

Discussion Materials

City of Allentown

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Active Fixed Income Managers

Manager overview

	Baird Core Plus Bond	Federated Total Return Bond	Loomis Sayles Core Plus Bond
Location	Milwaukee, WI	Pittsburgh, PA	Boston, MA
Firm Assets (\$B)	123.4	625.0	357.8
Strategy Inception	2000	1996	1986
Strategy Assets (\$B)	34.0	12.1	32.1
Ticker	BCOIX	FTRLX	NERNX
Expense Ratio	0.30%	0.38%	0.38%

Data as of June 2021.

Portfolio characteristics

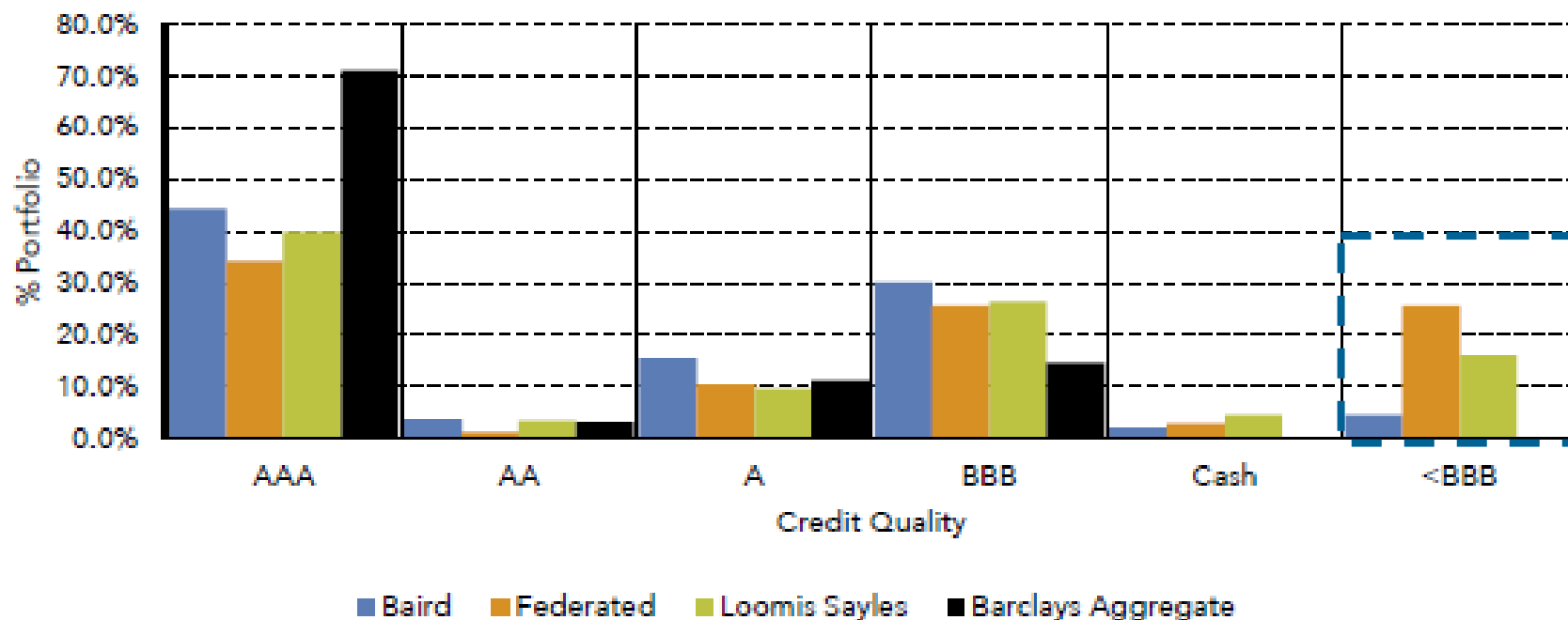
Portfolio Characteristics

Firm	# of Holdings	Average Turnover	Yield to Worst	Current Coupon	Time to Maturity	Avg Effective Duration	Average Quality
Baird	1,627	29.1%	1.7%	3.3%	8.0	6.4	A+
Federated	960	60.3%	2.2%	3.3%	6.7	5.4	A/A-
Loomis Sayles	812	140.9%	2.3%	3.2%	7.8	5.5	A
Barclays Aggregate	12,207	--	1.5%	2.7%	8.5	6.6	AA+

Data as of June 2021.

Credit quality

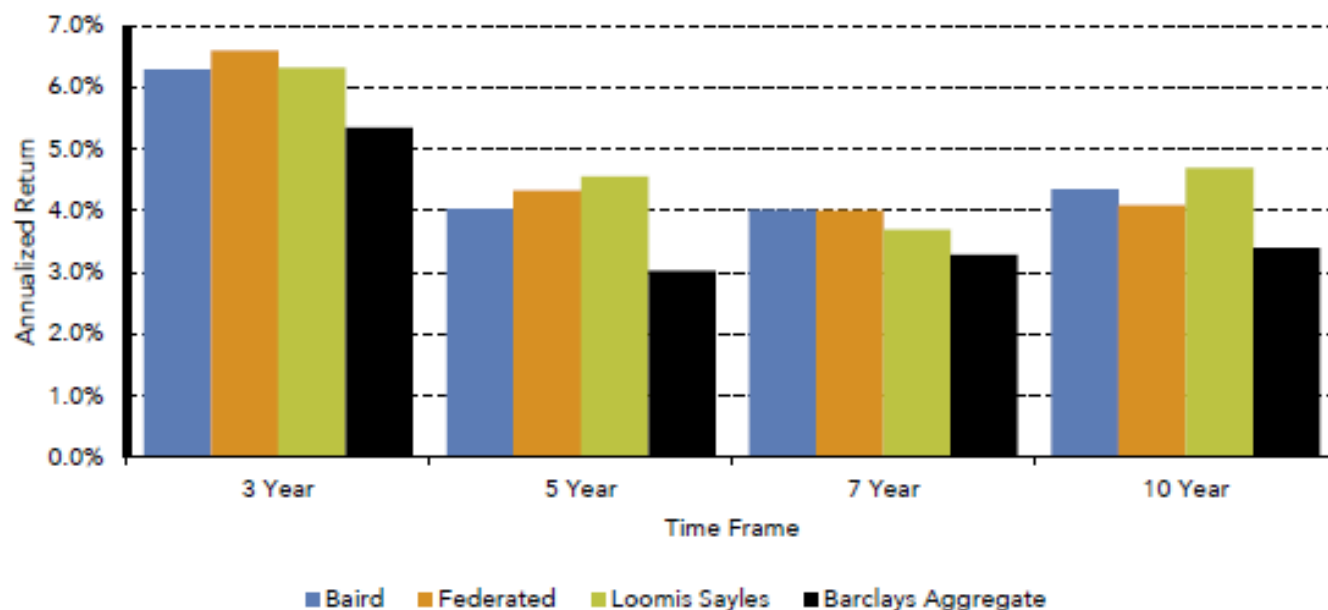
Credit Quality Comparison



Data as of June 2021.

Trailing returns

Trailing Returns



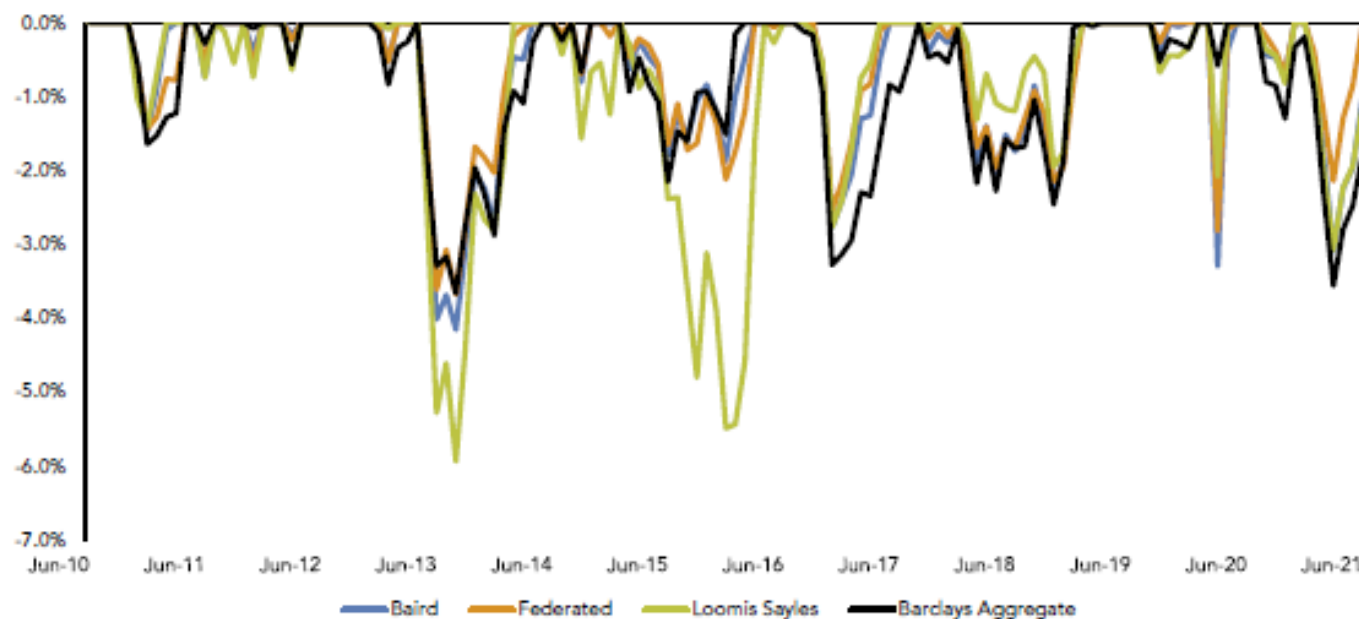
Trailing Returns and Risk

	3 Year		5 Year		7 Year		10 Year	
	Ret.	StDev	Ret.	StDev	Ret.	StDev	Ret.	StDev
Baird	6.3%	4.2%	4.0%	3.7%	4.0%	3.5%	4.3%	3.3%
Federated	6.6%	3.7%	4.3%	3.3%	4.0%	3.2%	4.1%	3.0%
Loomis Sayles	6.3%	3.9%	4.5%	3.5%	3.7%	3.8%	4.7%	3.9%
Barclays Aggregate	5.3%	3.5%	3.0%	3.3%	3.3%	3.1%	3.4%	3.0%

Data as of June 2021.

Drawdowns

Drawdown (10 Years)



Crisis Performance

	Financial Crisis May '07 - Feb '09	Euro Crisis April '11 - Sept '11	Taper Tantrum April '13 - Aug '13	Oil/Shale Crash May '15 - Jan '16	COVID-19 Crash Dec '19 - Mar '20
Baird	1.6%	3.0%	-4.2%	-0.4%	0.0%
Federated	6.0%	3.1%	-3.7%	-1.2%	0.0%
Loomis Sayles	2.4%	1.8%	-5.9%	-4.6%	1.6%
Barclays Aggregate	9.8%	4.9%	-3.7%	0.9%	3.1%

Data as of June 2021.

Pros & cons

	Pros	Cons
Baird	<ul style="list-style-type: none">▪ Strong long-term returns▪ Lowest-cost option▪ Maintains neutral duration	<ul style="list-style-type: none">▪ Largest strategy AUM
Federated	<ul style="list-style-type: none">▪ Strong long-term returns▪ Best risk-adjusted returns	<ul style="list-style-type: none">▪ More expensive
Loomis Sayles	<ul style="list-style-type: none">▪ Strongest long-term returns	<ul style="list-style-type: none">▪ Worst historical performance amid equity downturns▪ More expensive

Cash-Flow Update

Considerations

- Updated cash-flow projections
- Real estate capital calls
 - Morgan Stanley has estimated they will call 50-75% of the commitments at the end of this year
 - Police commitment: \$5.5M (75% is \$4.125M)
 - Fire commitment: \$2.5M (75% is \$1.875M)

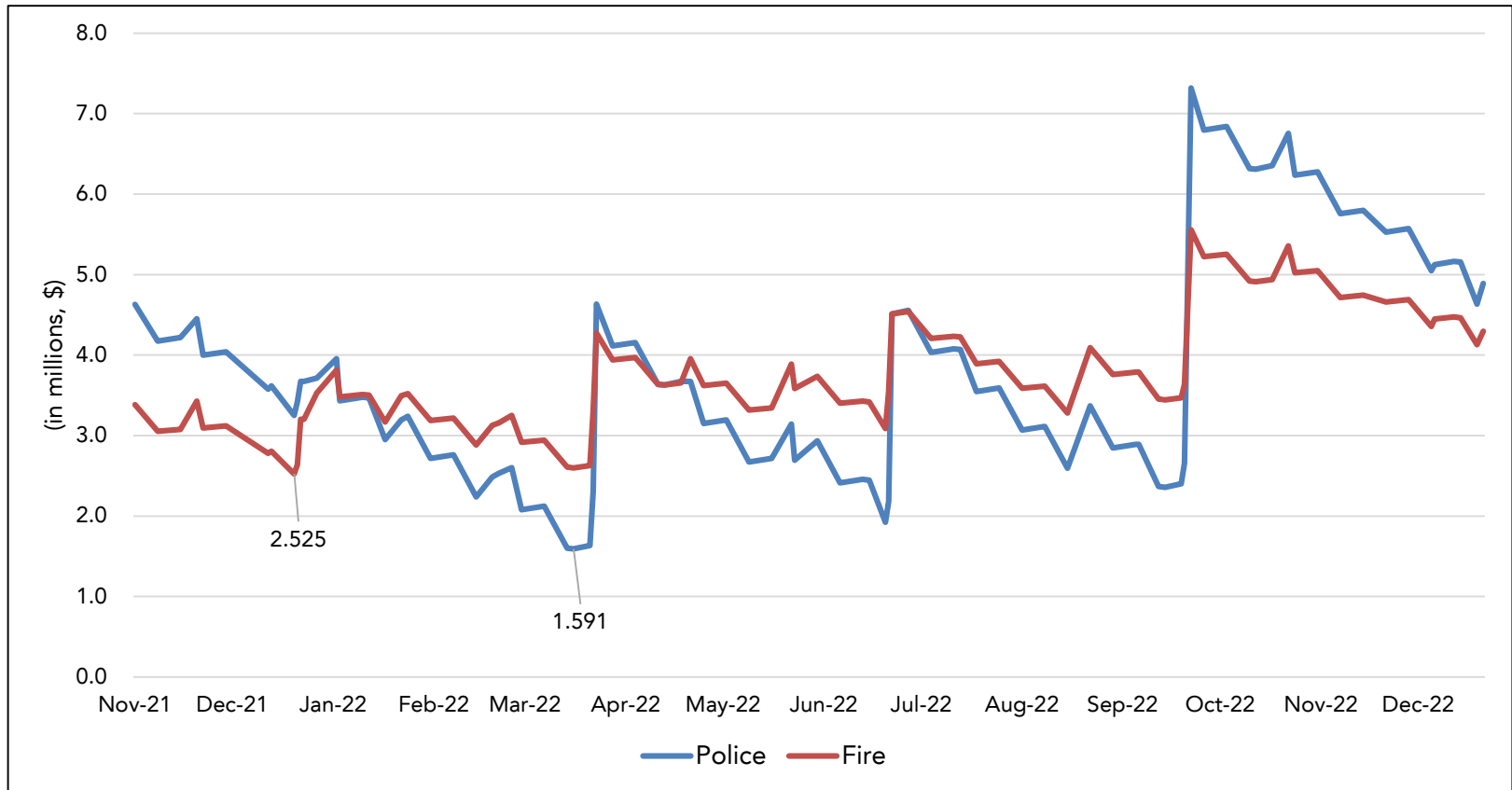
Cash flow projection assumptions*

- Bi-weekly withdrawals
 - Police: \$453,846 in 2021 and \$521,538 in 2022
 - Fire: \$330,769 in 2021 and \$333,462 in 2022
 - Officers & Employees: \$65,385 in 2021 and \$56,538 in 2022
- Bi-weekly contributions
 - Police: \$42,308 in 2021 and \$43,462 in 2022
 - Fire: \$24,615 in 2021 and \$27,308 in 2022
 - Officers & Employees: \$0 in 2021 and \$0 in 2022
- Projected MMO payments**:
 - Police: \$9.32M in 2022
 - Fire: \$3.84M in 2022
 - Officers & Employees: \$230,000 in 2022
- Bond maturities
- Fees are deducted

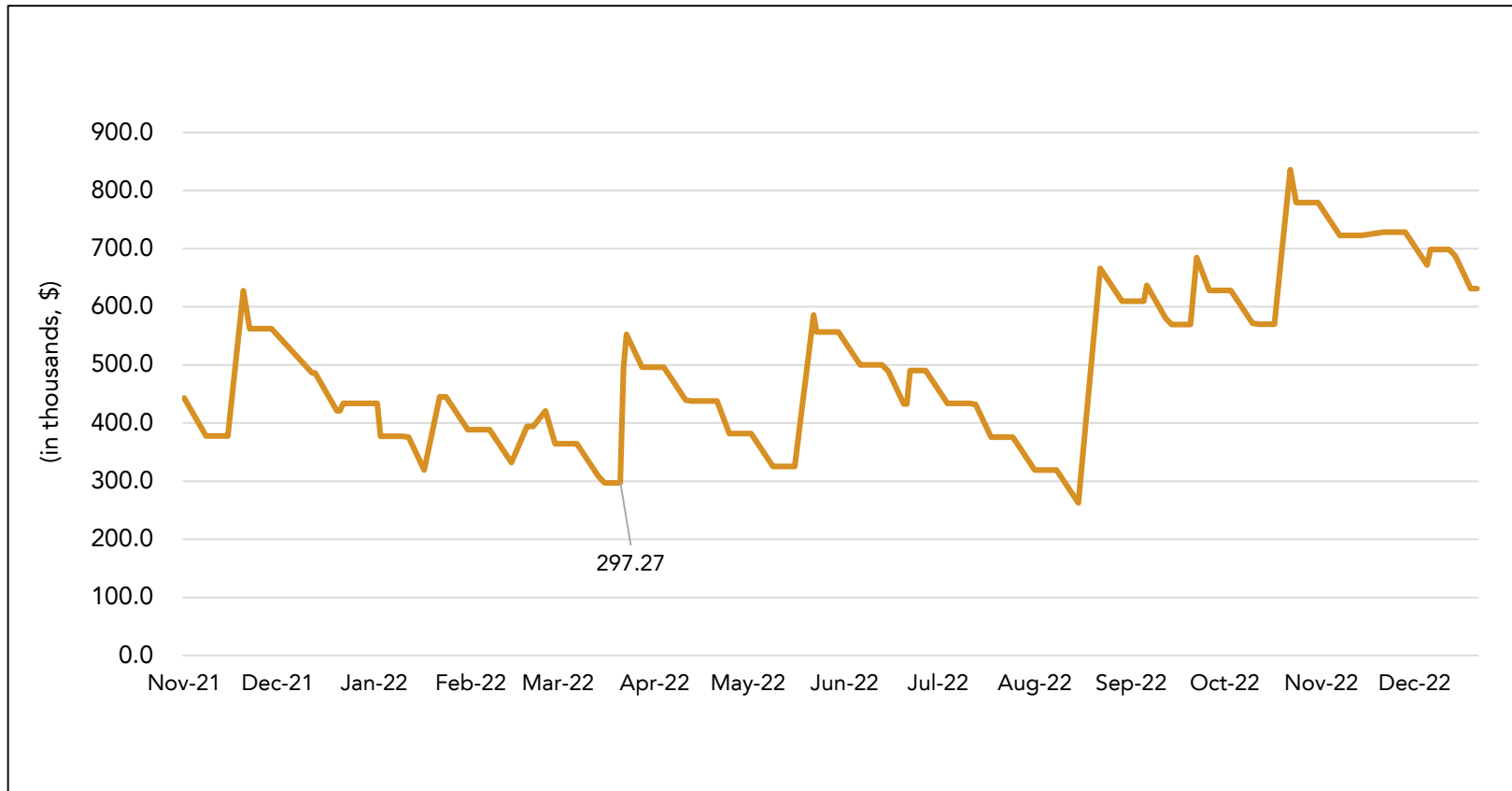
*Employee contribution, benefit payment and MMO estimates provided by Cheiron.

**Like past years, assumes deposits are made in April and July, while Q3 and Q4 MMOs are deposited together in October.

Police & Fire: cash projections



Officers & Employees: cash projections



Options

1. Rebalance into cash (Current MM yield: 0.03%)
2. Rebalance into core fixed income (Current yield: 1.7%)
3. Rebalance into new core plus manager (Current yield: 1.9%-2.5%)
4. Extend bond ladder

Treasury Yield Curve

	6 Mo.	1 Yr.	2 Yr.	3 Yr.
05/12/21	0.04	0.05	0.16	0.35
08/11/21	0.06	0.08	0.23	0.45
11/10/21	0.07	0.17	0.51	0.83

Police projections¹

Year	Benefit Payments	Expenses	Employee Contributions	MMO	Net Cash Flow	Bond Maturities
2022	13,560,000	110,000	1,130,000	9,320,000	(3,220,000)	3,415,000
2023	14,160,000	110,000	1,190,000	9,370,000	(3,710,000)	3,380,000
2024	14,850,000	120,000	1,240,000	8,690,000	(5,040,000)	3,125,000
2025	15,520,000	120,000	1,290,000	8,830,000	(5,520,000)	-
2026	16,100,000	130,000	1,350,000	7,830,000	(7,050,000)	-

¹Provided by Cheiron.

Police rebalancing proposal

	TICKER	TOTAL ASSETS	ALLOCATIONS	REBALANCING	TOTAL ASSETS	ALLOCATIONS	TARGET
Police Pension Plan		226,919,185	100.0%	0	226,919,185	100.0%	100.0%
U.S. Equity							
Vanguard Equity Income Fund Admiral	VEIRX	13,838,196	6.1%	0	13,838,196	6.1%	6.0%
Vanguard Mid Cap Index	VMCIX	6,964,275	3.1%	0	6,964,275	3.1%	3.0%
Vanguard Total Stock Market Index	VITSX	65,395,703	28.8%	(1,500,000)	63,895,703	28.2%	41.0%
Vanguard Total Stock Market Index ETF	VTI	28,938,004	12.8%	0	28,938,004	12.8%	
Total U.S. Equity		115,136,179	50.7%	(1,500,000)	113,636,179	50.1%	50.0%
Global Equity							
Dodge & Cox Global	DODWX	9,428,407	4.2%	0	9,428,407	4.2%	4.0%
Total Global Equity		9,428,407	4.2%	0	9,428,407	4.2%	4.0%
Non-U.S. Equity							
American Funds Int'l Growth & Income	RIGGX	13,689,466	6.0%	0	13,689,466	6.0%	6.0%
MFS Int'l Intrinsic Value Equity	MINJX	13,128,714	5.8%	0	13,128,714	5.8%	6.0%
Total Non-U.S. Equity		26,818,180	11.8%	0	26,818,180	11.8%	12.0%
Real Estate							
Morgan Stanley PRIME Property Fund (as of 9/30/21)	-	18,568,208	8.2%	0	18,568,208	8.2%	10.0%
Total Real Estate		18,568,208	8.2%	0	18,568,208	8.2%	10.0%
U.S. Fixed Income							
Vanguard Total Bond Market Index Inst	VBPIX	41,669,787	18.4%	(10,000,000)	31,669,787	14.0%	14.0%
<i>New Core Plus Mgr</i>	-	0	0.0%	6,750,000	6,750,000	3.0%	3.0%
BB&T Inst'l Investment Advisers - Short-Term Bonds	-	10,669,928	4.7%	625,000	11,294,928	5.0%	6.0%
Total U.S. Fixed Income		52,339,715	23.1%	(2,625,000)	49,714,715	21.9%	23.0%
Cash & Equivalents							
Federated Govt. Obligations MM Fund	GOIXX	4,628,496	2.0%	4,125,000	8,753,496	3.9%	1.0%
Total Cash & Equivalents		4,628,496	2.0%	4,125,000	8,753,496	3.9%	1.0%

Market Values as of November 10, 2021.

	Pre-Rebalancing Allocations		
	Portfolio	Target	Difference
U.S. Equity	53.02%	52.0%	1.02%
Non-U.S. Equity	13.69%	14.0%	-0.31%
Real Estate	8.18%	10.0%	-1.82%
Fixed Income	23.07%	23.0%	0.07%
Cash	2.04%	1.0%	1.04%
Total	100.00%	100.0%	-

	Post-Rebalancing Allocations		
	Portfolio	Target	Difference
U.S. Equity	52.36%	52.0%	0.36%
Non-U.S. Equity	13.69%	14.0%	-0.31%
Real Estate	8.18%	10.0%	-1.82%
Fixed Income	21.91%	23.0%	-1.09%
Cash	3.86%	1.0%	2.86%
Total	100.00%	100.0%	-

Fire projections¹

Year	Benefit Payments	Expenses	Employee Contributions	MMO	Net Cash Flow	Bond Maturities
2022	8,670,000	80,000	710,000	3,840,000	(4,200,000)	4,644,000
2023	8,860,000	90,000	740,000	3,910,000	(4,300,000)	4,798,000
2024	9,090,000	90,000	770,000	2,950,000	(5,460,000)	2,183,000
2025	9,360,000	90,000	810,000	3,020,000	(5,620,000)	-
2026	9,670,000	90,000	840,000	2,120,000	(6,800,000)	-

¹Provided by Cheiron.

Fire rebalancing proposal

	TICKER	TOTAL ASSETS	ALLOCATIONS	REBALANCING	TOTAL ASSETS	ALLOCATIONS	TARGET
Firemen Pension Plan		142,003,583	100.0%	0	142,003,583	100.0%	100.0%
U.S. Equity							
Vanguard Equity Income Fund Admiral	VEIRX	8,823,229	6.2%	0	8,823,229	6.2%	6.0%
Vanguard Mid Cap Index	VMCIX	4,419,098	3.1%	0	4,419,098	3.1%	3.0%
Vanguard Total Stock Market Index	VITSX	41,330,605	29.1%	(1,000,000)	40,330,605	28.4%	41.0%
Vanguard Total Stock Market Index ETF	VTI	17,286,441	12.2%	0	17,286,441	12.2%	
Total U.S. Equity		71,859,374	50.6%	(1,000,000)	70,859,374	49.9%	50.0%
Global Equity							
Dodge & Cox Global	DODWX	6,004,511	4.2%	0	6,004,511	4.2%	4.0%
Total Global Equity		6,004,511	4.2%	0	6,004,511	4.2%	4.0%
Non-U.S. Equity							
American Funds Int'l Growth & Income	RIGGX	8,676,345	6.1%	0	8,676,345	6.1%	6.0%
MFS Int'l Intrinsic Value Equity	MINJX	8,341,416	5.9%	0	8,341,416	5.9%	6.0%
Total Non-U.S. Equity		17,017,761	12.0%	0	17,017,761	12.0%	12.0%
Real Estate							
Morgan Stanley PRIME Property Fund (as of 9/30/21)	-	12,530,252	8.8%	0	12,530,252	8.8%	10.0%
Total Real Estate		12,530,252	8.8%	0	12,530,252	8.8%	10.0%
U.S. Fixed Income							
Vanguard Total Bond Market Index Inst	VBPIX	18,454,675	13.0%	(5,650,000)	12,804,675	9.0%	9.0%
<i>New Core Plus Mgr</i>	-	0	0.0%	4,225,000	4,225,000	3.0%	3.0%
BB&T Inst'l Investment Advisers - Short-Term Bonds	-	12,753,850	9.0%	1,250,000	14,003,850	9.9%	11.0%
Total U.S. Fixed Income		31,208,525	22.0%	(175,000)	31,033,525	21.9%	23.0%
Cash & Equivalents							
Federated Govt. Obligations MM Fund	GOIXX	3,383,160	2.4%	1,175,000	4,558,160	3.2%	1.0%
Total Cash & Equivalents		3,383,160	2.4%	1,175,000	4,558,160	3.2%	1.0%

Market Values as of November 10, 2021.

	Pre-Rebalancing Allocations				Post-Rebalancing Allocations		
	Portfolio	Target	Difference		Portfolio	Target	Difference
U.S. Equity	52.93%	52.0%	0.93%	U.S. Equity	52.23%	52.0%	0.23%
Non-U.S. Equity	13.89%	14.0%	-0.11%	Non-U.S. Equity	13.89%	14.0%	-0.11%
Real Estate	8.82%	10.0%	-1.18%	Real Estate	8.82%	10.0%	-1.18%
Fixed Income	21.98%	23.0%	-1.02%	Fixed Income	21.85%	23.0%	-1.15%
Cash	2.38%	1.0%	1.38%	Cash	3.21%	1.0%	2.21%
Total	100.00%	100.0%	-	Total	100.00%	100.0%	-

O&E Projections¹

Year	Benefit Payments	Expenses	Employee Contributions	MMO	Net Cash Flow	Bond Maturities
2022	1,470,000	60,000	0	230,000	(1,300,000)	1,487,000
2023	1,440,000	60,000	0	230,000	(1,270,000)	1,297,000
2024	1,320,000	50,000	0	190,000	(1,180,000)	1,132,000
2025	1,220,000	50,000	0	180,000	(1,090,000)	330,000
2026	1,110,000	40,000	0	110,000	(1,040,000)	-

¹Provided by Cheiron.

O&E rebalancing proposal

	<u>TICKER</u>	<u>TOTAL ASSETS</u>	<u>ALLOCATIONS</u>	<u>REBALANCING</u>	<u>TOTAL ASSETS</u>	<u>ALLOCATIONS</u>	<u>TARGET</u>
Officers & Employee Pension Plan		9,807,263	100.0%	0	9,807,263	100.0%	100.0%
U.S. Equity							
Vanguard Equity Income Fund Admiral	VEIRX	410,354	4.2%	(20,000)	390,354	4.0%	4.0%
Vanguard Mid Cap Index	VMCIX	207,686	2.1%	0	207,686	2.1%	2.0%
Vanguard Total Stock Market Index	VITX	2,870,165	29.3%	(180,000)	2,690,165	27.4%	27.5%
Total U.S. Equity		3,488,205	35.6%	(200,000)	3,288,205	33.5%	33.5%
Global Equity							
Dodge & Cox Global	DODWX	299,967	3.1%	0	299,967	3.1%	3.0%
Total Global Equity		299,967	3.1%	0	299,967	3.1%	3.0%
Non-U.S. Equity							
American Funds Int'l Growth & Income	RIGGX	497,420	5.1%	0	497,420	5.1%	5.0%
MFS Int'l Intrinsic Value Equity	MINJX	451,497	4.6%	0	451,497	4.6%	4.5%
Total Non-U.S. Equity		948,917	9.7%	0	948,917	9.7%	9.5%
U.S. Fixed Income							
BB&T Inst'l Investment Advisers - Short-Term Bonds -		4,626,971	47.2%	300,000	4,926,971	50.2%	52.0%
Total U.S. Fixed Income		4,626,971	47.2%	300,000	4,926,971	50.2%	52.0%
Cash & Equivalents							
Federated Govt. Obligations MM Fund	GOIXX	443,204	4.5%	(100,000)	343,204	3.5%	2.0%
Total Cash & Equivalents		443,204	4.5%	(100,000)	343,204	3.5%	2.0%

Market Values as of November 10, 2021.

Pre-Rebalancing Allocations			
	Portfolio	Target	Difference
U.S. Equity	37.25%	35.0%	2.25%
Non-U.S. Equity	11.05%	11.0%	0.05%
Fixed Income	47.18%	52.0%	-4.82%
Cash	4.52%	2.0%	2.52%
Total	100.00%	100.0%	-

Post-Rebalancing Allocations			
	Portfolio	Target	Difference
U.S. Equity	35.21%	35.0%	0.21%
Non-U.S. Equity	11.05%	11.0%	0.05%
Fixed Income	50.24%	52.0%	-1.76%
Cash	3.50%	2.0%	1.50%
Total	100.00%	100.0%	-

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