energy markets, growing fears of recession, as well as the concern over Britain's vote on whether to leave the European Union. As a result, interest rates generally declined over the period, and all major bond sectors posted positive returns for the year. Accordingly, the fixed income component of the plan generated competitive returns. The bond holdings are comprised of a diversified portfolio of investment grade bonds, with an emphasis on high quality corporate bonds. Investment-grade corporate bonds performed well, benefiting solid fundamentals and sustained demand. The fund also holds a diversified assortment of US treasuries, US agencies, asset-backed and mortgage-backed securities and taxable municipal bonds which reported positive returns, as well.

The Pension Board has a fiduciary duty to the participants in the plan. The City Council has consistently endorsed the actions taken by the Pension Board and has consistently budgeted contributions equal to or in excess of the amount recommended by the Pension Board.

I wish to thank the Pension Board of Trustees for their efforts this year. Both the City Council and the Pension Board of Trustees have displayed a dedication to maintaining the financial soundness of the pension plan to ensure the participants will receive the benefits, to which they are entitled.

If you have any questions please contact Lori Obermoeller, Director of Finance, for the City of Creve Coeur, at lobermoeller@crevecoeurmo.gov or (314)-872-2519.

Sincerely,

Lori Obermoeller

Lori Obermoeller
Director of Finance
City of Creve Coeur

Retirement Funding

The retirement benefits are funded by contributions from the City of Creve Coeur, investment income, and by employee contributions. In order to ensure your benefits are available to you, CCEDBP is constantly evaluating the assets relative to the value of the liabilities. The information shown on Table 3 indicates the extent to which the system was funded as of a given year.

The City must contribute the annually required contribution subject to City Council's annual review of the City's financial condition during the budget process that, when combined with present assets and future investment returns, will be sufficient to meet the present and future financial obligations of the retirement system. The City has met or exceeded the actuarial required contributions for the last 15 years.

The market events of 2009 had an extremely negative effect on the pension plan. Since that time, the plan has significantly improved its funding level as a result of increased City contributions, employee contributions and increased market performance. The City remains committed to providing adequate funding for the plan.

$1,840

Current Monthly Benefit for Members Currently Retired from the CCEDBP

Creve Coeur Employee Retirement Defined Benefit Plan

Member Data

Retired Members

June 30, 2016	CCEDBP
Retired Members	
Average Age	70.5
Average monthly benefit	$1,839.88
Active Members	
Average Age	52
Average Salary (per month)	$6,092
Average length of service	20.5
Total Membership	
Active	50
Terminated-vested	30
Retired	68

Age of Active Participants in Plan

Years Credited Service by Category	Number of Active Participants
30-34	1
35-39	3
40-44	4
45-49	11
50-54	12
55-59	10
60-64	4
65-69	5
Total	50

Facts About the Defined Benefit Pension Plan

- The City has consistently paid or exceeded the annually required contributions to adequately fund the plan.
- The active employees support the plan with a contribution of 3% of their base salary and longevity.
- The major sources of revenue for the plan is investment earnings and City contributions.
- The plan employs professional money managers to maximize investment earnings.
- The City's contribution for FY 2016 was $1,270,402
- The active employees contributed 3% of base salary and longevity pay totaling $112,251 in FY 2016.
- The plan was closed to all new employees hired after June 1, 2006.

Table One
FINANCIAL POSITION

PLAN NET ASSETS

The Plan Net Assets schedule shows a snapshot of what the Creve Coeur Employee Defined Pension Plan owns at the end of the Fiscal Year

	June-30			
	2016	**2015**	**Amount of Change**	**Percentage Change**
ASSETS				
Investments, at fair value:				
Equity:				
Mutual funds	$ 15,649,800	$ 15,719,196	$ (69,396)	-0.44%
Fixed Income				
Managed bond account	$ 6,052,080	$ 5,796,363	$ 255,717	4.41%
Total Increase			$ -	
Money market funds	$ 240,037	$ 256,607	$ (16,570)	-6.46%
Total Investments	**$ 21,941,917**	**$ 21,772,166**	**$ 169,751**	**0.78%**
Accrued interest and dividends receivable	$ 42,229	$ 38,090	$ 4,139	10.87%
Unsettled Transactions	$ 3,080.00			
Total Assets	**$ 21,987,226**	**$ 21,810,256**	**$ 176,970**	**0.81%**
LIABILITIES	-	-		
***NET POSITION-RESTRICTED FOR PENSIONS**	**$ 21,987,226**	**$ 21,810,256**	**$ 176,970**	**0.81%**

*Net Position-Resticted for Pension-the amount of funds available at year end to fund current and future pension liabilities

Attachment: Annual Pension Report FY2016 (Annual Pension Report)

Table Two
CHANGES IN NET POSITION

	For The Years Ended June 30			
	2016	2015	Amount of Change	Percentage Change
ADDITIONS TO NET POSITION ATTRIBUTED TO:				
Investment income:				
Net appreciation (depreciation) in fair value of investments	$ (233,017)	$ (143)	(232,874)	162848.95%
Interest and dividends	553,008	499,552	53,456	10.70%
Total Investment Income	**319,991**	**499,409**	**(179,418)**	**-35.93%**
Less - Investment management and custodial fees*	39,391	39,807	(416)	-1.05%
Net Investment Income	**280,600**	**459,602**	**(179,002)**	**-38.95%**
Employer's contributions	1,270,404	1,254,457	15,947	1.27%
Employee contributions	112,251	93,099	19,152	20.57%
Total Additions	**1,663,255**	**1,807,158**	**(143,903)**	**-7.96%**
DEDUCTIONS FROM NET POSITION ATTRIBUTED TO:				
Benefits paid to retirees and beneficiaries:				
Monthly annuitized	1,457,024	1,392,018	65,006	4.67%
Lump-sum	-	-	-	0.00%
Total Benefits Paid To Retirees And Beneficiaries	**1,457,024**	**1,392,018**	**65,006**	**4.67%**
Administrative expenses:				
Actuarial fees	15,832	14,866	966	6.50%
Fiduciary insurance	5,604	5,585	19	0.34%
Auditing fees	7,400	12,400	(5,000)	-40.32%
Other fees and charges	425	634	(209)	-32.97%
Total Administrative Expenses	**29,261**	**33,485**	**(4,224)**	**-12.61%**
Total Deductions	**1,486,285**	**1,425,503**	**60,782**	**4.26%**
INCREASE IN NET POSITION	**176,970**	**381,655**	**(204,685)**	**-53.63%**
NET POSITION - RESTRICTED FOR PENSIONS, BEGINNING OF YEAR	**21,810,256**	**21,428,601**	**381,655**	**1.78%**
NET POSITION- RESTRICTED FOR PENSIONS, END OF YEAR	**$ 21,987,226**	**$ 21,810,256**	**176,970**	**0.81%**

*Investment Manager Fees-Investment Manager Fees are as follows:

1) Equity $20,000 annually
2) Fixed Income .3% of value of fixed income investment

This is comparative information concerning the Defined Benefit Plan for year 2015-2016. It includes such information as;
1) Participants 2) Annual Benefits 3) Actuarial Liability 4) Actuarial Value of Assets
5) Unfunded Liability 6) Employee Contribution 7) Employer Contribution 8) Funding Levels

Table Three

RETIREMENT PLAN FOR EMPLOYEES OF
THE CITY OF CREVE COEUR

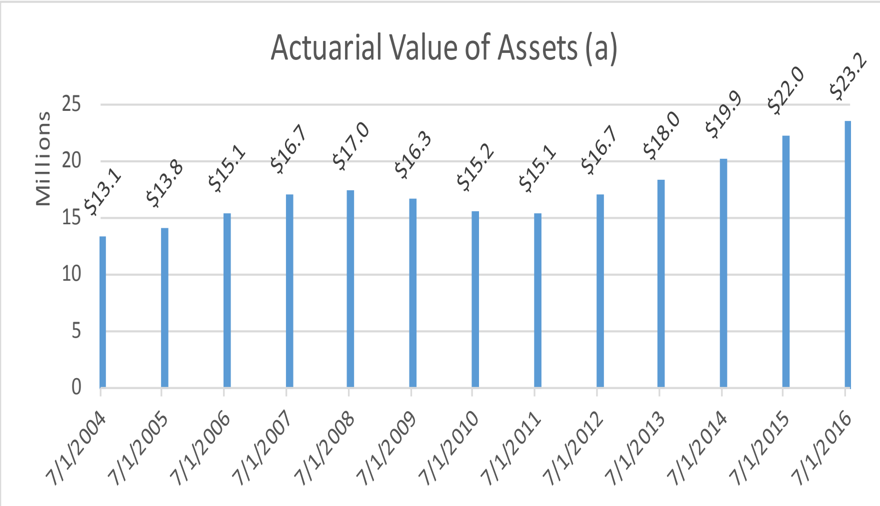
Summary of Valuation Results

(As of July 1 of Applicable Year)

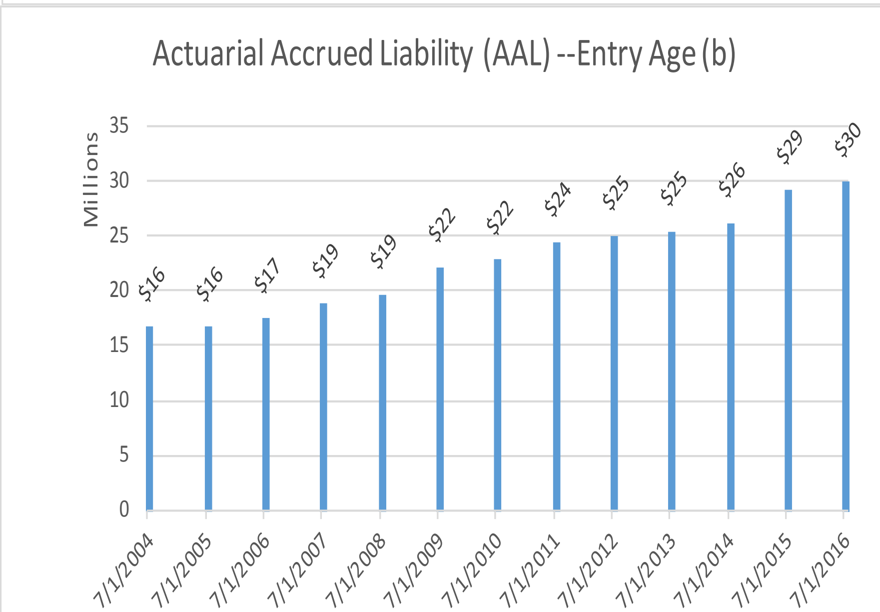
		2016	2015	Amount of Change	Percentage Change
1	Number of Participants				
	Active	50	53	-3	-6.00%
	Retired & Beneficiaries	68	65	3	4.41%
	Vested Terminations	30	32	-2	-6.67%
	Total	**148**	**150**	**-2**	-1.35%
2	Covered Payroll	$3,816,272	$3,866,480	($50,208)	-1.32%
3	Annual Benefits Payable to Retired Participants and Beneficiaries	$1,487,033	$1,422,281	$64,752	4.35%
4	Actuarial Liability				
	Active	$12,055,864	$12,112,798	($56,934)	-0.47%
	Retired & Beneficiaries	15,591,791	14,802,008	$789,783	5.07%
	Vested Terminations	1,934,052	2,006,925	($72,873)	-3.77%
	Total	**$29,581,707**	**$28,921,731**	($659,976)	**-2.23%**
5	Plan Assets - Actuarial Value	$23,220,080	$21,953,637	$1,266,443	5.45%
6	Unfunded Actuarial Liability (4-5)	$6,361,627	$6,968,094	($606,467)	-9.53%
	Additional (Reduction) in Value After July 1, 2015	($102,134)			
7	Total Normal Cost*	$337,523	$409,425	($71,902)	-21.30%
8	Expected Employee Contributions	$114,488	$115,994	($1,506)	-1.32%
	As a Percentage of Covered Payroll	3.00%	3.00%		
9	Employer Normal Cost*	$223,035	$293,431	($70,396)	-31.56%
	As a Percentage of Covered Payroll (7-8)	5.84%	7.59%		
10	Amortization of Unfunded Actuarial Liability	$927,196	$927,196	$0	0.00%
	Amortization Period	10 Years	10 Years		
	15 Year Amortization of UAL After July 1, 2015	($10,480)			
11	Total Employer Cost (with Amortization of Unfunded Acturarial Liabiltiy)	$1,139,751	$1,220,627	($80,876)	-7.10%
	As a Percentage of Covered Payroll	29.87%	31.57%		
12	Funded Ratio (5) / (4)	78.49%	75.91%		

*Nornal Cost-the postion of the acturial present value of plan benefits and expenses allocated to current valuation year.

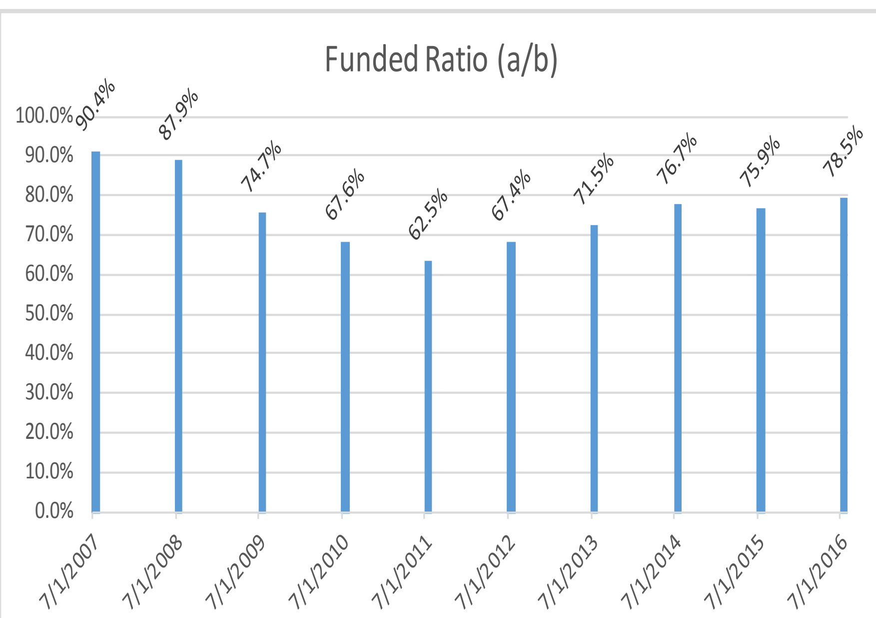
Theses charts provide historical information concerning the Creve Coeur Pension Plan.



Value of assets as calculated by the Actuary using generally accepted actuarial methodology included a three year smoothing of gains and losses.

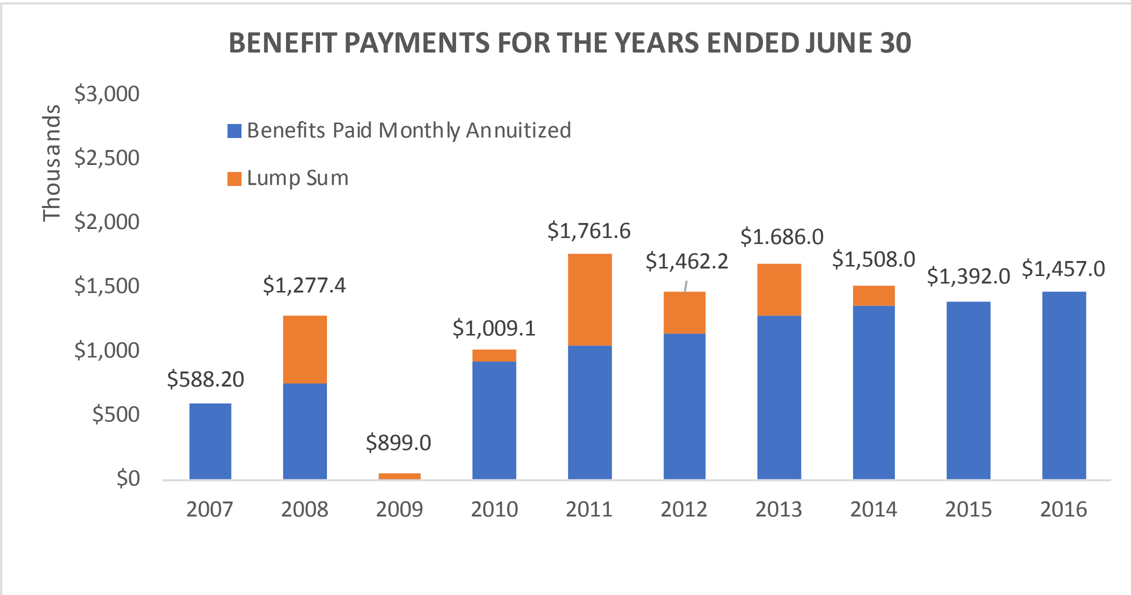


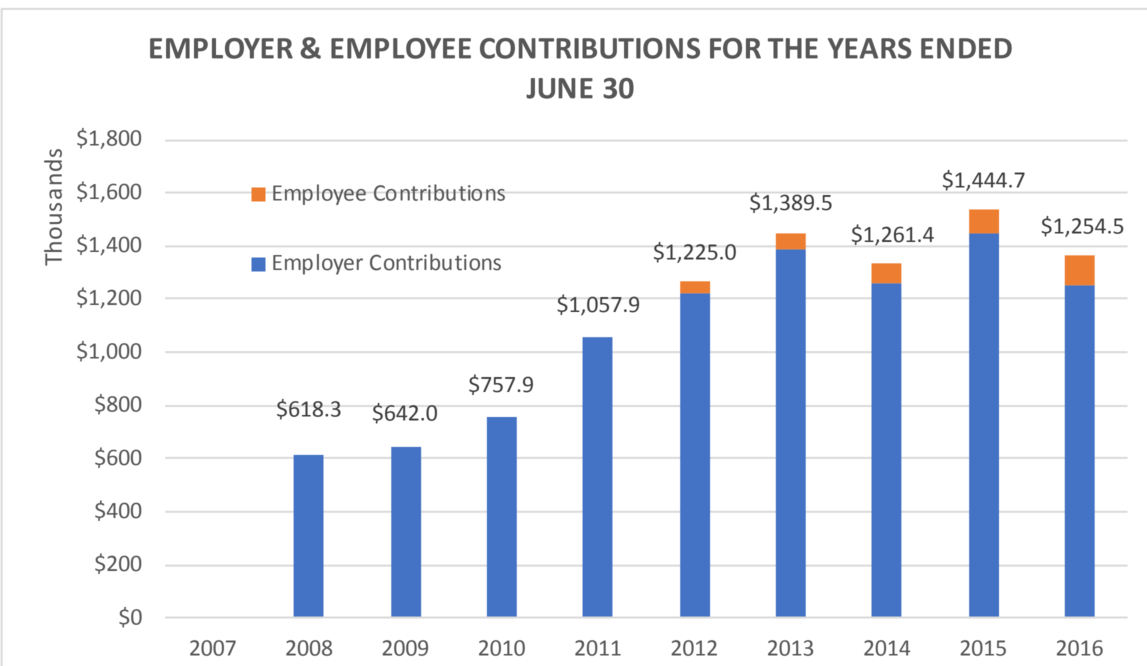
Actuarial liability of pension fund calculated using generally accepted actuarial methodology.



Funded ratio based upon actuarial value of assets divided by actuarial liability.

These schedules provide graphic representation of retiree benefit payments and employer contributions from FY2007 thru FY2016

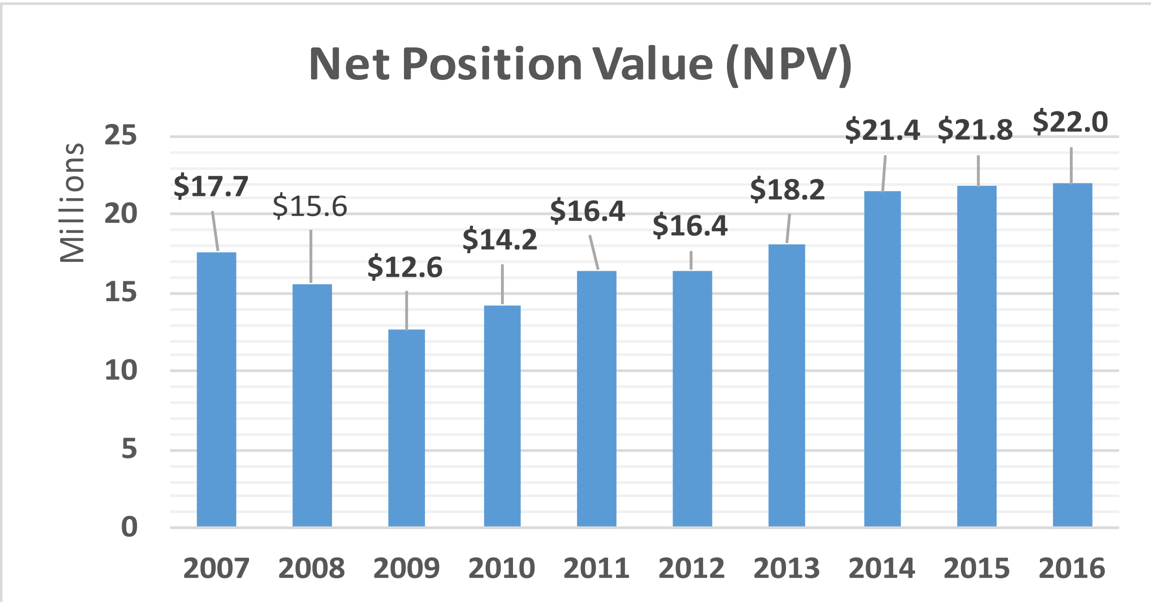


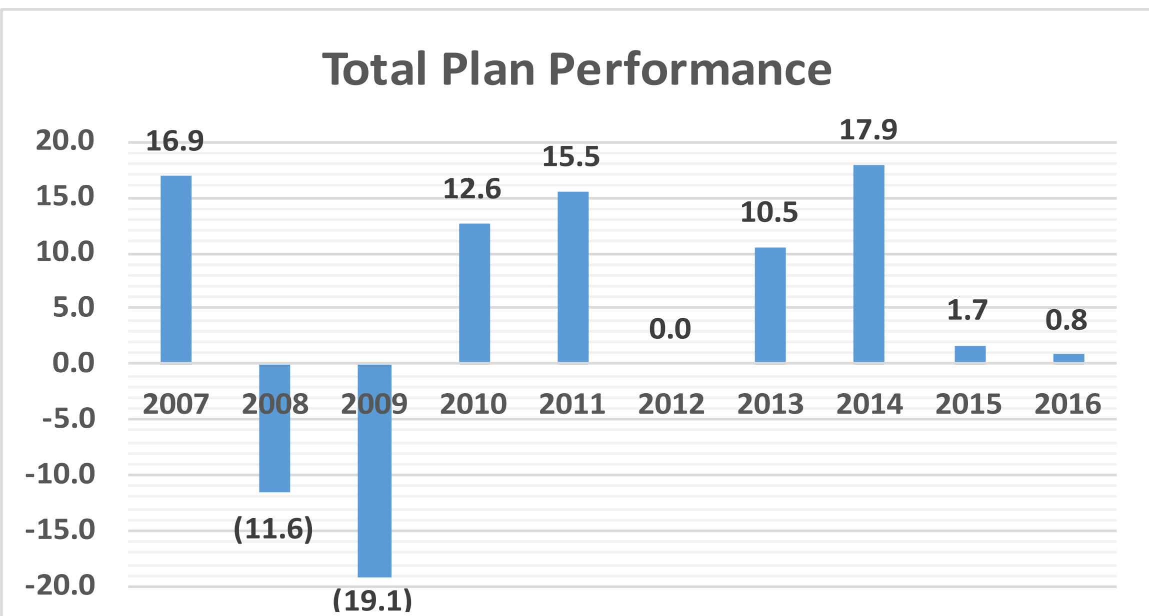


Attachment: Annual Pension Report FY2016 (Annual Pension Report)

This schedule provides information concerning the investment performance of plan assets from 2007 thru 2016

PERFORMANCE AND NET POSITION VALUE





Average Rate of Return for Investments per actuarial report;

10 years – 4.9 %

20 years – 5.6

Attachment: Annual Pension Report FY2016 (Annual Pension Report)

Retirement Form Change

APPLICATION FOR RETIREMENT ON
EARLY, NORMAL OR LATE RETIREMENT DATE

Retirement Plan for Employees of the City of Creve Coeur

Name of Participant	Date
Participant's Mailing Address	City, State, Zip
Participant's Date of Birth and Age at Retirement Request	Participant's SSN

Participant Married: Yes No (Circle One)

Spouse's Name	Spouse's Date of Birth

Spouse's Address (if different than participant)

I, ____, hereby submit my application for (check one)

☐	Early Retirement Age-Reduced Benefit	Early Retirement Age is the date on which a uniformed police officer Participant first attains age fifty (50) or any other Participant first attains age sixty (60) and has completed at least twenty (20) years of Credited Service. Reduced Early Retirement Benefit commences on his Early Retirement Date equal to his Accrued Benefit as of his Early Retirement Date, reduced so that the benefit will be the Actuarial Equivalent to his benefit as if payable starting at his Normal Retirement Date. Participant elects to receive his Retirement Benefits under the Plan where such date is the first day of any month coinciding with or following the Participant's attainment of his Early Retirement Age but is prior to the Participant's attainment of his Normal Retirement Age.
☐	Early Retirement Age-Unreduced Benefit	Early Retirement Age is the date on which a uniformed police officer Participant first attains age fifty (50) or any other Participant first attains age sixty (60) and has completed at least twenty (20) years of Credited Service. Unreduced Early Retirement Benefit means the date that the sum of the Participant's age and years of Credited Service equals eighty-five (85). In determining the sum of a Participant's age and Credited Service, completed years and completed months of both age and Credited Service shall be used. Unreduced Early Retirement Date means the date the Participant elects to receive his Retirement Benefits under the Plan where such date is the first day of any month coinciding with or following the Participant's attainment of his Unreduced Early Retirement Age but is prior to the Participant's attainment of his Normal Retirement Age.
☐	Normal Retirement Age	Normal Retirement Age means (a) for a Participant who is a uniformed police officer, the date the Participant attains age fifty-five (55), and (b) for any other Participant, the date the Participant attains age sixty-five (65). Normal Retirement Date means the first day of the month coinciding with or next following the date the Participant attains his Normal Retirement Age. A Participant shall be one hundred percent (100%) vested in his Accrued Benefit upon the attainment of Normal Retirement Age.
☐	Late Retirement Age	Late Retirement Date means the first day of the month coinciding with or immediately following the date a Participant retires, where such date is after his Normal Retirement Date.

Pursuant to the provisions of the Retirement Plan for Employees of the City of Creve Coeur.
My last date of service with the City of Creve Coeur is/was___________________________(month/day/year)

It is requested my monthly retirement income begin on the first day of_______________________.

I understand that I will be supplied with the amount of monthly income available to me under the Plan's various payment options. I also understand that if I fail to make any election of a payment form prior to my retirement, my benefit will be payable in accordance with the Ten Years Certain & Life payment form.

I hereby understand that should I request and have approved a change in my actual retirement date within 30 days of my previously approved retirement date, my monthly retirement income may be delayed by up to 30 days.

I certify that the above information is correct. I agree to endorse my retirement income checks in the manner in which my signature appears below:

Signature of Witness	Signature of Participant

FORM AND PAYMENT OF RETIREMENT BENEFITS

Retirement Plan for Employees of the
City of Creve Coeur

Please detach and keep this page for your information.

1. Notice to Participant Regarding Election of Payment Form:

   Prior to Retirement, you shall choose the payment form under which you wish your retirement benefits payable. The available payment forms are specified in #2 below. You are supplied with the applicable income under all of the available payment forms if you so desire. Based on this information, you can choose the payment form you desire in accordance with Form 2. However, if you do not choose a payment form for your retirement benefits, then your benefits will be payable under the Ten Years & Certain Life option.

2. Optional Forms of Benefit:

   a. *Ten Years Certain & Life*
      Your pension, to be payable to you during your lifetime with 120 monthly payments guaranteed to be paid to you and your named beneficiary, if your beneficiary survives you, or to the estate of the person last receiving payment.

   b. *Joint & Survivor*
      Your pension, actuarially adjusted, to be payable to you during your lifetime. If you die before your spouse does, such person will continue to receive monthly payments equal to 50%, 66 2/3% or 100% of the original monthly amount payable for life. You must elect the percentage of continuance when you make your payment form election. This payment form is only available if you are married at the date of your retirement.

   c. *Life Only*
      Your pension, actuarially adjusted, to be payable to you during your lifetime. No further payments will be made on your behalf after your death.

Note to Participant:

After having carefully read both pages of the Form 1 (Application for Retirement on Early, Normal or Late Retirement Date), please complete the first page and submit to the Finance Department.

CITY OF CREVE COEUR

BENEFICIARY DESIGNATION
FOR DEFINED BENEFIT PENSION PLAN

Beneficiary Designation

I ___________________________ (SSN _________________), a participant in the City of Creve Coeur Defined Benefit Pension Plan, do hereby designate the person identified below as my beneficiary in accordance with the Plan. This designation revokes and replaces any prior designation shall remain in effect unless and until revoked by signed writing.

Beneficiary Information

Name: ____

SSN: ____

Address: ____

____

Relationship: ____

Signature

Authorized Signature: ____ **Date:** ______________

Employee Pension Board of Trustees
City of Creve Coeur
Creve Coeur, MO 63141

SCHEDULED

Meeting: 10/17/17 05:30 PM
Department: Finance Department
Category: Discussion
Prepared By: Sherry Hall
Initiator: Lori Obermoeller
Sponsors:
DOC ID: 2696

DISCUSSION (ID # 2696)

Pension Reports Financial Certification

MEMORANDUM

DATE: October 11, 2017

TO: Pension Committee

FROM: Lori Obermoeller, Director of Finance

SUBJECT: Financial Certification of Pension Reports

I have completed the financial reports for the Creve Coeur Employee Retirement Defined Benefit Plan through September 30, 2017 (see attached) and all reports are true, complete and accurate. If you have any questions, please let me know.

CITY OF CREVE COEUR

Balance Statement by Fund

September 30, 2017

FUND 03: CITY EMPLOYEES RETIREMENT FUND

Account Number	Account Name	Beginning Balance	CPTD Debit	CPTD Credit	CYTD Debit	CYTD Credit	Ending Balance
ASSETS							
03-00-00-1453	COMMERCE - PENSION	$ 7,020,691.59	$ 0.00	$ 336,280.27	$ 0.00	$ 336,280.27	$ 6,684,411.32
03-00-00-1454	COMMERCE - FMV	59,604.81	2,387.56	0.00	2,387.56	0.00	61,992.37
03-00-00-1455	COMMERCE - ACRD INT	47,235.21	5,155.18	2,577.59	5,155.18	2,577.59	49,812.80
03-00-00-1456	TIAA-CREF PENSION	0.00	0.00	0.00	0.00	0.00	0.00
03-00-00-1457	TIAA-CREF FMV	0.00	0.00	0.00	0.00	0.00	0.00
03-00-00-1458	TIAA-CREF ACD INT	0.00	0.00	0.00	0.00	0.00	0.00
03-00-00-1461	CHARLES SCHWAB PENSION	13,513,453.80	90,084.16	5,000.00	90,084.16	5,000.00	13,598,537.96
03-00-00-1462	CHARLES SCHWAB FMV	3,609,117.93	786,405.57	90,082.41	786,405.57	90,082.41	4,305,441.09
03-00-00-1463	CHARLES SCHWAB ACRD INTREST	0.00	0.00	0.00	0.00	0.00	0.00
Total Assets		$24,250,103.34	$ 884,032.47	$ 433,940.27	$ 884,032.47	$ 433,940.27	$24,700,195.54
FUND EQUITY							
03-00-00-3999	UNRESTRICTED FUND BALANCE	$24,250,103.34	$ 512,102.40	$ 962,194.60	$ 512,102.40	$ 962,194.60	$24,700,195.54
Total Fund Equity		$24,250,103.34	$ 512,102.40	$ 962,194.60	$ 512,102.40	$ 962,194.60	$24,700,195.54
Total Liabilities and Fund Equity		$24,250,103.34	$(512,102.40)	$(962,194.60)	$(512,102.40)	$(962,194.60)	$24,700,195.54

CITY OF CREVE COEUR

Income Statement by Fund

For the Period Ending September 30, 2017

FUND 03: CITY EMPLOYEES RETIREMENT FUND

Account Number	Account Name	Original Budget	Revised Budget	Current Period to Date Actual	Current Year to Date Actual	Available Budget	Percent of Budget Remaining
REVENUES							
03-00-00-4308	EMPLOYER CONTRIBUTIONS	$1,430,000.00	$1,430,000.00	$ 0.00	$ 0.00	$1,430,000.00	100.00%
03-00-00-4309	EMPLOYEE CONTRIBUTIONS	104,000.00	104,000.00	25,445.41	25,445.41	78,554.59	75.53%
03-00-00-4704	INTEREST ON INVESTMENTS	525,000.00	525,000.00	144,372.24	144,372.24	380,627.76	72.50%
03-00-00-4709	Gain (loss) on investments	1,011,682.00	1,011,682.00	694,668.12	694,668.12	317,013.88	31.34%
Total Revenues		$3,070,682.00	$3,070,682.00	$864,485.77	$864,485.77	$2,206,196.23	71.85%
EXPENDITURES							
03-91-11-6203	PROFESSIONAL SERVICES	$ 24,000.00	$ 24,000.00	$ 531.52	$ 531.52	$ 23,468.48	97.79%
03-91-11-6205	INVESTMENT MANAGER FEES	42,145.00	42,145.00	10,684.68	10,684.68	31,460.32	74.65%
03-91-11-6206	RETIRED EMPLOYEE BENEFITS EXPENSES	1,733,120.00	1,733,120.00	403,177.37	403,177.37	1,329,942.63	76.74%
Total Expenditures		$1,799,265.00	$1,799,265.00	$414,393.57	$414,393.57	$1,384,871.43	76.97%
Excess (Deficiency) of Revenues over Expenditures		$1,271,417.00	$1,271,417.00	$450,092.20	$450,092.20	$ 821,324.80	64.60%

Attachment: Financial Certification (Pension Reports Financial Certification) charles SCHWAB

Schwab One® Trust Account of
D CALDWELL & K SULLIVAN TTEE
RETIREMENT PLAN FOR EMPLOYEES
U/A DTD 07/01/1981

Account Number 2881-6517

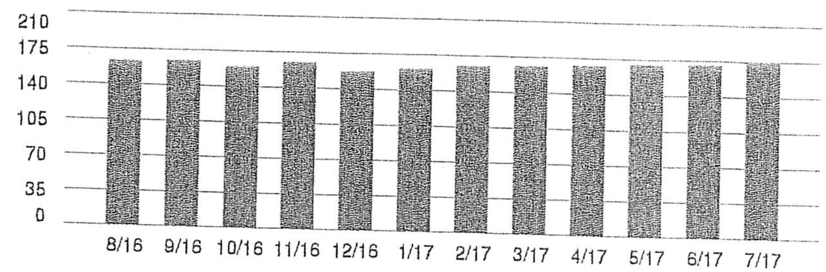
Statement Period July 1-31, 2017

Account Value as of 07/31/2017: $ 17,499,411.9

Change in Account Value

	This Period	Year to Date
Starting Value	**$ 17,122,571.73**	**$ 15,711,726.70**
Cash Value of Purchases & Sales	0.00	(164,247.89)
Investments Purchased/Sold	0.00	164,247.89
Deposits & Withdrawals	0.00	0.00
Dividends & Interest[B]	0.75 I	164,252.89
Fees & Charges	(5,000.00) E	(15,000.00)
Transfers	0.00	0.00
Income Reinvested	0.00	(164,247.89)
Change in Value of Investments	381,839.50 I	1,802,680.28
Ending Value on 07/31/2017	**$ 17,499,411.98**	**$ 17,499,411.98**
Total Change in Account Value (Totals include Deposits & Withdrawals)	**$ 376,840.25**	**$ 1,787,685.28**

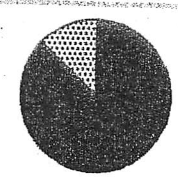
Account Value ($) Over Last 12 Months [in Hundred Thousands]



Asset Composition

	Market Value	% of Account Assets
Deposit Accounts[A,B]	$ 5,882.35	<1%
Equity Funds	15,187,717.29	87%
Exchange Traded Funds	2,305,812.34	13%
Total Assets Long	**$ 17,499,411.98**	
Total Account Value	**$ 17,499,411.98**	**100%**

Overview



87% Equity Funds
13% Exchange Traded Funds

Gain or (Loss) Summary

Realized Gain or (Loss) This Period

Short Term	$0.00
Long Term	$0.00

Unrealized Gain or (Loss)

All Investments	$3,990,957.43

Values may not reflect all of your gains/losses.

charles SCHWAB

Account Number
2881-6517

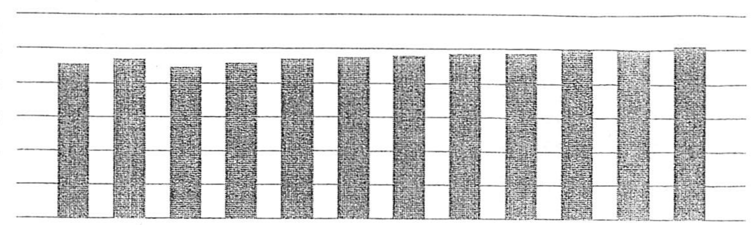
Statement Period
August 1, 2017 to
September 30, 2017

Account Value as of 09/30/2017:$ 17,903,979.05

Change in Account Value

	This Period	Year to Date
Starting Value	**$ 17,499,411.98**	**$ 15,711,726.70**
Cash Value of Purchases & Sales	(90,082.41)	(254,330.30)
Investments Purchased/Sold	90,082.41	254,330.30
Deposits & Withdrawals	0.00	0.00
Dividends & Interest[B]	90,083.41	254,336.30
Fees & Charges	0.00	(15,000.00)
Transfers	0.00	0.00
Income Reinvested	(90,082.41)	(254,330.30)
Change in Value of Investments	404,566.07	2,207,246.35
Ending Value on 09/30/2017	**$ 17,903,979.05**	**$ 17,903,979.05**
Total Change in Account Value (Totals include Deposits & Withdrawals)	**$ 404,567.07**	**$ 2,192,252.35**

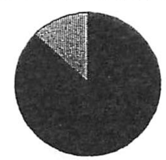
Account Value ($) Over Last 12 Months [in Hundred Thousands]



Asset Composition

	Market Value	% of Account Assets
Deposit Accounts[A,B]	$ 5,883.35	<1%
Equity Funds	15,528,841.48	87%
Exchange Traded Funds	2,369,254.22	13%
Total Assets Long	**$ 17,903,979.05**	
Total Account Value	**$ 17,903,979.05**	**100%**

Overview



87% Equity Funds
13% Exchange Traded Funds

Gain or (Loss) Summary

Realized Gain or (Loss) This Period

Short Term	$0.00
Long Term	$0.00

Unrealized Gain or (Loss)

All Investments	$4,305,441.09

Values may not reflect all of your gains/losses.

City of Creve Coeur Emp Retirement
July 1, 2017 - September 30, 2017

Account Number: 91-0048-01-6

Investment Officer:

Douglas Koester (314) 746-7337
douglas.koester@commercebank.com

Administrative Officer:

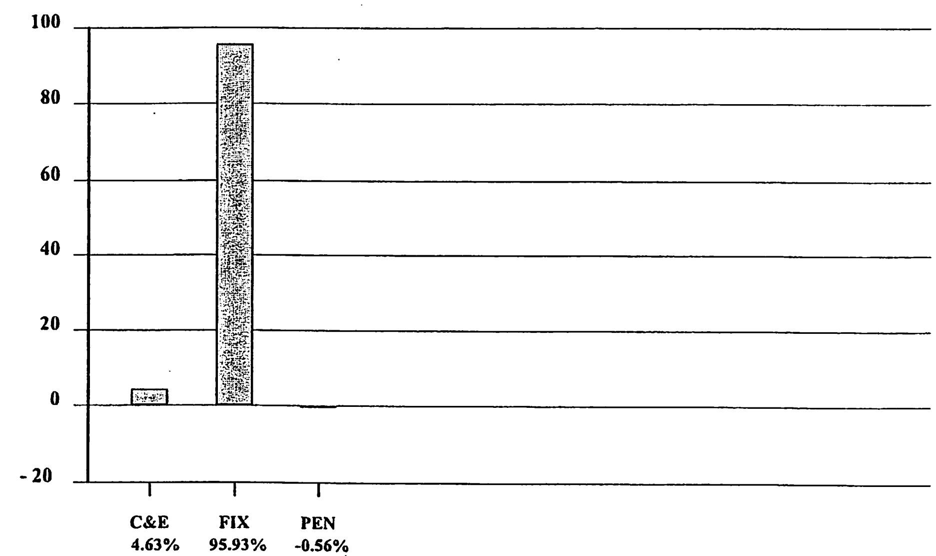
John M Bascio (314) 746-3729
john.bascio@commercebank.com

CITY OF CREVE COEUR
SHERRY HALL
300 N NEW BALLAS ROAD
CREVE COEUR MO 63141

Account Review

Your Beginning Market Value :	**$ 7,127,531.61**	
Interest :	**$ 52,214.80**	I
Dividends :	**$ 501.92**	
Deposits :	**$ 25,445.41**	I
Benefit Payments :	**$ -403,177.37**	E
Administrative Expenses : 5684.68 200.00	**$ -5,884.68**	E
Accrued Interest Expense :	**$ -1,006.23**	I
Miscellaneous Payments :	**$ -331.52**	E
Realized Gain/Loss :	**$ -4,042.60**	I
Unrealized Gain/Loss :	**$ 2,387.56**	I
Change In Accrued Income :	**$ 2,577.59**	I
Your Ending Market Value :	**$ 6,796,216.49**	

Summary of Assets



C&E Cash and Cash Equivalents
FIX Fixed Income
PEN Pending Trades

Employee Pension Board of Trustees
City of Creve Coeur
Creve Coeur, MO 63141

Meeting: 10/17/17 05:30 PM
Department: Finance Department
Category: Report
Prepared By: Sherry Hall
Department Head: Lori Obermoeller

SCHEDULED

STAFF REPORT

LAGERS Information

Missouri Local Government Employees Retirement System
701 West Main, P.O. Box 1665, Jefferson City, Missouri 65102
Telephone (573)636-9455 • 800-447-4334 • FAX (573) 636-9671
www.molagers.org

Dear City of Creve Coeur Employees' Pension Board,

First I want to thank you for your interest in Missouri LAGERS. LAGERS was created to ensure a secure retirement for our members and their families. We take this responsibility seriously and everything we do here at LAGERS is in an effort to create a secure retirement for all.

A few of the questions about the LAGERS portfolio have been passed on to me. I believe the best way to address the inquiries is to give a brief description on how we created and manage the portfolio. This includes how we manage the risk in the portfolio. The document governing the management of the portfolio is the "Statement of Investment Policy and Objectives (IPS)," which I have attached. The Investment Team has also created an "Investment Risk Policy", also attached, which addresses the issues of investment risk that are specific to LAGERS and identifies common practices and procedures used to address these risks.

The portfolio is monitored by the Investment Team on a continuous basis and is verified quarterly by LAGERS' Compliance Officer to be within the constraints set forth in the IPS. This document lays out the Asset Class and Liquidity allocations in Appendix I on page 14.

These allocations are set through our Asset/Liability Study which is a process that is required to be completed once every 5 years with updates as needed. The last full Asset/Liability Study was prepared in the 4th quarter of 2015 and we expect to update this study in the 2nd quarter of 2018. In summary, an Asset/Liability Study is an analysis to find the best asset class mix, or portfolio, which will best meet LAGERS' liabilities over the long-term.

The following are the steps we used in creating LAGERS' Asset/Liability Study:

1. Create the capital markets assumptions for all the asset classes to be considered in the portfolio. This includes the forecasted return, volatility, and correlation expectations over the long term for each respective asset class.
2. Select the risk level that is acceptable by LAGERS' Board for the combined portfolio. For this process we use standard deviation as the risk factor.
3. Set any asset class constraints that we believe are appropriate due to the market conditions.
4. Run a mean-variance optimization to create an efficient frontier that finds the best portfolio allocation to meet LAGERS long-term liabilities.

5. The best portfolio that meets LAGERS liabilities and selected risk level becomes the policy portfolio and the return this portfolio generates becomes our assumed rate-of-return.

I believe some of the other inquiries can be addressed by a third document entitled, “Investment Beliefs.” This document lays out the Investment Team’s beliefs on what we consider to be the main drivers for the portfolio’s performance.

I trust this helps show how the LAGERS portfolio is being managed for the long-term security for all.

Sincerely,

Brian K. Collett

Brian K. Collett, CFA, CAIA
bcollett@molagers.org
(o) 573-632-6353

Statement of Investment Policy & Objectives

MISSOURI LOCAL GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

Original Adoption Date: February 22, 1994
Revised Date: January 1, 2017

I. Statement of Policy

Purpose

Missouri Local Government Employees Retirement System ("LAGERS", "the System", or "the Fund") has developed this Statement of Investment Policy & Objectives to serve as the official policy regarding the investment practices of LAGERS and is not to be deviated from by any responsible party without the written permission of the Board of Trustees. The policies in this document have been adopted by the Board of Trustees, who has the fiduciary duty of overseeing LAGERS' investment program.

Investment Goals

Mission of LAGERS:

"to provide secure retirement, survivors', and disability benefits to members and beneficiaries in the most efficient and economical manner possible, while providing superior service and fulfilling its fiduciary obligations."

The purpose of LAGERS' investment fund is to accumulate the financial reserves necessary to provide for the retirement or pensioning of the officers, employees, surviving spouses, and children of deceased officers and employees of member political subdivisions in the State of Missouri. A sound investment program is essential to LAGERS' ability to meet its pension promise. The excess of the Fund's assets relative to the Fund's liabilities provides crucial security for the participants' retirement benefits. The goal of the Fund shall be to achieve a rate of return, net of manager fees, of at least 7.25% per annum as measured over a full market cycle. The Trustees and Investment Staff will use the Fund's asset allocation as the primary tool to achieve this goal. As this is a long-term projection and investments are subject to short-term volatility, the main investment focus of the Trustees and Investment Staff will be towards the Total Fund. Each asset manager, individual investment and/or security selection (together known as 'investment(s)') will be judged on performance relative to its asset class and to its relative benchmark over a full market cycle, usually 3-5 years.

Risk Tolerance

With respect to the given purpose, the System's liquidity requirement, and the source and predictability of contributions, the Board elects to target portfolio risk of 10% standard deviation in pursuing the investment program. LAGERS is unwilling to undertake investment strategies that might jeopardize the ability of the Fund to finance the pension benefits promised to the System's participants. Thus, LAGERS' actively seeks to lower/stabilize the cost of funding the System's pension promise by prudently taking on types of risk that best serves the long-run interest of the Fund and, therefore, of the System's participants.

LAGERS is dedicated to increasing risk awareness through regular monitoring of risks across the portfolio. These include but are not limited to inflation risks, interest rate risks, liquidity risks, and regulatory risks. A set of liquidity guidelines and asset guidelines are established in Appendix I. LAGERS has adopted a separate Investment Risk Policy which identifies other various investment risks and how they are addressed by the System.

Investment Philosophy

The guiding philosophy is to allow sufficient flexibility in the management process while maintaining reasonable parameters to ensure prudence and care in the execution of the investment program. Trustees and Investment Staff will administer its duties solely for the benefit of the System's participants with the necessary care, skill, prudence, and diligence provided in the execution of the investment program.

- The benefit obligations of LAGERS must be met on a timely and regular basis. LAGERS expects there will be a minimum need for liquidity from the Fund's portfolio in the next five years.

- The Fund is invested with a long-term perspective and therefore will invest across a spectrum of assets with different liquidity time frames.

- The Fund is a permanent one and shall be considered a total return fund with appropriate recognition given to both current income and capital appreciation.

- Active management, or the pursuit of returns in excess of benchmarks, entails the possibility of disappointing results over short periods of time; therefore, assets will be invested with a long-term perspective.

- Equity investments include those in public and private equity. These valuations are driven by a companies' ability to utilize capital in order to create a residual claim, after all liabilities are paid. Private Equity will help diversify the equity portfolio by decreasing exposure to systematic risk inherent in public equity. In the long run, ownership (equity investment) is a reasonable investment vehicle for preservation of real values.

- Fixed Income investments include any investment in which its value is primarily based on a regular stream of cash flows over an agreed upon period of time. This includes debt in public and private companies. These investments will protect the principle and provide a measure of stability to the portfolio.

- Real Asset/Real Return investments will help to diversify the portfolio against inflationary pressures. These investments obtain their value from the ownership or utilization of a tangible asset or cash flows derived from an agreed upon measure of tangible assets.

- Strategic Assets include investments in which its value is primarily based on its ability to create value beyond the traditional asset classes, capitalizing on market dislocations, market timing, or unique situations.

II. Fiduciary Conduct

An investment fiduciary is defined as a person who exercises discretionary authority or control in the investment of the assets of LAGERS, or who renders, for a fee, advice to the System. Investment fiduciaries include but are not limited to, the members of the Board of Trustees, the Investment Staff, investment consultants, investment managers, prime brokers, and bank custodians.

An investment fiduciary shall discharge his or her duties in the interest of the participants in the System and their beneficiaries and shall:

1. Act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims;

2. Act with due regard for the management, reputation, and stability of the issuer and the character of the particular investments being considered;

3. Make investments for the purpose of providing benefits to participants and participants' beneficiaries, and of defraying reasonable expenses of investing the assets of the System;

4. Give appropriate consideration to those facts and circumstances that the investment fiduciary knows or should know are relevant to the particular investment or investment course of action involved, including the role the investment or investment course of action plays in that portion of the investments for which the investment fiduciary has responsibility. For purposes of this document, "appropriate consideration" shall include, but is not necessarily limited to, a determination by the investment fiduciary that a particular investment or investment course of action is reasonably designed, as part of the investments of the System, to further the purposes of the System, taking into consideration the risk of loss and the opportunity for gain or other return associated with the investment

or investment course of action; and consideration of the following factors as they relate to the investment or investment course of action:

(a) The diversification of the investments of the System;
(b) The liquidity, current return and risk of the investment of the System relative to the anticipated cash flow requirements of the System; and
(c) The projected return of the investments of the System relative to the funding objectives of the System.

III. Investment Responsibilities

Board of Trustees

The Board of Trustees will determine the manner in which it fulfills its duties and how duties are delegated to other parties that are identified in this Policy. The Board has the fiduciary responsibility for managing the investment process and determining the appropriate delegations of authority in connection with investment management. In fulfilling its responsibility, the Trustees will establish, maintain, and oversee the asset and liquidity allocation targets and ranges for the Fund.

The Trustees are responsible for reviewing this Policy and overseeing the implementation of the investment policies and objectives by the Investment Staff that are set in this Policy. In addition, the Trustees are responsible for monitoring activities and reviewing reports, as provided by the Investment Staff, related to this Policy. More specific investment-related responsibilities of the Board are detailed in the Board's governance policies and charters, specifically in the Charter of the Board of Trustees.

It is the Board's responsibility to ensure that appropriate investment policies are in place and that these policies and directives are complied with. This can be accomplished by monitoring the overall performance, liquidity, and risk characteristics of the Fund and evaluating the Investment Staff's capability and performance.

Investment Staff

The Investment Staff has a fiduciary duty to implement and monitor the investment policies and objectives delegated to them by the Trustees and to support the Trustees in all aspects of LAGERS' investment process. This includes meeting regularly with the Trustees to provide perspective as to the Fund's goals and structure. The Investment Staff will work to execute and maintain the Asset and Liquidity Allocations outlined in Appendix I developed by the Trustees and Investment Staff. Fund allocations will be regularly reviewed and adjustments will be made as needed to keep the portfolio within the minimums and maximums set out in Appendix I.

Investment Staff, with the Chief Investment Officer's authorization, will execute the Asset and Liquidity Allocation, in accordance with all laws, policies, procedures, by selecting and replacing assets and/or managers as deemed appropriate when evaluated against the

System's risk/return characteristics, consistency with the investment philosophy, and discipline of the System's underlying asset and liquidity allocations set forth in this policy. No such action shall be permitted if it would cause an asset allocation or liquidity allocation to exceed or fall below the prescribed minimum and maximum allocations or if it is in violation of any other limits in this policy. Furthermore, any newly established or terminated agreements in regards to assets and/or managers will be reported to the Board at the next regular scheduled board meeting following such action. The selection process for the various asset classes is outlined in "*LAGERS Investment Selection Procedures",* maintained by Investment Staff with formal sign-offs by the Chief Investment Officer, legal counsel (internal and/or external) and the Compliance Officer/Internal Auditor.

The Investment Staff will review and monitor the Investment Portfolio and its performance, at least quarterly, and keep Trustees informed of any material changes occurring in the Investment Portfolio. The Investment Staff will recommend to the Board the hiring of a custodial bank and general investment consultant as needed, and within the investment budget, to assist in the management of the investment process. Through this process, the Investment Staff shares fiduciary responsibility for managing the investment process with the Trustees.

Investment Managers

The investment managers will construct and manage investment portfolios consistent with the investment philosophy and disciplines they were hired to implement. They will select specific securities, buy and sell such securities, and modify the asset mix within their respective investment guidelines. The investment managers shall be subject to the duties set forth in Sections 70.600-.755 and Sections 105.687-.689 of the Revised Statutes of Missouri. The Trustees and Investment Staff believe that investment decisions are best made when not restricted by excessive procedure. Therefore, full discretion is delegated to the investment managers to carry out their respective mandate within applicable general and specific guidelines agreed upon with Investment Staff. They will also allocate brokerage commissions and use only acceptable investment vehicles as defined in the agreed upon guidelines.

With regard to allocating commissions, each manager must make every effort when trading securities to do so on a best execution basis. If the net execution cost in dealing with a firm located in Missouri is equal to that of an out of state firm, the Missouri firm shall be given preference. If LAGERS engages in a contract which is to be satisfied by directed commissions, the manager shall use the brokerage facility designated by LAGERS as described in the contract, provided the lowest net total execution cost can be secured from the designated firm. This requirement will not apply to those investment managers who choose not to engage in the use of soft dollars. A brokerage summary report will be provided, upon request, to the Investment Staff for review to monitor adherence to the best execution policies set out above. Investment Staff may request for review such policies governing best execution practices and the use of soft dollars, along with any modifications to such policies.

An investment manager may use derivative instruments if Investment Staff reasonably concludes after the due diligence hiring process that the external manager possesses the experience, expertise, and qualifications to prudently use derivatives. The investment manager is required to document in their investment guidelines their use of derivatives and leverage.

Please see Section V, "Responsibilities of Each Investment Manager" for further discussion on duties and responsibilities of investment managers appointed to manage the Fund's assets.

Bank Custodian and Prime Brokers

The bank custodian(s) and prime broker(s) will hold all available cash and securities, and will, at least on a month-end basis, make available a summary of the holdings. In addition, a bank or trust depository arrangement will be utilized to accept and hold cash prior to allocating it to an investment, and to invest such cash in liquid instruments.

III. General Portfolio Guidelines

Eligible Holdings

The portfolio will be invested exclusively in investment vehicles, as authorized below. Listed below are the investment vehicles specifically permitted under this Statement of Investment Policies and Objectives, unless otherwise allowed within individual investment guidelines. They are categorized as equities, fixed income, real asset/real return, and strategic assets to indicate how they are classified for purposes of the asset-mix guidelines in a subsequent section.

Equities

- Common Stocks
- Preferred Stocks
- Convertible Preferred Stocks and Bonds
- Equitized Cash
- Private Equity
- Venture Capital

Fixed Income

- Bonds
- Mortgages and Mortgage-Backed Securities
- Short-term or Cash-Equivalent Securities
- High Yield Bonds
- Money Market Funds, Bank STIF and STEP Funds
- Term Loans

Real Asset/Real Return

- Real Estate
- Timberland
- Inflation-Linked Bonds
- Commodities
- Infrastructure Assets

Strategic Assets

- Hedge Funds
- Opportunistic

- The above assets can be held as a long or short position in a commingled (mutual) fund as well as privately managed separate accounts.
- Investments may not be made in any investment that is prohibited by the Internal Revenue Service or statutory restrictions.

- All investments made shall be subject to the quality and diversification restrictions established by Section 70.745, 70.746, 70.747, 105.687, 105.688, 105.689, and 105.690 of the Revised Statutes of Missouri.

- Co-investments may be held in any of the above categories as long as there is no violation of any other limits in this policy. Co-investments include individual investments and/or securities brought to Investment Staff from underlying managers or other sources for review.

- Derivatives may be used by underlying investment managers as a financial tool to acquire exposure to any of the above categories as long as there is no violation of any other limits in this policy and is documented in their respective guidelines. This includes but is not limited to swaps, futures, options, and forwards.

- Opportunistic investments include those investments that may provide underlying exposure to the other asset classes but also provide short-term or non-traditional opportunities. These opportunities may be due to short-term market dislocations or unique situations that the Investment Staff finds complimentary to the portfolio.

Diversification

The diversification of securities among sectors and issuers is the responsibility of the investment manager and Investment Staff. The Investment Staff has further diversification responsibility at the asset manager and asset class level and the Trustees have diversification responsibility at the total portfolio level.

Liquidity

Individual assets and/or investment mandates will be grouped into three different liquidity classifications. These classifications are based on the time frame it takes to liquidate the investment at prevailing market prices (i.e. not at a discount) and receive cash back. The classifications include:

- Short-Term: the ability to liquidate the investment and receive cash back in less than one week. These include but are not limited to publicly traded assets.
- Medium-Term: the ability to liquidate the investment and receive cash back within one week to three years. These include more illiquid assets such as hedge funds and overlay strategies that have a lock-up period and/or periodic redemptions (i.e. monthly, quarterly, or annually).
- Long-Term: these assets are the most illiquid and have lock-up periods of greater than 3 years. These assets have increased liquidity risk if sold before lock-up expires.

Illiquid assets carry a theoretical illiquidity premium that is demanded by investors for securities that cannot be easily converted into cash. Therefore, these assets that are more illiquid should earn a higher return. Consistent with LAGERS' liquidity requirements and long-term nature of the fund, LAGERS has established liquidity allocation ranges found in Appendix I.

Divestment

Consistent with carrying out Trustees' and Investment Staff's fiduciary responsibilities and the concept of Modern Portfolio Theory, the Trustees and Investment Staff will not systematically exclude any investments in companies, industries, countries, or geographic areas, except in those instances where the fund becomes aware of companies or countries that have been identified by an agency of the U.S. Government or other credible source as supporting terrorism or terrorist-related activities. In such instances, Investment Staff will review a list of the fund's holdings, and if the fund's holdings include securities of any of the companies or countries identified, Investment Staff will divest or direct the appropriate investment managers to divest the fund of its holdings in the companies or countries within a reasonable period of time, not to exceed 3 months. Investment Staff will also notify all investment managers that they are not to purchase any securities from the identified companies or countries.

Procurement Action Policy

Please see Appendix II which references LAGERS' Procurement Action Policy.

Style Adherence

The most important feature any individual manager brings to a multi-manager portfolio is style adherence. At least quarterly, fundamental portfolio characteristics and style benchmark comparisons will be monitored for adherence to a manager's identified style. The Trustees and Investment Staff recognize that different maturity ranges and sectors within the broad market categories go in and out of favor. Therefore, short-term examination of each investment's performance will review style adherence relative to similar style or duration, peer comparisons, and style benchmarks whilst maintaining a focus on the long-term return objective relative to their respective style benchmark.

Performance Objectives

Both relative and absolute results will be considered in the evaluation of the total Fund's performance. The following are the performance expectations for the Fund.

- The Fund's total return should exceed the total return of an index composed as follows:

15.00%	Russell 3000 Index
15.00%	CPI + 6% (Private Equity)
5.00%	MSCI All Country World Index ND (non-hedged)
5.00%	MSCI All Country World Index ex US ND (non-hedged)
3.00%	MSCI Emerging Markets Index ND (non-hedged)
14.00%	CPI + 4% (Private Fixed Income)

3.00%	Barclays Capital US Aggregate Bond Index
3.00%	Barclays Capital Global Aggregate Bond Index
3.00%	Barclays Capital U.S. 20+ Year Treasury Bond Index
3.00%	40% JP Morgan EMBI Global Div/50% JP Morgan GBI-EM Global Div/10% JP Morgan CEMBI Broad Div
8.00%	CPI + 4% (Infrastructure)
5.00%	CPI + 4% (Real Estate)
3.00%	Barclays Capital Global Inflation-Linked Bond Index
3.00%	Bloomberg Commodity Index
2.00%	CPI + 2.5% (Timber)
7.00%	CPI + 6% (Private Strategic)
3.00%	CPI + 4.5% (Public Strategic Portfolio)

- Primary emphasis is to be placed on relative rates of return. Performance shall be evaluated over a market cycle, usually 3-5 years. See Section IV, "Specific Portfolio Guidelines" for further information regarding performance expectations.

IV. Specific Portfolio Guidelines

Fixed Income

- The fixed income composite has a target allocation of 26.00% of the total plan's assets and is outlined in Appendix I.
- The benchmark for the fixed income composite portfolio is composed as follows:

54.00%	CPI + 4% (Private Fixed Income)
11.50%	Barclays Capital US Aggregate Bond Index
11.50%	Barclays Capital Global Aggregate Bond Index
11.50%	Barclays Capital U.S. 20+ Year Treasury Bond Index
11.50%	40% JP Morgan EMBI Global Div/50% JP Morgan GBI-EM Global Div/10% JP Morgan CEMBI Broad Div

- The total return of the fixed income composite, net of fees, should exceed the total return of the composite benchmark outlined above.
- The total return of each underlying portfolio or mandate in the composite should exceed the total return of an index of similar mandate or style assigned. The Investment Staff will use benchmarks specific to each respective asset or manager's mandate on a quarter-by-quarter basis to monitor each investment. Currency management is at the discretion of the Non-US managers.
- The goal of the fixed income composite portfolio shall be to achieve a total annualized real rate of return net of fees of at least 3.0% over the CPI as measured over a market cycle, usually 3-5 years.

Equity

- The equity composite has a target allocation of 43.00% of the total plan's assets and is outlined in Appendix I.
- The benchmark for the equity composite portfolio is composed as follows:

35.00%	Russell 3000 Index
35.00%	CPI + 6% (Private Equity)
11.50%	MSCI All Country World Index ND (non-hedged)
11.50%	MSCI All Country World Index ex US ND (non-hedged)
7.00%	MSCI Emerging Markets Index ND (non-hedged)

- The total return of the equity composite, net of fees, should exceed the total return of the composite benchmark outlined above.
- The total return of each underlying portfolio or mandate in the composite should exceed the total return of an index of similar mandate or style assigned. The Investment Staff will use benchmarks specific to each respective asset or manager's mandate on a quarter-by-quarter basis to monitor each investment. Currency management is at the discretion of the Non-US managers.
- The goal of the equity composite portfolio shall be to achieve a total annualized real rate of return net of fees of at least 5.0% over the CPI as measured over a market cycle, usually 3-5 years.

Real Assets/Real Return

- The real asset/real return composite has a target allocation of 21.00% of the total plan's assets and is outlined in Appendix I.
- The benchmark for the real asset/real return composite portfolio is composed as follows:

38.00%	CPI + 4% (Infrastructure)
24.00%	CPI + 4% (Real Estate)
14.25%	Barclays Capital Global Inflation-Linked Bond Index
14.25%	Bloomberg Commodity Index
9.50%	CPI + 2.5% (Timber)

- The total return of the real asset/real return composite, net of fees, should exceed the total return of the composite benchmark outlined above.
- The total return of each underlying portfolio or mandate in the composite should exceed the total return of an index of similar mandate or style assigned. The Investment Staff will use benchmarks specific to each respective asset or manager's mandate on a quarter-by-quarter basis to monitor each investment. Currency management is at the discretion of the Non-US managers.
- The goal of the real asset/real return composite portfolio shall be to achieve a total annualized real rate of return of at least 3.25% over the CPI as measured over a market cycle, usually 3-5 years.

Strategic Assets

- The strategic asset composite has a target allocation of 10.00% of the total plan's assets and is outlined in Appendix I.
- The benchmark for the strategic asset composite portfolio is composed as follows:

70.0%	CPI + 6.0% (Private Strategic)
30.0%	CPI + 4.5% (Public Strategic Portfolio)

- The total return of the strategic asset composite, net of fees, should exceed the total return of the composite benchmark outlined above.
- The total return of each underlying portfolio or mandate in the composite should exceed the total return of an index of similar mandate or style assigned. The Investment Staff will use benchmarks specific to each respective asset or manager's mandate on a quarter-by-quarter basis to monitor each investment. Currency management is at the discretion of the Non-US managers.
- The goal of the strategic asset composite portfolio shall be to achieve a total annualized real rate of return of at least 5.6% over the CPI as measured over a market cycle, usually 3-5 years.

V. Responsibilities of Each Investment Manager

The duties and responsibilities of each investment manager appointed to manage the Fund's assets are:

- Managing the assets in accordance with the statutory requirements, policy guidelines and objectives expressed herein. No deviation is permitted unless the ability to do so is given in a separate written agreement.
- Managing the assets with the expectation of outperforming its respective benchmark over a rolling 3-5 year market cycle.
- Promptly informing the Investment Staff regarding all significant matters pertaining to the investment of the assets. The Investment Staff should be kept apprised of major changes in investment strategy, portfolio structure, market value of the assets, and other matters affecting the investment of the assets. The Investment Staff should also be informed promptly of any significant changes in the ownership, affiliation, organizational structure, financial condition, or relevant personnel changes within the investment management organization.
- Unless otherwise specified in the Investment Management Agreement or other agreement, each investment manager is hereby authorized and empowered to vote proxies, said voting to be performed in good faith and for the exclusive benefit of the System's participants and beneficiaries. Each investment manager shall keep accurate records as to the voting of proxies and these records should be available upon request, to the Investment Staff for review.
- The System's custodian has identified specific commission recapture firms that are available to the equity managers of the System to facilitate the reduction of trading costs. Each manager is requested to use best efforts to utilize these firms, and it is the

manager's responsibility to know the current list of available recapture firms and keep the Investment Staff fully informed as to the effectiveness and prudence of the program.

- Reports on commissions generated, commission rates charged, and brokerage firms used by the investment managers, as well as proxy voting policies, will be provided, upon request, to the Investment Staff for review.

VI. Disposition of New Money

The Investment Staff shall establish, notwithstanding any other limits in this policy, the amount of new money to be received by each investment. A limit of 10% of the System's assets is established on the amount of capital allocated to each individual investment management company. Except for passive or index funds, if an investment reaches the maximum level set forth in the previous sentence, that investment would receive no new contributions from the System. As an investment grows above its respective maximum level of the System's assets, the Investment Staff will research options to reduce the investment back to its acceptable level of 10% within a reasonable amount of time.

VII. Evaluation and Review

On a timely basis, but not less often than quarterly, the Investment Staff will periodically review actual investment results achieved to determine whether:

- The investment performed in accordance with the policy guidelines set forth herein relative to their respective benchmarks as well as relative to their strategy-specific benchmark.
- Asset allocation remains reasonable and each manager's decision-making process remains consistent with the style and methodology represented by the manager.
- Liquidity allocation remains reasonable.

Investment Staff will ensure receipt of the Form ADV from each registered investment advisor and review for any adverse findings on an annual basis.

Also, at least annually, the Trustees and Investment Staff will formally review this Statement of Investment Policies and Objectives to determine whether it continues to be appropriate in light of the Trustees' investment philosophy and objectives, and changes in the capital markets and/or Fund structure.

VIII. Securities Lending - Specific Policies and Guidelines

The Investment Staff may select a firm(s) to lend financial securities of the Fund.
The firm shall have full discretion over the selection of borrowers and shall continually review credit worthiness of potential borrowers through adequate analysis of all material provided to them.

The securities lending program shall in no way inhibit the trading activities of the investment managers of the System. The securities lending agent and Investment Staff will create investment guidelines for the investment of cash collateral to adhere to this document. The Investment Staff will review, at least quarterly, the performance of the program and ensure that proper collateralization procedures are adhered to as stated in the investment guidelines.

The Investment Staff has authority to manage the Security Lending's cash collateral. This collateral will be invested at Staff's discretion in the eligible investments permitted under this Statement of Investment Policy and Objectives, while also taking into the account the liquidity needs of the Security Lending program.

Refer to Securities Lending Authorization Agreement in Appendix III for detailed investment guidelines.

IX. Securities Litigation

The Investment Staff will utilize the services of a qualified custodial bank or other vendor for purposes of monitoring and managing the timely filing of proof of claims in securities class action litigation matters in respect of investments held by the System from time to time.

Refer to Private Securities Class Action Litigation in Appendix IV for the System's policy regarding the potential participation as lead or co-lead plaintiff in securities class action litigation.

Appendix I

Asset Allocation Targets

The Trustees and Investment Staff believe that the level of risk assumed in the Fund is a function, in large part, of the Fund's asset allocation. Based on its determination of the appropriate risk posture for the Fund and its long-term return expectations, the Trustees have established the following asset-mix guidelines for the Fund:

Asset Class	Target Allocation % of Total	Minimum Allocation % of Total	Maximum Allocation % of Total
Equity	43.00%	38.00%	48.00%
Fixed Income	26.00%	21.00%	31.00%
Real Assets/Real Return	21.00%	16.00%	26.00%
Strategic Assets	10.00%	5.00%	15.00%

Liquidity Allocation Targets

The liquidity allocation target and bands that have been determined to provide the greatest risk controls while permitting the greatest cost efficiency are listed below.

Liquidity Time Frame	Target Allocation % of Total	Minimum Allocation % of Total	Maximum Allocation % of Total
Short-Term (<1 week)	40.00%	35.00%	65.00%
Medium-Term (1 wk – 3 yrs)	20.00%	10.00%	30.00%
Long-Term (>3 years)	40.00%	20.00%	50.00%

Monitoring of Allocation Targets

The asset and liquidity allocations of the portfolio will be reviewed on a timely basis, but not less often than quarterly, using the most recently available statement from the system's custodian. Should one of the asset classes or liquidity time frames exceed its minimum or maximum allocation, a rebalancing among the assets will occur in the most cost effective and timely manner. During the funding of an asset class, this rebalancing will be suspended for that asset class as deemed appropriate by Investment Staff.

The Board, in conjunction with the Investment Staff, is responsible for asset and liquidity allocation decisions, and will periodically review its target allocations to confirm or adjust the targets. Until such time as the Board changes the asset and liquidity allocation ranges, it will be necessary to periodically rebalance the portfolio. In order to institute a rational, systematic, and cost-effective approach to managing asset allocations, the Investment Staff will use rebalancing to assure that the actual investment portfolio closely resembles the broad asset and liquidity allocation model.

The range for triggering a rebalancing is outlined in the above matrixes. If the percentage of the System assets in an asset class has deviated from the targets beyond the minimum or maximum, Investment Staff will develop instructions for the investment managers and the custodian that will authorize the transfer of assets among accounts back to within the bands around the target asset allocation. Investment managers will have full discretion in raising needed cash and investing such cash to carry out the rebalancing activity. LAGERS Compliance Officer/Internal Auditor (COIA) is to verify that the current asset and liquidity allocations fall within the targeted ranges on at least a quarterly basis or when he/she deems appropriate. If a violation of the asset allocation is found, the COIA is to verify that the Investment Staff is in process of correcting such violation and ensure the board is informed at the next regularly scheduled board meeting.

Each asset manager's portfolio (excluding fixed income) is to be fully invested at all times, although cash can be held briefly when a security is sold prior to deciding which new security should be purchased. The amount of cash that each manager will be allowed to hold will be outlined in each investment manager's investment guidelines. This is consistent with the Board's decision to have managers avoid market-timing decisions. Since the fixed income managers will need cash for duration and collateral needs, they are exempt from this provision.

Appendix II

Procurement Action Policy

In accordance with Section 105.702 RSMo and within the bounds of its fiduciary responsibilities under law, including but not limited to the provisions of section 105.688 RSMo, the Board of Trustees of the Local Government Employees Retirement System (LAGERS) desires to take actions to assure equal opportunities for minorities and women in the areas of money management, brokerage, and investment counseling with respect to contracts involving LAGERS. To accomplish that goal, the Board adopts the following plan:

1) In soliciting proposals from money managers, brokers and investment counselors, LAGERS will include as a specification the requirement of an affirmative action plan.

2) In soliciting proposals from money managers, brokers and investment counselors, LAGERS will publicize the contract process in a manner like to inform qualified firms owned by minorities and women.

3) The Board will review this Procurement Action Policy annually after its adoption. Based on the review, the Board will determine whether any changes in the Policy are necessary. The results will be reported to the Joint Committee on Public Employee Retirement and to the Missouri Minority Advocacy Commission.

4) To qualify as a minority or women-owned firm, such firm shall:

    a. be domiciled in the United States;

    b. be owned or controlled by one or more individuals who collectively are women or who qualify as a minority as defined below. Ownership is classified as having a controlling interest in the firm of at least 51%; and

    c. have such women or minority owners involved in the daily business operations of the firm.

As used in this policy, the term "minorities" includes, but is not necessarily limited to, African Americans, Native Americans, Hispanic Americans, and Asian Americans.

Appendix III
SCHEDULE B
TO SECURITIES LENDING AUTHORIZATION AGREEMENT

COLLATERAL GUIDELINES

INVESTMENT OBJECTIVES AND GUIDELINES

The Collateral Account shall be comprised of both Cash Collateral and Non-Cash Collateral. The Missouri LAGERS Enhanced Cash Collateral Account ("SL Enhanced Account") shall function as an account that is separate from the Non-Cash Collateral Account.

Cash Collateral and Non-Cash Collateral Guidelines

Listed below are the guidelines specifying eligible investments, credit quality standards, and diversification, maturity and liquidity requirements. Other than in respect of Cash Prior Purchased Assets (as defined below), all requirements listed in these guidelines, including diversification, are effective at the time of purchase of any security or instrument as a Cash Collateral investment and at time or receipt of any Non-Cash Collateral. Standard settlement periods and market conventions may be incorporated when calculating issuer exposure and liquidity percentages at the time of purchase for Cash Collateral. Agent will make use of market standard settlement methods for cash investments and Non-Cash Collateral, including the use of a tri-party custodian as approved by Agent's appropriate risk committee. Settlement through a tri-party custodian may result in Cash Collateral being held on deposit at the tri-party custodian.

Capitalized terms in these guidelines that are not defined shall have the meanings given to them in the Agreement.

These guidelines supersede all prior objectives and guidelines and shall remain in effect until the parties mutually agree in writing to the contrary.

Income

Income earned from the investment of Cash Collateral, net of (i) expenses, including but not limited to, transaction accounting and reporting expenses, auditing fees, brokerage fees and other commissions, and any miscellaneous expenses, (ii) any applicable payment or withholding of tax, (iii) Loan Rebate Fees paid or accrued to the Borrowers, and (iv) any adjustments to provide for regular returns as provided below, together with fees for Loans collateralized by Non-Cash Collateral, is distributed to Lender on a monthly basis in the currency in which the income was earned.

Lender may engage Agent to convert Lender's net income from securities lending into Lender's base currency. Such transaction shall occur on or around the 5th business day of the month to coincide with the monthly period close. Conversion proceeds shall be credited to Lender's account by the fifteenth day of each month (or the next following business day if the fifteenth is not a business day). The Agent, acting as principal, or an affiliate of the Agent, may be counterparty in foreign exchange transactions and may retain any profits earned thereby as long as the terms of the transaction are competitive with terms then available in the relevant market for similar transactions.

On a monthly basis, a portion of the income earned by Lender on a loan in the SL Enhanced Account on any business day may be withheld by Agent and transferred to income earned on a different loan within the SL Enhanced Account for Lender on any other business day if on that day one or more rebates due or accrued to borrowers with respect to one or more loans should exceed the income earned from the Cash Collateral supporting those loans. If, despite such transfers, during any month total rebates payable exceed total revenues with respect to any loan or loans of Lender, the net shortfall shall be charged against positive undistributed earnings from other loans of the same Lender to the extent thereof, and any remaining shortfall shall be allocated between the Lender and the Agent in the same proportions as positive securities lending revenues. Any amounts thereby payable by the Lender shall be the personal obligation of that Lender and shall be due and payable upon the Lender's receipt of Agent's invoice for such amounts. Agent may withhold (and each Lender is deemed to grant to Agent a lien upon) future loan revenues, and any other property of the Lender then or thereafter in the possession of Agent, to secure the payment of such obligation. Notwithstanding the foregoing, however, losses of Collateral principal shall not be shared between Lender and the Agent to any extent but shall be allocated as provided in the Agreement or these guidelines.

Incidental expenses, (e.g., negative float due to payment advances) incurred in the administration of the Collateral Account are recovered against incidental receipts, (e.g., positive float from pending balances) similarly arising and any remaining balance is added to the lending revenues for the benefit of Lender within the Collateral Account. Net realized short-term capital gains or losses (if any) will be distributed at least annually.

Trading Policy

The SL Enhanced Account may engage in short-term trading, and may dispose of any portfolio security prior to its maturity if, on the basis of a revised credit evaluation of the issuer or other considerations, Agent believes such disposition is advisable. Subsequent to its purchase, a portfolio security or issuer thereof may be assigned a lower rating or cease to be rated. Such an event would not necessarily require the disposition of the security, if the continued holding of the security is determined to be in the best interest of the SL Enhanced Account.

Cash Collateral

INVESTMENT OBJECTIVE:

The investment objective of the SL Enhanced Account is to maximize total return to the extent consistent with preservation of principal and the following investment guidelines. The SL Enhanced Account is not an appropriate investment for those whose primary objective is absolute stability of principal.

Subject to the investment guidelines set forth below, the return objective shall be to match the return over time of the benchmark as calculated by 100% Barclays USD FRN <5 yrs, notwithstanding investments used to maintain liquidity requirements. There can be no assurance that this return objective will be attained. Within quality, maturity, and market sector diversification guidelines, investments are made in those securities with the most attractive relative yields. All investments shall be in US Dollar.

The initial securities to be held by the SL Enhanced Account are securities to be distributed in connection with the Lender's in-kind redemption from the NTGI Collective Short Term Extendable Portfolio ("STEP").

Upon the effective date of the SL Enhanced Account, Lender and Agent hereby acknowledge that (1) the terms contained herein will apply to new purchases from such effective date; (ii) there will be certain assets held within the SL Enhanced Account that complied with the requirements of STEP then in effect at the time of purchase of such assets, but that may not meet the terms of this SL Enhanced Account ("Cash Prior Purchased Assets"); and (iii) such Cash Prior Purchased Assets will continue to impact the overall Account accordingly. Agent may, at its sole discretion, hold such Cash Prior Purchased Assets until maturity, or as otherwise determined by it.

INVESTMENT GUIDELINES:

1. Eligible Investments:

a. Obligations issued or guaranteed by the U.S. Government, its agencies or instrumentalities, including MBS issued by its agencies, and custodial receipts with respect thereto.

b. Obligations of U.S. and Non-U.S. commercial banks, including The Northern Trust Company (or branches thereof where deposits with branches are general obligations of the parent bank) and bank holding companies, including, but not limited to, commercial paper, asset-backed commercial paper, certificates of deposit, time deposits, notes and bonds.

c. Obligations of U.S. and Non-U.S. corporations, including, but not limited to, commercial paper, notes, bonds and debentures.

d. Obligations issued or guaranteed by OECD (Organization for Economic Cooperation and Development) governments or political subdivisions thereof, and their agencies or instrumentalities.

e. Asset backed securities limited to those structures collateralized by credit cards, student loans, auto leases and loans, and various equipment leases and loans.

f. Repurchase agreements with counterparties collateralized fully by investments described in Section 5 below in this Schedule (Acceptable Repo Collateral), and marked to market daily.

g. Units of NTGI Collective Short Term Investment Fund ("Fund"). The Fund is governed by the Fund Declaration/Investment Guidelines established by Northern Trust Investments, N.A. as trustee, and Lender hereby confirms that it has received a copy of the most recent version.

2. Credit Quality:

a. With respect to commercial paper and other short-term obligations, investments and reinvestments shall be limited to obligations rated (or issued by an issuer that has been rated) at the time of purchase in the two highest rating categories (within which there may be sub-categories or gradations indicating relative standing) by at least one of the nationally recognized statistical rating organizations ("NRSROs") that have assigned a rating to such security (or issuer), provided however, that a maximum of 15% of the value of the total assets of the SL Enhanced Account may be invested in commercial paper and other short-obligations which are rated (or issued by an issuer that has been rated) at the time of purchase in the second highest rating category by two NRSROS which rate the security (or issuer), or one NRSRO in the event that the security (issuer) is only rated by one NRSRO.

b. With respect to bonds and other long-term obligations, investment and reinvestment shall be limited to obligations rated at the time of purchase of investment grade or higher (within which there may be sub-categories or gradations indicating relative standing) by at least 2 of the NRSROs that have assigned a rating to such security

c. Any unrated investments will be, at the sole discretion of the Agent, deemed of equal or superior credit quality to eligible rate investments.

3. Diversification:

a. Except for obligations issued or guaranteed by the U.S. government, its agencies or instrumentalities and repurchase agreements and holdings of the Fund, a maximum of 5% of the value of the total assets of the SL Enhanced Account may be invested in securities of any one issuer.

b. A maximum of 25% of the value of the total assets of the SL Enhanced Account may be invested in repurchase agreement with one counterparty.

c. Compliance with the diversification requirements of this section shall be determined on the basis of values immediately after the acquisition of any security.

4. Maturity/Liquidity:

a. The SL Enhanced Account will seek to maintain a weighted average maturity or duration (as defined below) of not more than 150 days (0.40 years).

b. For purposes of determining the maturity of each eligible investment with respect to calculating the weighted average maturity, (a) instruments which have an adjustable rate of interest shall be deemed to have a maturity equal to the shorter of the period of time remaining until (i) the next readjustment of the interest rate or (ii) the principal amount can be recovered through demand or optional put(if applicable), and (b) a repurchase agreement shall be deemed to have a maturity equal to the period of time remaining until the date on which the repurchase is scheduled to occur, or, if no date is specified but the agreement is subject to demand, the notice period applicable to a demand for the repurchase of the securities.

c. A minimum of 20% of the value of the assets of the SL Enhanced Account should mature daily. Holdings of the NTGI Collective Short Term Investment Fund, will be included in this calculation.

d. All securities in the SL Enhanced Account must have a maturity date or a put feature within 5 years. Asset-backed securities will be deemed to have a maturity equal to such security's weighted average life.

5. Acceptable Repo Collateral

Description	Minimum Margin%
Cash	100%
U.S. Treasuries	102%
Federal Agency Debentures	102%
Mortgages (GNMA, FNMA, FHLMC)	102%
Tier One Money Market	105%
Investment Grade Corporate Bonds	105%
High Yield Corporate Bonds	105%
Equity (from major market indices)	105%

6. Net Asset Value

Lender hereby directs Agent to maintain the Cash Collateral portion of the SL Enhanced Account as a fund comprised of units having a constant net asset value of $1.00 per unit and to value the Cash Collateral portion of the SL Enhanced Account using the amortized cost method for that purpose.

The SL Enhanced Account is not registered under the Investment Company Act of 1940 as a money market fund, is not subject to regulation by the Securities and Exchange Commission and does not comply with federal regulations governing registered money market mutual funds.

For the purposes of all assets in the SL Enhanced Account, accretion of discount and amortization of premium to par will not be implemented.

In no event shall Agent be personally liable to restore any loss within the SL Enhanced Account, unless the loss was directly caused by the negligence or intentional misconduct of Agent.

7. Downgrade Policy

The Agent will notify Lender as soon as reasonably practicable if securities purchased by the Agent subsequently are downgraded below Baa3 by Moody's or BBB- by S&P, and the Agent will determine the appropriate course of action in such event and communicate such course of action to Lender. Downgraded securities will be reviewed on a case-by-case basis.

8. Significant Changes

Significant changes to personnel in portfolio management relating to the SL Enhanced Account will be communicated promptly to the Lender.

Non-Cash Collateral

9. **Eligible Instruments**

a. Obligations issued or guaranteed by OECD (Organization for Economic Cooperation and Development) member states or their local governments, agencies or authorities that have a long-term rating at time of receipt of AA- (or the equivalent) or higher by any NRSRO.

b. Certificates of Deposit issued by banks approved by Agent's appropriate committee from time to time, rated at least by A-1 by S&P, or P-1 by Moody's or F-1 by Fitch.

c. Equity securities that are part of any of the following indices, or part of any other indices approved by the Agent's appropriate committee at the time of receipt such as:

German DAX 30
France CAC 40
Japan NIKKEI 225
United Kingdom FT 100
United States S&P 500
United States Russell 1000
ASX 200.

d. Corporate debt securities, including convertible securities and government guaranteed securities, the ratings of which, or the issuers of which, conform at the time of receipt to the standards specified for those collateral types as approved by the Agent's appropriate committee.

MISSOURI LOCAL GOVERNMENT EMPLOYEES' RETIREMENT SYSTEM

By: [signature]
Name: Brian Collett
Title: CIO
Date:

Appendix IV

PRIVATE SECURITIES CLASS ACTION LITIGATION

This document sets forth LAGERS' policy regarding potential participation as lead or co-lead plaintiff in private securities class action litigation.

Background

As part of its fiduciary duty to prudently invest and manage the assets of the System, LAGERS invests in the stock of various public companies. From time to time, class action lawsuits are filed against certain companies, their directors and/or officers for alleged violations of federal or state securities laws regarding disclosure obligations and other alleged breaches of fiduciary duties to shareholders. Occasionally, LAGERS receives solicitations from law firms seeking to represent LAGERS as a lead or co-lead plaintiff in securities class-action litigation.

Appointment as Lead or Co-Lead Plaintiff

As a shareholder, LAGERS is a putative member of any class action by shareholders against a corporation whose shares the System owns. The Private Securities Litigation Reform Act of 1995 requires federal courts to appoint one or more class members to serve as lead or co-lead plaintiffs in private securities class action litigation. The Act provides a rebuttable presumption that the lead plaintiff is to be the investor with the greatest financial interest in the relief sought by the lawsuit who is willing to serve as lead plaintiff. Since institutional investors such as LAGERS typically own more shares than individual investors, they are frequently solicited to serve as lead plaintiffs.

Because of the diversity of the LAGERS investment portfolios, as well as the System's investment policy guidelines, it is likely that other institutional investors will have a larger financial interest in the relief sought in most securities class action lawsuits. Accordingly, in most such lawsuits, an investor other than LAGERS would be a more appropriate lead or co-lead plaintiff.

There are also financial risks involved in serving as lead or co-lead plaintiff if the litigation is unsuccessful. These risks include bearing the costs of litigation and possible payment of the defendant's expenses and attorneys' fees, as well as defending against claims by other shareholders for inadequately representing their interests.

LAGERS' Policy

Based on the foregoing, it is LAGERS' general policy not to seek or accept designation as lead or co-lead plaintiff in private securities class action litigation. Exceptions to this general policy will be determined on a case-by-case basis in those instances where LAGERS has a substantial financial interest and designation as lead or co-lead plaintiff is determined to be in the best interest of the System.

Adopted:

Investment Risk Policy

MISSOURI LOCAL GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

Original Adoption Date: April 12, 2012
Revised Date: December 9, 2016

Introduction

Missouri Local Government Employees Retirement System ("LAGERS" or the "System") faces a number of risks in undertaking necessary investment activities. Some risks, such as normal market volatility, are generally unavoidable and risks, such as investing in emerging markets, are knowingly assumed in order to implement certain investment policies. Other risks, such as exposure to legal liability, are unnecessary and are avoidable.

Controlling or eliminating these risks is important to LAGERS. This document addresses the issues of investment risk that are specific to the System and identifies common practices and procedures used by pension systems to address these risks. Finally, the document includes descriptions of the procedures, processes, or policies that LAGERS specifically has in place to address each particular risk area. The risk areas and common practices and procedures were taken from a document titled *"Public Pension Systems – Statements of Key Risk and Common Practices to Address Those Risks," endorsed by the Government Finance Officers Association, The National Council on Teacher Retirement, the National Association of State Retirement Administrators, and the Association of Public Pension Fund Auditors.*

In preparing this document a "top down" or tiered approach was taken in identifying investment risks within the System. The broadest and most significant risk (or primary risk) is stated first and then the subordinate risks are identified in order of decreasing importance until some level of immateriality is reached. The risks identified at the top "tier" are universal within the pension system industry and, as we work our way down, become more specific to LAGERS. The following outline identifies the key risks addressed in this document:

- I. Assets Do Not Support Liabilities
    - a. Liabilities Do Not Behave as Expected
    - b. Assets Do Not Behave as Expected
        - i. External risks
            - 1. Markets fail to achieve expected returns
            - 2. Board & legislative actions
            - 3. Inherent risks
        - ii. Internal risks
            - 1. Strategic risk
            - 2. Poor governance
            - 3. Implementation risk
                - a. Tactical failure
                - b. Operational failure

ASSETS DO NOT SUPPORT LIABILITIES

The primary risk to LAGERS is that the assets will not support the liabilities. After all, *the underlying purpose of any defined benefit pension system is to pay current and future benefits to its members.* These benefit obligations cannot be met without the appropriate level of available assets. All other investment risks associated with LAGERS are ultimately just a sub-category of this primary risk.

Two major sub-categories of risk fall directly below the primary risk identified above. The first is that the liabilities of the pension fund will not behave as expected, and the second is that the assets will not behave as expected. Numerous factors, ranging from market volatility to demographic changes to policy changes that increase benefits, can cause the assets and liabilities of a pension system to behave unexpectedly. Without proper planning and management, these unexpected behaviors may ultimately affect whether or not LAGERS' assets will support its liabilities.

POINTS OF FOCUS FOR ACTION

LAGERS uses four basic procedures at the highest level to address and manage the risk of assets not supporting liabilities:

Actuarial valuations: Actuarial valuations are performed annually by an actuary retained by the board. The primary purposes of the annual valuations are (i) to evaluate the trends of the liability components of the system and their relationship to existing assets and (ii) to determine the contribution rates necessary to fund the liabilities on a level percent of payroll basis. Beyond that, the actuary prepares an annual gain /loss analysis to assess deviations from assumed experience in the funding risk areas and every five years prepares an experience study to determine whether or not assumptions need any fine tuning to bring them closer in line with actual experience.

LAGERS' Action: A qualified independent actuary retained by the Board prepares an annual actuarial valuation and an annual gain/loss analysis. Beyond that, the retained actuary prepares an experience investigation every five years.

Asset/liability studies: Studies generally performed periodically to identify changes in the relationships between the assets and liabilities of a pension fund.

LAGERS' Action: LAGERS conducts an asset/liability study at a minimum of every five years to ensure that investments, combined with employer and employee contributions, will generate sufficient cash to fund disbursements in the most effective and efficient manner. The last study was conducted in 2015.

Asset allocation models: Models are generally constructed by the system's investment staff and approved by the board. The objective is to identify an asset allocation structure which will allow the system to limit risk through diversification while at the same time producing returns which will be sufficient to meet the system's funding objectives. In many instances, the asset allocation exercise is part of a comprehensive asset/liability study.

Liquidity allocation models: Models are generally constructed by the system's investment staff and approved by the board. The objective is to ensure that the system maintains ample liquidity to meet its funding commitments while not inhibiting potential return. Two kinds of commitments which necessitate a liquidity allocation are disbursement of benefits to plan participants and investment activities.

LAGERS' Action: With the assistance of Investment Staff, the Board has established an asset allocation to ensure diversification of assets and a liquidity allocation to ensure the System meets funding commitments. The asset allocation and liquidity allocation are documented in the Investment Policy. The policy document requires the Board to formally review the asset allocation and liquidity allocation annually. The comprehensive asset/liability study performed at least every five years also reviews and ensures the reasonableness of the asset allocation model in regards to achievement of the assumed rate of return and desired risk tolerance.

LIABILITIES DO NOT BEHAVE AS EXPECTED

Numerous risks are potential contributors to the liabilities of a pension system not behaving as expected, and there are numerous common practices for managing those risks. The purpose of this policy, however, is to focus on the *investment* risks associated with the assets of the system. Therefore, risk management concerns and actions associated with the liabilities are not expressly covered, but are addressed via the experience study and annual valuations.

ASSETS DO NOT BEHAVE AS EXPECTED

Simply stated, this is the risk that the return needed to meet the liabilities is not produced due to unexpected behavior of the investment chosen. This unexpected behavior could result from a wide variety of factors, ranging from internal operational issues to external market forces.

In fact, all the investment risks that could have a material effect on LAGERS stem from assets not behaving as expected or planned. Therefore, all the risks identified in the remainder of this document focus on risks that can cause assets not to behave as expected. The specific risks that may ultimately cause assets to not behave as expected fall in two general categories: external and internal influences.

EXTERNAL RISKS

Markets Fail to Achieve Expected Returns

With the assumption that LAGERS is a long-term investor and employs standard asset allocation techniques to build a diversified portfolio of assets, this risk is not that the actual annual returns of any given asset class will not meet the expected annual returns. Rather, this particular risk is intrinsic to the assets themselves and mitigated by using such factors as expected volatility and correlation in diversifying the portfolio. In fact, it is assumed that all classes of assets will perform significantly differently than expectations over short periods of time.

Instead, this is the risk that the long-term behavior of one or more of the asset types turns out to be significantly different than expected due to unforeseen market, economic, or political factors. These deviations from expectations may result from any or all of the following:

- long term returns of the asset type;
- long term volatility of the asset type;
- asset type's correlation or behavior in relation to other asset types; or
- behavior of the entire asset allocation in relation to the liabilities of the plan.

The use of improper assumptions in modeling could, over time, result in a significant under funding of LAGERS.

POINTS OF FOCUS FOR ACTION

LAGERS uses three primary vehicles to address these external risks:

Asset Allocation Study: Periodic asset allocation studies take a prospective approach to managing market risk by examining the appropriateness of the set of assumptions being used in the allocation model. This is usually done alongside a liability study to create the Asset/Liability Study.

LAGERS' Action: At a minimum of once every five years, with the assistance of Investment Staff, *the Board conducts an asset allocation study. The results of this study established an asset allocation policy and strategic mix which are expected to generate returns in excess of the 7.25% assumed rate of return required to meet the current future liabilities. In order to produce returns in excess of 7.25%, a heavy allocation to stocks was necessitated. Given the significant weighting to stocks, finding assets that truly exhibited return patterns uncorrelated to stocks (diversifying assets) was extremely important. The resulting policy and strategy allocations are documented in the Investment Policy.*

Long-term Performance Measurement: This is conducted for each asset type and the portfolio as a whole. Performance measurement can be referred to as a retrospective approach to managing the risk because it evaluates the historical returns and volatility of each asset type, as well as the historical correlations among the asset types. By evaluating the historical performance, market trends may be identified which may help the system avoid long-term unexpected market behavior.

LAGERS' Action: LAGERS' custodial bank calculates performance monthly, and that information is reviewed by Investment Staff. Once satisfied that the information is accurate, *Investment Staff with the help of the custodian uses the performance calculations to prepare a quarterly performance report that is formally presented to the Board with a focus on longer term performance over a minimum of three years.*

Periodic Actuarial Valuations: These studies track the actual behavior of the assets as matched against the actual behavior of the liabilities and quantify the ongoing difference of the impact of any unexpected behavior. If unfavorable trends develop, then the asset allocation or other factors affecting the future behavior of the system (e.g., contribution rates) can be adjusted.

LAGERS' Action: An actuarial valuation is performed annually by a retained qualified independent actuarial firm. In addition, a separate independent actuary periodically reviews the work of the retained actuary, typically at least once every ten years.

Board & Legislative Actions

LAGERS' funding is predicated on assumptions regarding long-term rates of return and the application of present value concepts to promised future benefits. Any change to the realization or fulfillment of these assumptions by virtue of board and/or legislated action may substantially impact the financial health and economic viability of the system. An example would include policies or laws that limit what asset types the system may own and legislation that increases benefits without considering available assets.

Another example that could seriously affect the assets of LAGERS is board action that artificially increases the interest rate assumption, with the intended effect of a reduced contribution from the employers. A shortage in expected contributions can obviously upset the balance between assets and liabilities and ultimately cause LAGERS to be underfunded. The added risk of this type of action is that it would probably require that a higher level of investment risk be taken in order to support the new assumptions. The key risk in any of these examples is that a radical change is made without understanding the effects on the program being changed, with the attendant risks of trend chasing, confusion, and lack of long-term focus.

POINTS OF FOCUS FOR ACTION

Sudden adverse board action or legislative changes are sometimes unavoidable; however, LAGERS takes the following steps to minimize the likelihood that such situations will occur:

Investment Policy: A well-organized and documented investment policy that has been approved by the board is a key to avoiding sudden and frequent overhauls of the investment program. An unorganized and haphazardly executed investment program will likely find itself subject to periodic overhauls initiated by outside sources as it experiences intermittent periods of performance that may be considered by some to be poor.

LAGERS' Action: LAGERS has a comprehensive Investment Policy that was originally adopted by the Board in February, 1994. The Board also approves subsequent revisions to the policy.

Education: Educating policy makers and constituents about the system is also an effective mechanism for managing this risk. The more knowledgeable these groups are about the key investment concepts employed in financing a pension system the less likely they are to pursue changes that may negatively affect the investment plan. This education is often accomplished through regular communications from the system. In addition, other educational materials, such as the investment policy and strategy of the system, are often made available.

LAGERS' Action: LAGERS distributes a Trustee Reference Manual to each new Board member. This manual outlines the organizational structure of LAGERS, identifies the responsibilities and functions of the Board, and contains the comprehensive Investment Policy. In addition, each new Board member is encouraged to meet one-on-one with the Chief Investment Officer to discuss LAGERS' investment philosophy. The Board is also provided with continuing education through presentations by the LAGERS staff regularly.

Legislative Liaison: Most pension systems have some sort of monitoring and communication process in place to keep in touch with proposed legislation or other actions that may affect the system's assets. Early awareness and effective communication enables the system to educate the public and lawmakers on the potential effects of the legislation before its passage.

LAGERS' Action: During the legislative session LAGERS' Executive Staff tracks and reports on proposed legislation affecting LAGERS, and meets with legislation sponsors as necessary. In addition, LAGERS contracts with a Legislative Consultant who serves as a liaison between LAGERS and members of the legislature.

Inherent Risks

All investments are subject to one or more types of inherent risk. It is expected and necessary to assume some level of risk in order to achieve needed returns. For example, some inherent risks present in common investment vehicles follow:

- Capital Risk - The risk of losing the original investment.
- Credit Risk - The risk that the issuer will not make scheduled payments.
- Inflation Risk - The risk that the investment return will not keep pace with inflation.
- Interest Rate Risk - The risk that changes in interest rates will decrease values.
- Liquidity Risk - The risk that the investment cannot be readily converted to cash at prevailing or assumed prices.
- Market Risk - The risk that adverse market shifts will cause losses.

POINTS OF FOCUS FOR ACTION

Diversification: As indicated, these risks are inherently present and are usually knowingly assumed when investing. Usually, they cannot be avoided; however, one way to mitigate these risks is by utilizing the principle of diversification. This way, for example, if one company or industry falters, the threat to the overall fund will be minimized. An asset allocation policy sets targets and ranges for asset classes, thereby diversifying the portfolio among unrelated investments. The asset allocation process should consider three major factors: expected risk, expected return and correlation. From there, a fund may require diversification within those asset classes. However, it is important to examine diversification from a total portfolio perspective.

LAGERS' Action: At a minimum of once every five years, with the assistance of Investment Staff, the Board conducts an asset allocation study. In addition, LAGERS measures long-term performance to evaluate historical returns and volatility. Both of these measures assist the LAGERS Board in mitigating risk by evaluating whether the portfolio is properly diversified and in determining an appropriate asset allocation, which is detailed in LAGERS' Investment Policy.

Risk Oversight: An assumption of risk tolerance within the investment portfolio is necessary to assist in meeting long-term performance objectives needed to deliver the retirement benefits promised to members. Risk monitoring processes are anticipated to serve as a tool in providing prudent oversight of the investment portfolio. Risk should be identified and monitored through various factors in an attempt to understand the risks within the portfolio. Analysis of these factors should occur at various levels of detail which include individual manager, asset class and total fund level.

LAGERS' Action: Investment Staff measures and monitors the following risk factors on a quarterly basis in order to maintain risk awareness within the portfolio:

Environmental Exposures

- *Rising Growth Risk*
- *Falling Growth Risk*
- *Rising Inflation Risk*
- *Falling Inflation Risk*

Asset Driven Exposures

- *Interest Rate Risk*
- *Liquidity Risk*
- *Leverage Risk*
- *Regulatory Risk*
- *Operational Risk*
- *Counterparty Risk*

In order to determine the true exposure to these risks, the above risk factors are multiplied by a leverage measure at the individual manager level. This leverage measure is a measurement that discloses the amount of leverage within a mandate by taking into consideration derivatives or other instruments used to gain leverage.

Note: Definitions for the above risk factors are defined in a separate Investment Terms Glossary.

INTERNAL RISKS

Strategic Risks

Strategic decisions can be made by the board to move away from underlying policy benchmarks rather than simply indexing funds in accordance with a simplified asset allocation model. When indexing, the risk of not achieving the policy benchmark returns less transaction costs would be virtually non-existent. However, any decision to move away from this strategy (such as decisions to overweight or underweight in particular styles or market capitalization) increases the risk that returns will not meet the returns of the policy benchmark, which may ultimately result in assets not meeting the expected long-term performance assumptions. Despite the risk involved in moving away from policy benchmarks, the LAGERS Board has elected to deviate from this policy due to the belief that the rewards of achieving incremental return exceed the incremental risk of performing below benchmark returns.

Additionally, potential flaws can exist in the benchmarks that are used to measure fund performance. No benchmark is a perfect reflection of the underlying general market. Even the S&P 500, often used as a reflection of large cap U.S. stocks, has substantial international exposure. The choice of a particular small cap U.S. index can result in widely different returns over periods of time, such as differences in the performance of the S&P 600 and the Russell 2000 (common small capitalization U.S. benchmarks). Potential problems in this area are magnified as the indices being used to replicate markets, which are less liquid and more inefficient (such as international emerging markets), are utilized. While over longer periods of time these differences in performance may become less significant, they are an area of potential concern over shorter time periods.

POINTS OF FOCUS FOR ACTION

Manage the Risk: Ultimately, most systems do not choose to avoid the risk associated with strategic decisions. Instead, they elect to manage the risk. Managing the risk begins with clearly defining the policy benchmarks established for the fund and the acceptable level of deviation from these established benchmarks. Some systems establish benchmarks at the strategic level as well as the policy level. Again, using the Russell 3000 as a policy benchmark, a fund may strategically decide to own a disproportionate number of value stocks in their portfolio and, therefore, decide to incorporate a tailor-made benchmark to reflect their decision to be overweight in value stocks. Benchmarks may be further defined at the specific manager level. Regardless of the number of benchmarks established on different levels, they normally are clearly defined and should ultimately roll up into the overall policy benchmarks.

LAGERS' Actions: LAGERS establishes benchmarks at the policy, strategy, and individual manager level. In some cases, decisions have been made to employ strategic decisions which necessitate strategy benchmarks that deviate from the policy benchmarks. Benchmarks should be clearly specified, measurable, and preferably investable. In addition, the Investment Policy requires the benchmark to be determined for each individual manager, in advance of funding, by mutual agreement between the manager and Chief Investment Officer.

Long-term Performance: Monitoring the long-term performance of the strategic decisions is another way to manage the risk that the strategies will not provide the anticipated returns for the system. The impact of strategic decisions usually only becomes apparent over a period of years. Individual annual returns for strategies may be volatile when compared to the returns of the underlying asset class or policy benchmarks. A long-term performance measurement system can monitor these return variances or risks by simply tracking the impact of these particular strategies over time and comparing them to the alternative of investing in the broad asset class or policy benchmark.

LAGERS' Actions: LAGERS' custodial bank calculates performance monthly, and that information is reviewed by Investment Staff. Once satisfied that the information is accurate, Investment Staff with the help of the custodian uses the performance calculations to prepare a quarterly performance report that is formally presented to the Board. Returns are also evaluated on a one-year, three-year, five-year, ten-year, fifteen-year and inception-to-date basis, with an emphasis on three-year and beyond.

Poor Governance

Governance risk, in this context, refers to the risk that the board, staff, or agents of a pension system will, either intentionally or unintentionally through their management actions or lack thereof, cause the assets of the system to underperform expectations. Agents of a pension system include, but are not limited to external consultants, money managers, auditors, custodians, actuaries, and legal counsel.

Characteristics of poor governance may include incompetence, poorly or improperly defined roles, poor communications, failure to meet fiduciary responsibilities, lack of ethical standards, and inconsistency.

POINTS OF FOCUS FOR ACTION

The focus here is the control environment, which is the foundation for the entire internal control system within the organization. The control environment defines the character of the organization and affects the attitudes of all individuals towards governance and control. It consists of several elements including: integrity and ethical values, competence, a qualified board of trustees and executive staff, a rational organizational structure, and proper assignment of authority and responsibility. Without this foundation, other components of the control system often fail.

Integrity and Ethical Values

Code of Ethics: Pension systems often develop and adopt their own code of ethics to address the need for ethical standards within the organization. Others may recognize a more general set of ethics from their state government or other organization. Some systems may not officially "adopt" a code of ethics but may address many of the ethical issues in personnel manuals, trustee handbooks, and other internal policies and documents.

LAGERS' Actions: LAGERS primarily addresses ethics for staff in the Ethics Policy. The policy generally requires staff to avoid unethical behavior in the course of performing LAGERS related duties. The policy specifically requires staff to avoid: 1) using an official position for private gain; 2) giving preferential treatment to any person or entity; and 3) losing their independence *or impartiality in making decisions. The Ethics Policy also contains rules applicable specifically to the Board, addressing financial interests and Board interaction with outside parties.*

Fiduciary Responsibility: Good governance of pension systems also includes the understanding of fiduciary responsibilities by boards, staff, and agents of the system. For most boards, fiduciary responsibilities are defined and imposed through state laws and regulations pertaining to the system (including direct or indirect references to trust law). Mission statements, plan documents, and other internal documents may further define the fiduciary responsibility of the board. Many times the fiduciary responsibility of staff members and agents is also defined in and/or imposed by state laws and regulations and through other methods similar to the way in which it is established for the board. Staff's fiduciary responsibilities may also be defined through written policies and guidelines approved by the board. In the case of agents to the system, their fiduciary responsibilities are normally defined and acknowledged in writing. This is usually accomplished through contracts and written agreements between the system and its agents.

LAGERS' Actions: The fiduciary responsibility of LAGERS pension fund trustees is specifically addressed in Section 105.688, RSMo. This statute basically requires Board members to act as investment fiduciaries in administering the System's assets and goes on to further identify the specific considerations the Board members should take before making investment decisions. The LAGERS Charter of the Board of Trustees also contains information relating to the Board's fiduciary responsibility, as does the Investment Policy.

The fiduciary responsibilities of LAGERS' Chief Investment Officer, other Executive Staff and Board Committees are stated in their corresponding Charter.

The fiduciary responsibilities of LAGERS' agents are defined in contracts and written agreements. All investment managers must sign a legal agreement that contains language acknowledging the manager's fiduciary responsibility to LAGERS.

LAGERS' Ethics Policy also includes a description of the fiduciary duty of all LAGERS covered parties, including trustees, staff and external associates of LAGERS who have discretionary authority over LAGERS' assets or operations. The policy requires an annual attestation of understanding and compliance by all trustees and staff.

<u>Competence</u>

Hiring Practices: Methods used to help ensure a competent staff include establishing good hiring practices, conducting effective periodic evaluations, and providing an attractive working environment. Most pension systems operate under rules and personnel policies or have their own defined standards and procedures.

LAGERS' Actions: LAGERS' hiring practices are outlined in the Personnel Policy. These practices include establishing specific job descriptions for each position and clearly identifying education, skill, and experience requirements for each position. Performance appraisals of Investment Staff are conducted by the Chief Investment Officer (CIO) once a year. Performance appraisals of the CIO are conducted by the Board of Trustees at least every two years. Annually, *the CIO meets with all members of the investment department to establish department goals for the year. Throughout the year, the CIO meets with investment department personnel to discuss progress being made toward achieving established goals and to provide feedback to employees regarding work performance. LAGERS conducts a salary survey every two years for Investment Staff and every year for the Chief Investment Officer to ensure that the salary of each position is in line with the market. In addition, the CIO operates under an employment agreement with the Board of Trustees, with the agreement providing for annual merit increases based on portfolio performance over a specified period of time.*

Training: Another method to help ensure the competency of staff and trustees is to provide an appropriate orientation for new board members and staff and continuing education for all board members and staff. New board members are often initially educated through an orientation process and receive on-going education by attending conferences and seminars. In addition, the investment staff and agents of the system may schedule portions of board meetings to further educate the board on investment related issues.

LAGERS' Action: Section 105.688, RSMo as well as LAGERS' Trustee Education Policy outline the curriculum required for the Board member educational program and new Board member orientation. This curriculum provides continuing education through presentations by Investment Staff on various investment topics at Board meetings. The Board is also provided at- will opportunities to attend conferences and seminars related to investments. Finally, staff produces a memo prior to each Board meeting which serves to educate the Board on new investments, and prepares a periodic newsletter for the Board regarding current investment topics.

LAGERS encourages Investment Staff to continue their education by offering reimbursement of tuition for courses taken that relate to the employee's career development. The specifics of the educational assistance plan are spelled out in the Personnel Policy (specifically the Professional Development Policy contained within the Personnel Policy). In addition, the policy offers financial assistance to staff members who wish to obtain career related certifications and licenses and will also pay for job-related professional dues and memberships. Staff members are also encouraged to attend seminars and conferences which will further enhance their career development.

Outside Experts: Another method of managing the risk of poor governance is by hiring outside experts. Most systems rely on outside experts such as actuaries, attorneys, auditors, authorities on governance issues, and consultants, when necessary.

LAGERS' Actions: LAGERS utilizes the following outside experts to help manage investment-related risks:

- *Actuaries*
- *Attorneys*
- *Auditors*
- *Investment Managers*
- *Investment Consultants (on as-needed basis)*
- *Prime Brokers*
- *Custodial Bank*

The activity of each of these agents is periodically reviewed by staff to ensure satisfactory performance. In addition, where appropriate, LAGERS has agents formally reviewed periodically by independent third parties (such as actuarial audits by independent actuarial firms).

Board of Trustees

Good governance of a pension system usually begins with a competent governing board. The criteria for the selection of most pension boards are usually detailed in the governing statute or other legal document establishing the pension system.

LAGERS' Actions: The criteria for the selection of LAGERS' Board members is specified in Section 70.605, RSMo.

Organizational Structures

Organizational structures will vary among pension systems, depending upon their approach (e.g., whether investments are managed externally, internally or a combination of both). Regardless of the approach, the structure should be clearly defined and key positions identified.

LAGERS' Actions: LAGERS Investment Policy clearly defines the organizational structure and the roles and responsibilities of all parties involved in the investment program.

Assignment of Authority and Responsibility

Written Policy: Another practice used to reduce the risk of poor governance is the development and adoption of written policy statements. For example, policy statements often address some or all of the following issues:

- **Investment Goals** (general return goals, risk and return objectives, risk tolerance, etc.)
- **Investment Structure** (board, staff, consultant, manager, and custodian responsibilities, manager selection process, monitoring and review procedures, etc.)
- **Investment Philosophy** (general philosophy governing the investment program)
- **Asset Class Policies** (objectives, allowable investments, styles, benchmarks, etc.)
- **Other Policies** (proxy voting, securities lending, etc.)

Written and approved policy statements serve as an educational tool for new investment staff and board members and help ensure seamless transitions during staff and board turnover. In addition, having written and approved policy statements in place helps prevent sudden inappropriate changes to the investment plan in reaction to temporary or transient events.

LAGERS' Actions: LAGERS' Investment Policy addresses the issues listed above. The policy has been formally approved and adopted by the Board and subsequent revisions are also approved by the Board.

Implementation Risk

There is also the risk that policies and procedures may not be implemented properly. Pension systems may develop and adopt the ideal asset/liability mix, asset allocation model, and investment policies and strategies, but if staff or agents of the system do not effectively implement the mix and strategies, then assets may ultimately not support the liabilities generated by the system. Causes of ineffective implementation fall into two general categories: *tactical failure* and *operational failure*. Implementation risk and common practices to address the risk are discussed below in terms of these two general categories.

Tactical Failure

Two general sources of tactical failure may prevent a pension system from achieving the benefits that would accrue from following its long-term investment strategy. First is the risk that the actual allocation of assets does not conform to the asset allocation strategy. Second is the risk that the actual return experienced through investment in specific assets does not meet the returns of the asset classes of which they are a part.

Portfolio Drift

For various reasons, a pension system may not follow the underlying asset allocation defined in its investment plan. Particularly after a significant change in the market, a fund may remain in an overweight/underweight position relative to its respective allocation targets for a prolonged period of time and, as a result, realize returns far below that expected from the policy asset allocation. As discussed below, the primary discipline used to address this concern is the process of *rebalancing*.

POINTS OF FOCUS FOR ACTION

The primary discipline used here is an expressed rebalancing procedure. For example, many systems incorporate ranges around an expressed policy asset allocation that, when violated, will trigger either a direct reallocation of assets to more closely align with the policy asset allocation or trigger a review of conditions to determine whether a rebalancing of assets should occur. As part of this process, most systems will include a direct comparison of the actual allocation with the policy allocation in formal reports to the board of trustees.

LAGERS' Action: LAGERS has established a formal rebalancing program. The program is based upon set ranges around an expressed asset allocation that, when violated, triggers the reallocation process. The rebalancing policy is included in Appendix I in the Investment Policy. In addition, the Compliance Officer/Internal Auditor verifies compliance with policy allocation targets quarterly and reports to the Board.

Underperformance

Different types of tactical decisions may cause the actual returns of specific assets to underperform the asset class of which they are a part. First, as discussed above, strategic decisions may be undertaken; and, second, the managers may underperform the asset class.

Strategic Decisions: The risks associated with strategic decisions discussed above may be the result of decisions to:

- Add asset types not included in the underlying asset classes (e.g., private equity, private debt, or emerging markets).
- Tilt the characteristics of an asset class (e.g., more or less small capitalization stocks).
- Take actions to try to reduce risk (e.g., hedging international currency risk).

Manager Underperformance: The external or internal managers employed by a fund to actively attempt to gain returns higher than those available by passively investing in the markets themselves may underperform the asset class. The actual returns could be significantly different, and lower, than those in the general market due to the manager's investment decisions.

POINTS OF FOCUS FOR ACTION

Concentrate on hiring quality managers and then monitoring people and performance. Monitoring should occur on an ongoing basis or through separate periodic evaluations.

Due Diligence in Hiring: As it relates to portfolio managers, risk management begins with good hiring practices. Most pension systems have a formalized due diligence process in place to identify external manager candidates that will incorporate the desired investment styles and disciplines to meet the objectives of the system's strategies. The hiring process also usually includes the development of a contract that includes guidelines for the management of the specific portfolio. The guidelines usually include language that addresses:

- The objective of the portfolio;
- The benchmark the portfolio will be measured against;
- The desired characteristics of the portfolio; and
- The allowable and possibly prohibited investments for the portfolio.

Guidelines help to further ensure that the managers adhere to the strategy and discipline for which they were hired.

LAGERS' Actions: LAGERS' policy for hiring and terminating investment managers is incorporated in the Investment Policy. The overall objectives of the policy are to ensure that decisions are being made in a full disclosure environment characterized by objective evaluation and proper documentation, and that ultimately all decisions will be made solely in the interest of plan participants and beneficiaries. The roles of staff in hiring and terminating managers are detailed in the policy. The staff's process for selecting investment managers is documented and reviewed by the Compliance Officer/Internal Auditor to determine compliance with the policy.

Upon selection, the manager is required to sign a legal agreement that outlines the manager's general fiduciary duties in relation to LAGERS. In addition, specific operational guidelines are *developed and may identify (i) the objective of the portfolio, (ii) the benchmark that the manager will be measured against, (iii) the desired characteristics of the portfolio, and (iv) the allowable and prohibited investments. These guidelines are signed by both parties and become part of the contract.*

People: Many systems also meet on a periodic basis with the external management team. These meetings provide the system with a better understanding of the day-to-day operations of the external manager and the manager's business continuity, including resources and staff turnover. In addition, portfolio theory is often discussed to reassure the system that the manager is still a proper fit for the management niche for which they were originally hired.

LAGERS' Actions: LAGERS' Investment Staff conducts quarterly due diligence meetings with each investment manager, which may include on-site visits to the managers' place of business and/or teleconferencing. In addition, LAGERS' policy is for LAGERS' Investment Staff to request a seat on the investment advisory board of each limited partnership in which LAGERS is a partner.

Monitoring Performance: Individual securities chosen could underperform the market or sector for which the manager was hired. This risk is typically tracked separately, and reasons for underperformance are monitored, identified, and discussed with corrective action taken if necessary. This is usually done prospectively (the manager anticipates future events that could impact the style or discipline) and retroactively (analyzes reasons for present and past underperformance to determine if the manager is still capable of implementing that discipline).

The retroactive check is accomplished through performance monitoring. In addition to the performance reports generated by the manager, on a regular basis staff may produce their own set of reports for monitoring performance to aid in determining the reasons for over performance or underperformance. Formal reports to the board may include such items as performance compared to market benchmarks and the analysis of the performance (attribution analysis). These types of reports should help guard against terminating managers simply because their style was "out of favor."

LAGERS' Actions: Performance reports that compare each manager's performance to their established benchmark are prepared monthly by LAGERS' custodial bank. Formal performance reports are prepared and issued to the Board quarterly.

Operational Failure

The risk of operational failure is not primarily concerned with investment strategy or tactics, but with management and operational issues used in the implementation process of the strategy or tactic. Operational failures often result from a breakdown in systems, procedures, personnel, or processes. One common approach to avoiding potential operational failure is for the management of pension systems to implement procedures that ensure achievement of the following control objectives (as identified by General Standard 300, *Standards for the Professional Practice of Internal Auditing*):

1) The reliability and integrity of information.
2) Compliance with established policies, procedures, laws, and regulations.
3) The safeguarding of assets.
4) The economical and efficient use of resources.
5) The accomplishment of established objectives and goals for operations and programs.

Operational failure can occur in three major areas within LAGERS: external managers, custodial banks, and internal operations. LAGERS takes a systematic and consistent approach to managing and monitoring each of these relationships.

External Managers

The management of operational risk associated with external managers focuses on activities by the manager that change the assets held in their account, primarily buying or selling securities. The operational failure of the external manager could be the result of three actions:

- A security is inappropriately sold;
- A security is inappropriately purchased; or
- An intended sale or purchase of a security is not accomplished.

These actions are all the result of the manager not complying with the guidelines and strategies set forth by the system. The possibility always exists that an external manager, either intentionally or unintentionally, will not adhere to the guidelines or strategy for which they were hired. An adequate monitoring process should mitigate the risk of noncompliance by the manager; however, for the monitoring process to be effective, the data monitored must be timely, available, and accurate. Therefore, an operational risk associated with external managers is that timely and reliable information is not available or that the information is inaccurate. If the system is monitoring inaccurate or dated holdings and trade data, then the risk of not detecting noncompliance features within the actual portfolio increases. Generally, the longer a portfolio is allowed to be out of compliance with the established guidelines and strategies, the more likely the returns of the portfolio will not be in line with expectations.

POINTS OF FOCUS FOR ACTION

Separation of Authority from Custody: The legal custody of a pension system's assets is usually maintained through a custodial bank. Securities are held at the custodial bank in the custodian's name on the pension system's behalf. Managers do not have direct control over those assets and must perform their activities through the custodial accounts. When a security is purchased or sold, the custodian must receive instructions from the manager to receive or deliver the security (usually on a "delivery vs. payment" basis). Therefore, it is very difficult for the manager to obtain more funds than authorized by the system. Consequently, each external manager creates only a limited amount of operational risk with regard to the overall pension system because they only have access to the funds assigned them by the system.

If, for example, an external manager's building is destroyed and all records and capabilities are lost, the pension system still has all of its securities under separate control. In addition, pension systems can, at any time, "freeze" an external manager's account and prevent future access by the manager, which is often done upon termination of a manager. All that is lost is the opportunity cost of the added value that may have come from future decisions by the manager. Opportunity cost concerns can be limited by immediately transferring the securities to another manager's account, which is also frequently done upon the termination of a manager.

Finally, an external manager does not have the ability to move cash and securities out of the pension system's account to another destination, either within that custodian's system or outside the system. A manager only has control over the movement of securities and cash within the account. An attempt or request for this unauthorized type of movement should automatically trigger a request by the custodian for independent authorization from both the external manager's and pension system's staff.

LAGERS' Actions: In most cases a master custodian or prime broker maintains the legal custody of LAGERS' assets known as "separate accounts". The custodian or prime broker holds the securities in LAGERS name on the behalf of LAGERS. Managers do not have direct control over LAGERS' assets and must perform their activities through the custodian/prime broker. The custodian/prime broker must receive instructions from each manager when a security is purchased or sold and the manager will only receive funds into their account at the direction of LAGERS. Therefore, the custodian/prime broker is aware of every transaction by the manager and makes the transactions readily available to LAGERS through an on-line accounting system. With this readily available information, LAGERS' staff is able to determine compliance in a timely and accurate manner. Ultimately, the manager cannot receive or move funds without authorization by LAGERS.

In addition to the separately managed accounts as described above, LAGERS' portfolio also consists of partnerships (private equity and real estate) and commingled accounts, in which assets reside with the external manager or their custodian/prime broker. LAGERS makes every effort to ensure the safeguarding of these assets by requiring each external manager to sign a legal agreement which specifies the manager's fiduciary responsibilities, by requiring an annual audit of each partnership, and by requiring the commingled accounts to have a third-party pricing verification of assets held at the manager's custodian/prime broker.

For additional assurance, all legal agreements between LAGERS and its external managers require the managers to carry minimum coverage for errors and omissions insurance and fidelity bonds. All future partnership contracts will also include a negotiated minimum amount of insurance coverage.

Reconciliation: The accuracy of the holdings and transactions is usually assured through a monthly reconciliation of the data by the external manager and custodian or by the pension system staff from data provided from the external manager and the custodian. The reconciliation process helps to ensure the integrity and timeliness of the data used by the system in the monitoring process.

LAGERS' Actions: Monthly and/or quarterly reconciliations of transactions and holdings are performed between external managers of separate accounts and the custodian.

In the case of partnership accounts, LAGERS and the custodian receive an annual audit from the external manager that LAGERS believes to be reliable and accurate. LAGERS reconciles the market value in the audit against the market value reported by the custodian to ensure correctness.

In the case of commingled accounts, LAGERS receives a monthly statement from the fund's custodian/prime broker. Third-party pricing mechanisms are used to value the fund's holdings and those prices are posted by LAGERS' custodian. LAGERS reconciles the market value from the fund's custodian/prime broker against the market value reported by LAGERS' custodian to ensure correctness.

Investment Staff also prepares monthly and/or quarterly reconciliations between all external managers' monthly and/or quarterly reports and the custodian. In addition, LAGERS utilizes an internal investment accounting system to record the partnership accounts' monthly market values and transactions (including capital calls, distributions, and other cash flows) of the portfolios within LAGERS' fund as reported by the custodian.

Due Diligence: Pension systems also manage the risk of external manager operational failure by incorporating good hiring practices and conducting periodic due diligence reviews. During the hiring process the system should take steps to ensure the external manager has adequate resources and qualified personnel to enable them to disseminate timely and accurate information. The on-going due diligence reviews help the system identify significant changes in the manager's organizational structure, ownership, personnel, or available resources that may affect future operational performance.

LAGERS' Actions: LAGERS has established hiring procedures and on-going due diligence reviews that address the concerns listed above. The hiring process for the various asset classes is included in the Investment Policy and is outlined in "LAGERS Asset Manager Hiring Procedures", maintained by Investment Staff with formal sign-offs by the Chief Investment Officer, Counsel (inside and/or outside) and the Compliance Officer/Internal Auditor. Additionally, Investment Staff performs due diligence meetings and/or quarterly update calls with each external manager to keep abreast of any significant developments within the investment portfolios.

Derivatives Usage: A derivative financial instrument is a security whose value is dependent upon or derived from one or more underlying assets, financial indexes, or commodity prices. These investments include but are not limited to future contracts, swap contracts, options contracts, and forward foreign currency exchange. The derivative itself is merely a contract between two or more parties and its value is determined by fluctuations in the underlying asset. Derivative financial instruments involve, in various degrees, credit and market risk corresponding to their underlying asset. However, due to their complexity, there is an additional layer of operational risk that must be considered.

LAGERS' Actions: A LAGERS' external manager may use such derivative instruments if Investment Staff reasonably concludes after the due diligence hiring process that the external manager possesses the experience, expertise, and qualifications to prudently use derivatives. The permitted uses of derivatives and leverage by the external manager are fully documented in their investment guidelines.

Custodial Banks

A system must be in place to ensure that the assets of a pension system are maintained safely, securely, and with the appropriate legal protection. This task falls primarily to custodial banks. Therefore, a key component of managing operational risk by pension systems is the quality of the custodial system. The custodial system needs to be accurate and provide staff the ability to access holdings, pricing, and transaction information on a regular and timely basis.

In essence, pension systems rely on three basic mechanisms to assure the continued viability of the custodial operation. The first is a comprehensive annual financial examination of the custodial records conducted by an independent accounting and/or auditing firm. The second is a thorough process of monthly reconciliation that generally takes place between the individual portfolio managers and the custodian. The third is through the periodic use and review of the custodial bank's system and its key components by internal system staff.

POINTS OF FOCUS FOR ACTION

Independent Audit: The financial statements of virtually all public pension systems are audited annually by an independent auditor. Because the custodial bank plays such a material role in the operations of the system, the auditors must obtain a certain level of assurance that custodial operations and internal controls are sufficient. The auditor can obtain this level of assurance by physically reviewing and testing the controls and procedures of the custodian's operations or by obtaining an independent report. The independent report should be prepared in accordance with the AICPA's Auditing Standards Board Statement on Standards for Attestation Engagements (SSAE) No. 16, "Reporting on Controls at a Service Organization" (SOC 1 report).

Because of the expense involved with physically reviewing and testing the controls and procedures of the custodian's operations, most auditors opt to obtain a SOC 1 report for the custodian. It is important to note that a SOC 1 report that only contains descriptions of the policies and procedures at the custodial bank and the auditor's assessment as to whether such policies and procedures are suitably designed is not sufficient to reduce the pension system auditor's assessment of control risk. However, a SOC 1 report that also states that the policies and procedures were tested, and that they were operating effectively to achieve the related control objectives during the period is expressly designed to reduce the assessment of control risk by users of the custodial system. The external auditors of a pension system are allowed to use this latter type of SOC 1 report as a substitute for performing their own evaluation of the reliability of a custodian's operating system.

LAGERS' Actions: LAGERS' external auditors receive a copy of the custodial bank's SOC 1 report each year and use it as a substitute for performing their own evaluation of the custodian's *operating system. LAGERS' Compliance Officer/Internal Auditor also receives a copy of the SOC 1 audit. The audit report is reviewed to determine if any adverse findings were made by the external auditors. The report also includes a list of recommended controls that should be in place at the custodial bank's clients, which LAGERS' staff and external auditors review for compliance.*

Reconciliation: The second ongoing check of the reliability of the custodial systems is the requirement that each portfolio manager and custodian reconcile the account positions on a monthly basis. This procedure involves the comparison of the custodian's security positions, prices, and valuations with the same information as recorded by each manager. Any discrepancies are duly noted and resolved on a timely basis. Differences in pricing sources may sometimes be allowed once identified, but there is usually no tolerance for any difference in the size of the position (or units held). Many pension systems often withhold payment for asset managers or custodial services if either party fails to perform its reconciliation function on a timely basis. This monthly reconciliation function is usually monitored independently by the pension system's internal staff.

The reconciliation process helps to assure that any material breakdown in the custodial system between annual audits will be identified on a timely basis. Corporate governance actions (stock splits, dividends, interest, warrants, etc.) will also be monitored through the valuation and unit holding comparisons.

LAGERS' Actions: Monthly reconciliations of transactions and holdings are performed between external managers of separate accounts and the custodian.

Partnership accounts submit annual audited financial statements to LAGERS and the custodian.

Commingled accounts submit monthly third-party administrator reports to the custodian for posting.

LAGERS' Investment Staff also prepares monthly and/or quarterly reconciliations between all external managers' monthly and/or quarterly reports and the custodian. Any major discrepancies are reported to the external manager for review. LAGERS also encourages many of the external managers to reconcile with the custodian by basing management fee payments on the market values that are reported by the custodian.

Periodic Reviews: In many cases, where sufficient internal staff members are available, many pension systems also perform reviews of the portfolios and transactions on a periodic basis. The potential benefit of this is to serve as a third check on the reliability and accuracy of the custodial system. These reviews often validate the accuracy of account valuations, currency positions, and periodic transactions. A significant breakdown in the custodial system should be revealed in this type of review and most significant errors in record keeping, corporate governance, and pricing should also be captured. To accomplish the periodic reviews, the data provided by the custodian should possess certain qualities to enable pension staff to perform their operating, reporting, and compliance functions. The necessary qualities include:

- The data must be relevant to the needs of the pension system staff.
- The data must be current, timely, and accessible to pension system staff.
- The data must be complete and accurate.

LAGERS' Actions: Weekly reconciliations are performed between the custodial bank and LAGERS' internal tracking system to identify cash balance differences within the cash account. In addition, monthly reconciliations are performed to identify transaction and market value differences.

Internal Operations

In addition to the operational risks associated with external agents, the internal operations of a pension system are also exposed to operational risk.

POINTS OF FOCUS FOR ACTION

Cash Management: Cash management involves the movement of cash between accounts, or into and out of the portfolio, to fund the distribution to beneficiaries or to fund external asset managers at the appropriate level. The risk is that unauthorized movements of cash will be made or that inappropriate amounts of cash will be distributed.

LAGERS' Actions: All internal and external cash movements from the custodian are initiated by an authorized LAGERS staff member and must be approved by an authorized LAGERS signatory.

Operating Systems: There is the risk that the internal operating systems necessary to support the investment activity for externally managed assets will fail. For example, a communication link often exists between the pension system and custodian, which allows the pension system instant access to portfolio data. Internal computer systems may go down or the building in which the pension system is located may suffer a catastrophe.

LAGERS' Actions: In the unlikely event of a disaster, LAGERS has prepared the necessary strategies and procedures for minimizing financial risk to the System. The disaster response actions are outlined in the Disaster Recovery Plan.

Review of Policy

This policy shall be reviewed annually in conjunction with the regular review of the Statement of Investment Policy, or in conjunction with any other revision to the Statement of Investment Policy to ensure consistency between the policies.

INVESTMENT BELIEFS

MISSOURI LOCAL GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

Original Adoption Date: December 2014

Executive Summary

The following document sets out various investment beliefs of the Missouri Local Government Employees Retirement System ("LAGERS" or the "Fund" or the "System").

Mission: *To provide secure retirement, survivors', and disability benefits to members and beneficiaries in the most efficient and economical manner possible, while providing superior service and fulfilling its fiduciary obligations.*

What We Believe…

- We believe a well-governed board and organization sets a foundation by establishing guiding principles and policies while delegating responsibility and authority to those responsible for enacting such principles and policies.
- We believe a small, highly skilled, broad-based investment team allows for collaboration within and among the asset classes and is the key to unlocking a team's full value and will best position the portfolio for success. We believe the best investment results come from those who are dedicated and empowered to make timely informed decisions and take accountability for them.
- We believe prudence is best demonstrated by a well-documented and sound investment process.
- We believe alignment of investment policies and practices with investment beliefs is necessary for long-term results.
- We believe operational excellence and continuous improvement ensures the portfolio remains suitable as well as innovative across time.

Goal: *To achieve an actuarial rate of return, net of manager fees, of at least 7.25% per annum as measured over a full market cycle while maintaining reasonable risk, characterized by a standard deviation of 10%.*

How We Invest…

Risks must be considered at the investment, manager, asset class, and total portfolio levels. While only some investment risks can be quantitatively defined and measured at the present time, we must remain aware of all risks. We must take the risks we expect to be rewarded fairly for in order to earn the returns required to meet the System's obligations. However, we do understand that over the short-term, there may be periods of unexpected losses as well as expected losses when certain strategies are out of favor.

Asset Allocation through effective portfolio construction is fundamental to our success. Proper diversification allows us to spread risk across key factors such as time periods, geography, and economic cycles, all which reduce the adverse impact of any one investment loss on the Fund overall. However, over-diversification, as well as numerous investment constraints, can reduce investment returns.

Flexibility while remaining disciplined allows us to adapt to business cycles and shifting investment environments. The expected returns of assets can change over time; however, the relative performance of asset classes and investment styles is generally subject to reversion to the mean. Therefore, our investment strategy must adjust to the shifting investment environments.

Illiquidity Premium is demanded for securities that cannot be easily converted into cash. Minimal liquidity needs results in the ability to maximize the allocation exposed to this illiquidity premium via proper liquidity allocation.

Active Management is warranted if:

a. The asset class, segment of the asset class, or investment strategy is reasonably inefficient or difficult to access;
b. There exist managers with skill, consistent performance, and sufficient capacity to meet LAGERS' needs; and
c. LAGERS is able to cost-effectively identify and retain those skilled managers.

Strong Relationships with best-in-class managers contribute to our success. We identify, cultivate, and foster relationships with like-minded partners globally to broaden our investment reach. We build success together based on cooperation, trust and transparency. These managers must exhibit strong ethical behavior, superior professional management, repeatable processes, and a proven track record. We acknowledge that good investment opportunities attract investment capital, but so do poor investment opportunities.

Performance Measurement

- The long-term performance measure for the Fund is performance relative to the Fund's passive policy benchmark.
- The most relevant performance measure for a public market investment manager is performance relative to an appropriate passive public market benchmark.
- Currently, available performance benchmarks for private markets have significant shortcomings; therefore, real return benchmarks are used and assessed over a full market cycle.
- Underlying costs of the Fund's assets should be carefully managed and linked to the investment value creation process. Performance fees are negotiated to make sure the interest of the manager and the System are properly aligned.

Brian Collett, CFA, CAIA

Brian has been LAGERS' Chief Investment Officer since April of 2005. His responsibilities include managing LAGERS' investment portfolio and serving as the investment advisor to the LAGERS' Board of Trustees.

Under his leadership the LAGERS investment portfolio ranks in the first quartile in the public fund universe, and has a return of 9.27% net of fees for the last five years ending June 30, 2017, exceeding the assumed rate of return of 7.25%. Over this time frame, the portfolio has also outperformed LAGERS' Policy Benchmark by 2.12%.

Prior to his CIO position, Brian held various positions across the investment industry including Senior Research Manager for the South Carolina Retirement Systems and a Senior Technology Analyst for the Russell Investment Group. Brian currently serves on several advisory boards for numerous US and global investment funds.

Brian has a Bachelor of Science in Mathematics from Marian University and a Master of Business Administration from Butler University. He earned the Chartered Financial Analyst (CFA) designation in 1999 and the Chartered Alternative Investment Analyst designation in 2010.

Megan Loehner, CFA, CPA, CAIA

Megan Loehner serves as the Director of Investments for Missouri LAGERS. She joined the team in March 2010. Megan has worked alongside the Chief Investment Officer for the last seven years, sharing in the responsibility of the management of the LAGERS' investment portfolio. The portfolio has earned a return of 10.31% over the last seven years ending June 30, 2017, beating the assumed rate of return of 7.25% and the policy benchmark of 8.26%. Megan's responsibilities include ongoing portfolio management of all managers and assets, conducting new manager search processes, assisting in asset allocation and risk allocation decisions, as well as the asset/liability study that is conducted every 5 years.

Prior to joining LAGERS, she worked for three years as an Investment Officer for the Public School and Education Employee Retirement Systems of Missouri (PSRS/PEERS). While at PSRS/PEERS, she focused mainly on the $1 billion Private Equity portfolio which consisted of more than 30 managers and also aided in the monitoring and diligence of the $10 billion Domestic Equity program.

Megan is a graduate of the University of Missouri, where she received a Bachelor's of Science and a Master's of Science in Accounting. She holds the Chartered Financial Analyst designation and is also a Certified Public Accountant and a Chartered Alternative Investment Analyst. She was also named as one of the "Top 30 Women Rising Stars in Institutional Investing" by Trusted Insight.

Justin Ellsesser, CFA, CAIA

Justin serves as Investment Officer and joined Missouri LAGERS in April of 2017. His responsibilities include assisting the Chief Investment Officer and the Director of Investments with managing LAGERS' investment portfolio. This includes sharing in the responsibility of the management of the investment portfolio, including ongoing portfolio management of all managers and assets, conducting new manager search processes, assisting in asset allocation and risk allocation decisions, as well as the asset/liability study that is conducted every 5 years.

Prior to joining LAGERS, Justin served as a Research Analyst at Lynx Investment Advisory in Washington, DC where he conducted investment analysis, portfolio management, and financial consultation to institutions and high net worth individuals. Prior to his position at Lynx he was Manager of Trading and Operations at Silver Leaf Partners where he managed trading and operations staff while providing execution and prime brokerage services to hedge fund clients. He has served on multiple boards for the Washington CFA Society, the Washington Association of Money Managers, and currently serves an officer on the Financial Advisory Council at Shippensburg University.

Justin earned a Bachelor of Science in Finance from Shippensburg University of Pennsylvania in 2011. He earned the Chartered Financial Analyst and Chartered Alternative Investment Analyst designations in 2015.

Employee Pension Board of Trustees
City of Creve Coeur
Creve Coeur, MO 63141

SCHEDULED

DISCUSSION (ID # 2677)

Meeting: 10/17/17 05:30 PM
Department: Finance Department
Category: Presentation
Prepared By: Sherry Hall
Initiator: Lori Obermoeller
Sponsors:
DOC ID: 2677

Proposed Pension Board Meeting Schedule - 2018

City of Creve Coeur
Employee Pension Fund
Board of Trustees

2018 Pension Board Meeting Schedule

Core Topics for all Meetings

Thursday January 25, 2018 5:30 p.m.

(Finance comm. Meeting scheduled for 1/23/18)

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 17, 2018 5:30 p.m.

(Finance comm. Meeting scheduled for 4/24/18)

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 24, 2018 5:30 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 October 23, 2017 5:30 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

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

INFORMATIONAL - INVOICE PAID (ID # 2678)

Invoices Paid Since 7-18-17 Meeting

City of Creve Coeur
Employee Pension Fund Board of Trustees

DATE: August 16, 2017

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

FROM: City of Creve Coeur
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
Conduent	Benefit Calculations	$ 200.00
	Total Disbursement(s)	$ 200.00

Please prepare the check(s) and advise Sherry Hall by faxing a copy of the check(s) to (314) 872-2539 or e-mail at shall@crevecoeurmo.gov.

Thank you for your immediate attention to this matter.

CONDUENT

Conduent HR Consulting, LLC
420 Lexington Ave, Suite 2220
New York, NY 10170

July 25, 2017

Lori Obermoeller
lobermoeller@crevecoeurmo.gov
City of Creve Coeur
300 N. New Ballas Road
Creve Coeur, MO 63141

Client #: 00015236
Invoice #: 2337045
Total Due This Invoice: $434.00
Terms: Net Due in 30 Days

EFT/ACH to:
Conduent HR Consulting, LLC
Wells Fargo Bank
2975 Regent Blvd.
Irving, TX 75063
Account #: 4121887111
Routing #: 121000248

Mail To:
Conduent HR Consulting, LLC
P.O. Box 202617
Dallas, TX 75320-2617

Direct Inquiries to:
Veronica Pulbere - Accounting Dept.
Email: Veronica.Pulbere@Conduent.com
Phone: (201) 902-2417

Actuarial and consulting services during the month of May 2017 – June 2017:

INCLUDES:	Amount
Plan design analysis – questions on LAGERS study – City	234.00
Benefit calculations – Chellis – Pension	200.00
TOTAL AMOUNT DUE	**$434.00**

APPROVED FOR PAYMENT

7-27-17

Lori Obermoeller Date

Attachment: Invoice Paid Since Last Meeting.pdf (Invoices Paid Since 7-18-17 Meeting)

City of Creve Coeur
Employee Pension Fund Board of Trustees

DATE: July 20, 2017

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

FROM: City of Creve Coeur
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
Jon McIntosh 1721 Lance End Lane Fenton MO 63026	Reimb for 2017 MAPERS Conference	$ 331.52
	Total Disbursement(s)	$ 331.52

Please prepare the check(s) and advise Sherry Hall by faxing a copy of the check(s) to (314) 872-2539 or e-mail at shall@crevecoeurmo.gov.

Thank you for your immediate attention to this matter.

Attachment: Invoice Paid Since Last Meeting.pdf (Invoices Paid Since 7-18-17 Meeting)

MAPERS Mo Assn. of Public Emp. Ret. Systems
P.O. Box 271
Jefferson City, MO 65102 US
(573) 634-3861
KimJourdon@MoMapers.org
www.MoMAPERS.org

Sales Receipt

MAPERS Missouri Association of Public Employee Retirement Systems

BILL TO	SHIP TO
Mr. Mark Perkins Creve Coeur (City of) 300 N. New Ballas Road Creve Coeur, MO 63141	Mr. Mark Perkins Creve Coeur (City of) Mark Perkins Creve Coeur (City of) 300 N. New Ballas Road Creve Coeur, MO 63141

SALES #	DATE
7520	04/06/2017

PMT METHOD
Discover

ACTIVITY	QTY	RATE	AMOUNT
PS/A Conf. Regis. Plan Sponsor or Associate Conf. Registration Fee - Jonathan McIntosh	1	75.00	75.00

TOTAL	75.00
AMOUNT RECEIVED	75.00
BALANCE DUE	**$0.00**

Attachment: Invoice Paid Since Last Meeting.pdf (Invoices Paid Since 7-18-17 Meeting)

LAKE OF THE OZARKS

TAN-TAR-A RESORT

Confirmation # G21064

Jonathan McIntosh
CITY OF CREVE COEUR
1721 LANCE END LN
Fenton, MO 63026

Arrival	Wednesday Jul 12, 2017
Departure	Friday Jul 14, 2017
Nights	2
Room Type	2 DOUBLE BEDS
Room #	1724
Group	MO ASN OF PUBLIC EMPLO

Charge Summary

Total Charges	$227.59
Taxes	$12.83
Payments	-$240.42
Total Due	$0.00

Date	Description	Price	Qty	Extended Cost	Sales Tax	Lodging Tax	Total Charge	Balance	
Wed 7/12/17	MO ASN PUBLIC EMPL	117.00	1	117.00	6.41	3.21	126.62	126.62	I
Thu 7/13/17	MO ASN PUBLIC EMPL	117.00	1	117.00	0.00	3.21	120.21	246.83	I
Thu 7/13/17	Sales Tax Adj *(-) ROOM	-6.41	1	-6.41	0.00	0.00	-6.41	240.42	I
Fri 7/14/17	Guest Payment AMEX 1019	-240.42	1	-240.42	0.00	0.00	-240.42	0.00	I

REDHEAD LAKESIDE GRILL
(573)693-1160
1700 Yacht Club Drive
Osage Beach, MO

Check Name:
Check 205208
Tab 4 Person 1
Time 12:54:59 PM Date 7/12/2017

1	Kids Chicken Strips	7.00
1	16" Cheese Pizza	14.00
1	Chicken Tacos	10.00

SUB TOTAL	31.00
Gratuity	0.00
Sales Tax	1.70

TOTAL 32.70

THANK YOU
KatieV

Sherry Hall <shall@crevecoeurmo.gov>

MAPER's conference reimbursement

1 message

Jonathan McIntosh <jmcintosh@crevecoeurmo.gov> Thu, Jul 20, 2017 at 7:03 AM
To: Sherry Hall <shall@crevecoeurmo.gov>

Sherry;

My reimbursement request for the 2017 MAPER's conference is attached along with receipts.

MAPERS Conference 2017 - Jonathan McIntosh
#657

conference registration	$75.00
hotel (Tan-Tar-A)	$240.42
lunch day 1 (Redhead lakeside grill)	$14.00
gratuity for lunch	$2.10
total reimbursement requested	$331.52

Thank you,

Sgt. Jonathan McIntosh #657
Creve Coeur Police Department
314-737-4600 / 314-442-2090 - fax

2 attachments

Sales_Receipt_7520_from_MAPERS_Mo_Assn_of_Public_Emp_Ret_Systems.pdf
47K

DOC072017.pdf
239K

Employee Pension Board of Trustees
City of Creve Coeur
Creve Coeur, MO 63141

SCHEDULED

Meeting: 10/17/17 05:30 PM
Department: Finance Department
Category: Discussion
Prepared By: Sherry Hall
Initiator: Lori Obermoeller
Sponsors:
DOC ID: 2693

UPCOMING EVENTS/REMINDERS (ID # 2693)

Annual Training for Board Members

Continuing Education for Trustees of Missouri Public Retirement Plans

Husch Blackwell is pleased to offer an all-day seminar to meet pension trustees' annual education requirements in Kansas City on November 2 and in St. Louis on November 7.

Our attorneys will team up with actuarial and investment professionals from Ekon Benefits and Ekon Advisors and certified public accountants from RubinBrown to deliver an informative program. A special lunch presentation and Q&A session will feature speakers from Missouri LAGERS.

Topics

- **Fiduciary Requirements for Trustees and Other Legal Updates**
  Alan H. Kandel, Partner, Husch Blackwell

- **Actuarial Methods and Funding**
  Keith Kowalczyk, Ekon Benefits

- **Public Plan Investing**
  Genelle M. Brakefield, TGPC, QPFC, Ekon Advisors

- **GASB Financial Reporting Requirements for Pension Plans**
  Chester Moyer, Partner, RubinBrown (Kansas City)
  Ted Williamson, Partner, RubinBrown (St. Louis)

- **Missouri's Sunshine Law: Compliance and Avoidance of Personal Liability**
  Donna Wilson Peters, Attorney, Husch Blackwell (Kansas City)
  R. Ryan Harding, Partner, Husch Blackwell (St. Louis)

- **Pension Plans: Past, Present and Future**
  Robert Wilson, Executive Secretary, LAGERS (Kansas City)
  Jeff Kempker, Assistant Executive Secretary, Member Services, LAGERS (St. Louis)

REGISTER FOR KANSAS CITY

Date and Time
Thursday, November 2, 2017
8:00 - 8:30 a.m. – Registration
8:30 a.m. - 3:30 p.m. – Program

Location
Husch Blackwell
4801 Main Street
10th Floor
Kansas City, MO 64112

REGISTER FOR ST. LOUIS

Date and Time
Tuesday, November 7, 2017
8:00 - 8:30 a.m. – Registration
8:30 a.m. - 3:30 p.m. – Program

Location
Charles F. Knight Conference Center
Washington University in St. Louis
1 Brookings Drive
St. Louis, MO 63130

Who Should Attend
Board members of Missouri public pension plans, elected officials with oversight responsibility for public retirement plans, staff who administer plans, advisors to Missouri public retirement plans, city

attorneys.

Continuing Education Credit

All attending pension board members will be provided a certificate of attendance. Missouri continuing legal education credit is pending.

Seminar Cost

$95 per attendee (Includes full-day program, breakfast and lunch)

Registration

Registration is requested by October 26. We encourage you to forward this invitation to your public pension plan board members and other interested colleagues.

REGISTER FOR KANSAS CITY | **REGISTER FOR ST. LOUIS**

Questions?

Kansas City seminar registration or logistics: Contact Emily Kenyon at 816.983.8776.
St. Louis seminar registration or logistics: Contact Pam Clark at 314.345.6648.
Public retirement plan questions: Contact Alan Kandel at 314.345.6463.

If you received this message as a forward, we invite you to **subscribe to our electronic communications**

GREENSFELDER

Continuing Education Seminar Series 2017

GOVERNMENT PLANS

Missouri law requires six hours of continuing education each year for public employee retirement plan board members.

Please join us for a seminar series highlighting several topics required by law to help fulfill the statutory requirements. We will offer two-hour programs on three consecutive Wednesdays: October 25, November 1 and November 8. All sessions will take place in Des Peres, Missouri.

This event is open to the public. Please forward the invitation on to colleagues who would benefit from this continuing education seminar series.

For questions, contact Megan Schwedtmann at mschwedtmann@greensfelder.com or 314-345-4762.

Check out our website for the latest on our agenda. Scheduled topics for each session include:

Wednesday, October 25 | 6 - 8 p.m.

- Pensionomics – *Diane Oakley, National Institute on Retirement Security*
- Best Practices for Retirement Boards – *Thomas Mug, Officer, and Kara Krawzik, Associate, at Greensfelder, Hemker & Gale, P.C.*

Wednesday, November 1 | 6 - 8 p.m.

- Fiduciary Due Diligence: How to Implement for Public Employee Retirement Plans – *John Hefele, President of Fiduciary Advisors*
- Creating an Effective RFP Process
  - For Investments – *Todd Grizzle, Investment Consultant at Fiduciary Advisors*
  - For Legal Services – *Thomas Mug, Officer, and Kara Krawzik, Associate, at Greensfelder, Hemker & Gale, P.C.*

Wednesday, November 8 | 6 - 8 p.m.

- Governmental Plan Audits and Best Practices – *Kim Spraggs, Missouri State Auditor's Office*
- Actuarial Principles and Methods – *Nick Meggos, Nyhart*

Location
The Lodge Des Peres
1050 Des Peres Road, Des Peres, MO 63131

REGISTER NOW

Fees
Complimentary to clients of Greensfelder, Fiduciary Advisors, Inc. and Nyhart. Other participants' fees will be $25 per session or $50 for all three nights.

Payments can be made by check at the door or in advance. Please make checks payable to: Greensfelder, Hemker & Gale, P.C.

Payments may be sent to:
Kara Krawzik
Greensfelder, Hemker & Gale, P.C.
10 South Broadway, Suite 2000
St. Louis, MO 63102

GREENSFELDER