Police and Fire Retirement Plan Dashboard

"OUR MISSION IS TO ENSURE PROMPT DELIVERY OF SERVICES AND BENEFITS TO OUR MEMBERS, AND TO COLLECT, INVEST, AND EXPEND SYSTEM ASSETS IN A PRUDENT, FAIR, AND TIMELY MANNER".

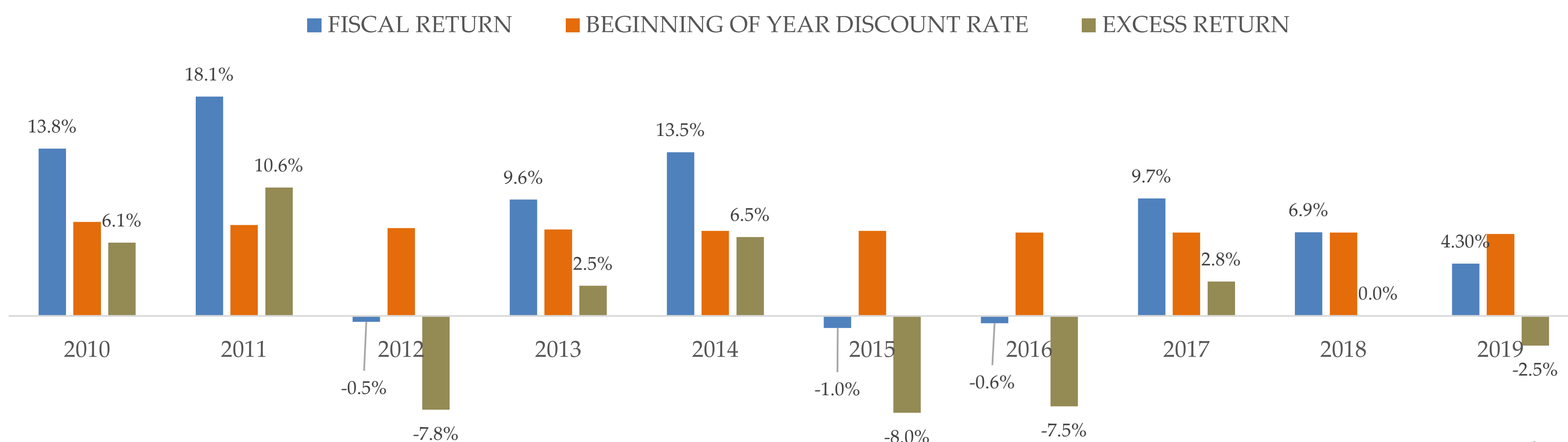
Contents

Police and Fire Discount Rate History

as of June 30, 2020

YEARS	FISCAL YEAR	10 YEAR US TREASURY RATE	DISCOUNT RATE	FISCAL YEAR RETURN*	EXCESS TO DISCOUNT RATE
	1997	6.51%	8.00%		
1	2010	2.97%	7.75%	13.8%	**6.1%**
2	2011	3.18%	7.50%	18.1%	**10.6%**
3	2012	1.67%	7.25%	-0.5%	-7.8%
4	2013	2.52%	7.125%	9.6%	**2.5%**
5	2014	2.53%	7.00%	13.5%	**6.5%**
6	2015	2.35%	7.00%	-1.0%	-8.0%
7	2016	1.49%	6.875%	-0.6%	-7.5%
8	2017	2.31%	6.875%	9.7%	**2.8%**
9	2018	2.85%	6.875%	6.9%	**0.0%**
10	2019	2.01%	6.75%	4.3%	-2.5%

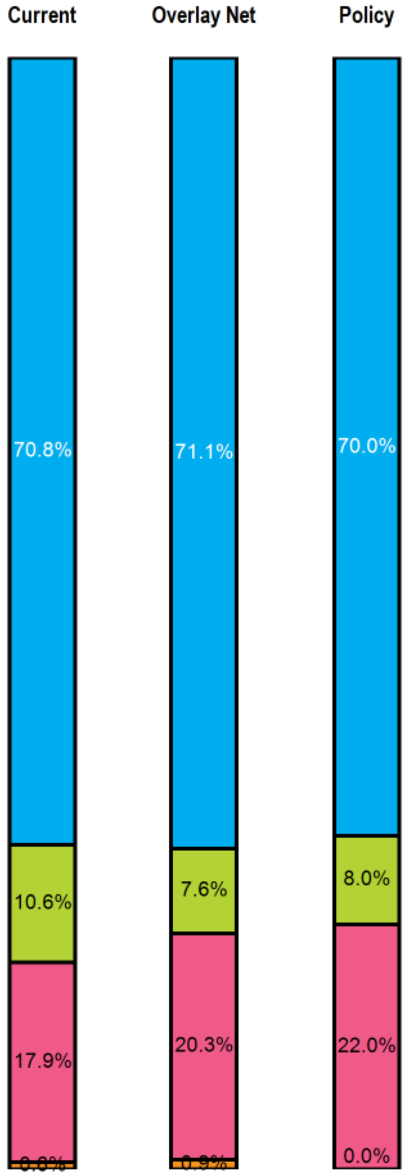
Plan Return versus Discount Rate



Source: Meketa. Annually updated.

INVESTMENT METRICS

Total Fund | As of June 30, 2020



Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Russell Overlay Net Position	Policy
Growth	**$2,625,769,475**	**70.8%**	**71.1%**	**70.0%**
Public Equity	$1,725,608,505	46.5%	46.8%	46.0%
Private Markets	$708,887,255	19.1%	19.1%	19.0%
Emerging Markets Debt	$117,056,640	3.2%	3.2%	3.0%
High Yield Bonds	$74,217,075	2.0%	2.0%	2.0%
Low Beta	**$393,491,252**	**10.6%**	**7.6%**	**8.0%**
Market Neutral Strategies	$118,237,674	3.2%	3.2%	3.0%
Immunized Cash Flows	$163,695,953	4.4%	4.4%	5.0%
Cash	$111,557,625	3.0%	0.0%	0.0%
Other	**$665,613,556**	**17.9%**	**20.3%**	**22.0%**
Core Real Estate	$144,744,627	3.9%	3.9%	5.0%
TIPS	$74,782,978	2.0%	2.0%	2.0%
Investment Grade Bonds	$334,614,958	9.0%	11.4%	12.0%
Long Term Govt Bonds	$111,450,146	3.0%	3.0%	3.0%
Overlay	**$23,968,377**	**0.6%**	**0.0%**	**0.0%**
Total	**$3,708,842,660**	**100.0%**	**100.0%**	**100.0%**

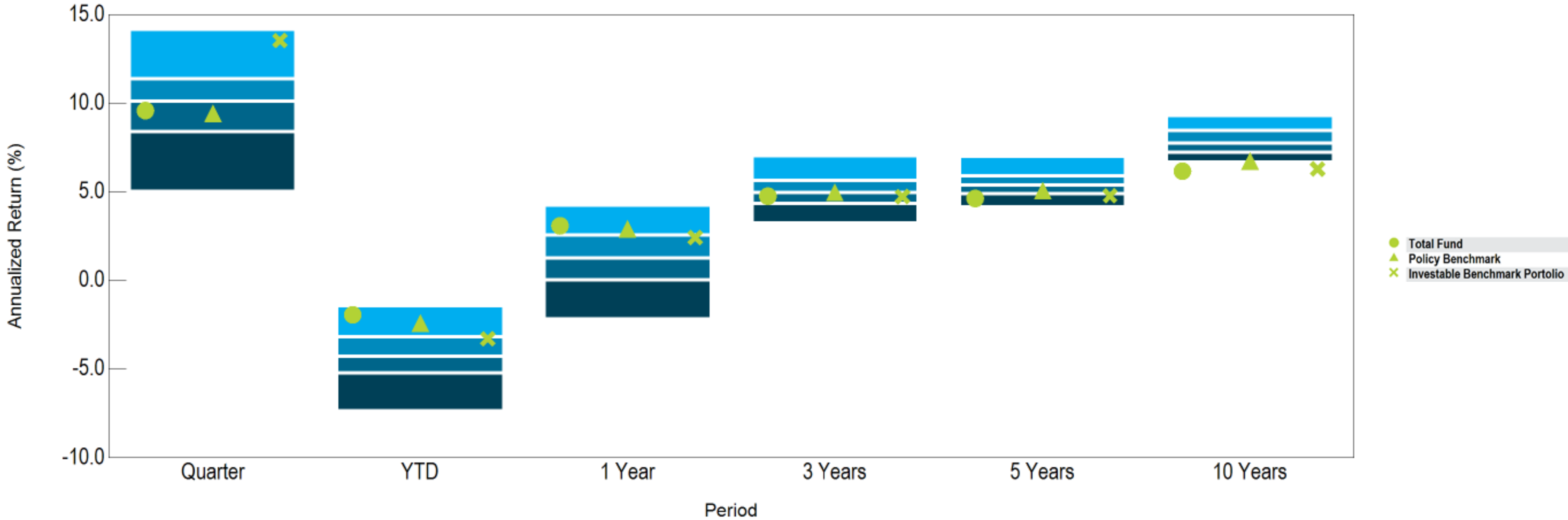
[1] Data in the column titled "Russel Overlay Net Position" is based on physical exposures, adjusted for synthetic positions provided by Russell Investments.

[2] Policy Targets represent approved asset allocation from the Special Board Meeting on March 18th, 2020.

Source: Meketa. Quarterly updated.

INVESTMENT METRICS

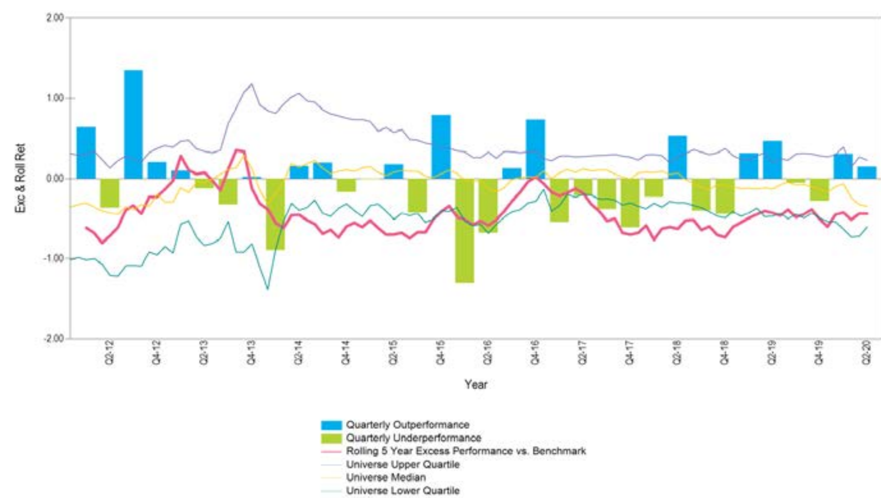
Performance vs. InvestorForce Public DB > $1B Net (Annualized Return)



Performance vs. InvestorForce Public DB > $1B Net (Ranking)

	Quarter	YTD	1 Year	3 Years	5 Years	10 Years
	Period					
	Return (Rank)					
5th Percentile	14.2	-1.5	4.2	7.0	7.0	9.3
25th Percentile	11.4	-3.2	2.6	5.7	5.9	8.5
Median	10.1	-4.3	1.3	5.0	5.4	7.8
75th Percentile	8.4	-5.2	0.0	4.4	4.9	7.2
95th Percentile	5.0	-7.3	-2.2	3.2	4.2	6.7
# of Portfolios	71	71	71	71	70	64

Quarterly Cumulative Excess Performance

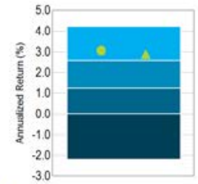


Source: Meketa. Quarterly updated.

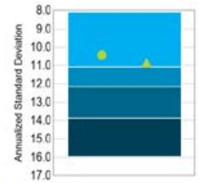
INVESTMENT METRICS

Risk Adjusted Performance – 1 Year

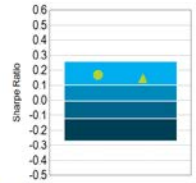
Annualized Return (%) vs. InvMetrics Public DB > $1B Net



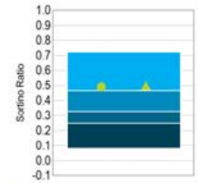
Annualized Standard Deviation vs. InvMetrics Public DB > $1B Net



Sharpe Ratio vs. InvMetrics Public DB > $1B Net



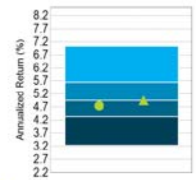
Sortino Ratio vs. InvMetrics Public DB > $1B Net



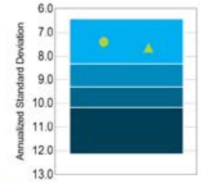
	Annualized Return (%)	Annualized Standard Deviation	Sharpe Ratio	Sortino Ratio
Total Fund				
Value	3.1	10.4	0.2	0.5
Rank	17	20	15	23
Policy Benchmark				
Value	2.9	10.8	0.1	0.5
Rank	21	24	17	20
Universe				
5th %tile	4.2	8.1	0.3	0.7
25th %tile	2.6	11.1	0.1	0.5
Median	1.3	12.1	0.0	0.3
75th %tile	0.0	13.9	-0.1	0.2
95th %tile	-2.2	15.9	-0.3	0.1

Risk Adjusted Performance – 5 Years

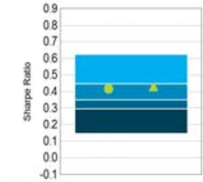
Annualized Return (%) vs. InvMetrics Public DB > $1B Net



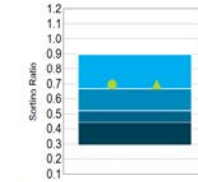
Annualized Standard Deviation vs. InvMetrics Public DB > $1B Net



Sharpe Ratio vs. InvMetrics Public DB > $1B Net

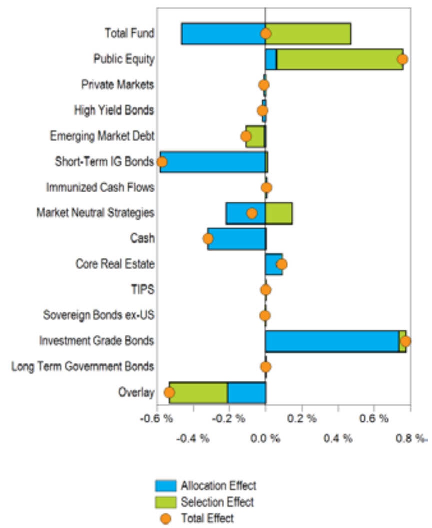


Sortino Ratio vs. InvMetrics Public DB > $1B Net

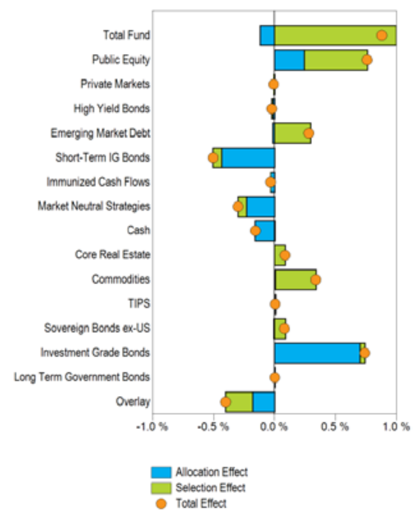


	Annualized Return (%)	Annualized Standard Deviation	Sharpe Ratio	Sortino Ratio
Total Fund				
Value	4.7	7.4	0.4	0.7
Rank	58	14	34	20
Policy Benchmark				
Value	5.0	7.6	0.4	0.7
Rank	51	17	31	20
Universe				
5th %tile	7.0	6.4	0.6	0.9
25th %tile	5.7	8.3	0.4	0.7
Median	5.0	9.3	0.4	0.5
75th %tile	4.4	10.2	0.3	0.4
95th %tile	3.2	12.1	0.1	0.3

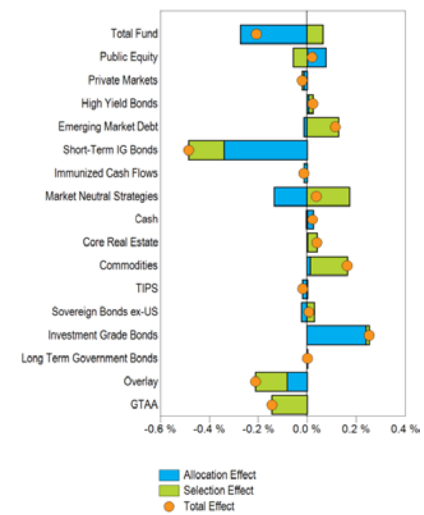
Attribution Effects – 3 Months



Attribution Effects – 1 Year



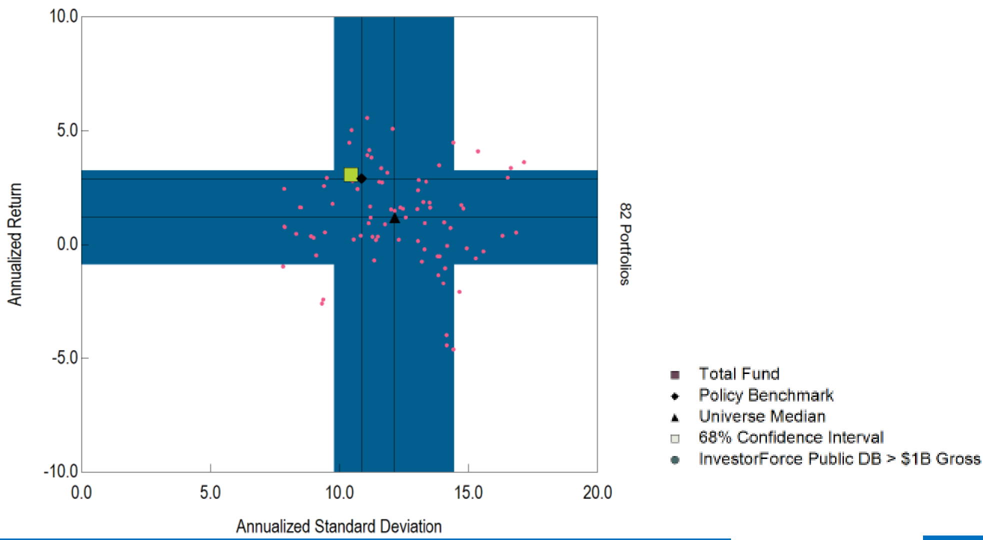
Attribution Effects – 3 Years



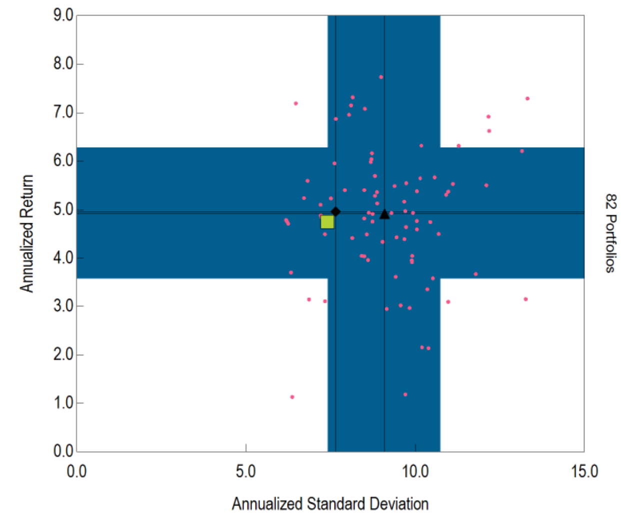
Source: Meketa. Quarterly updated.

INVESTMENT METRICS

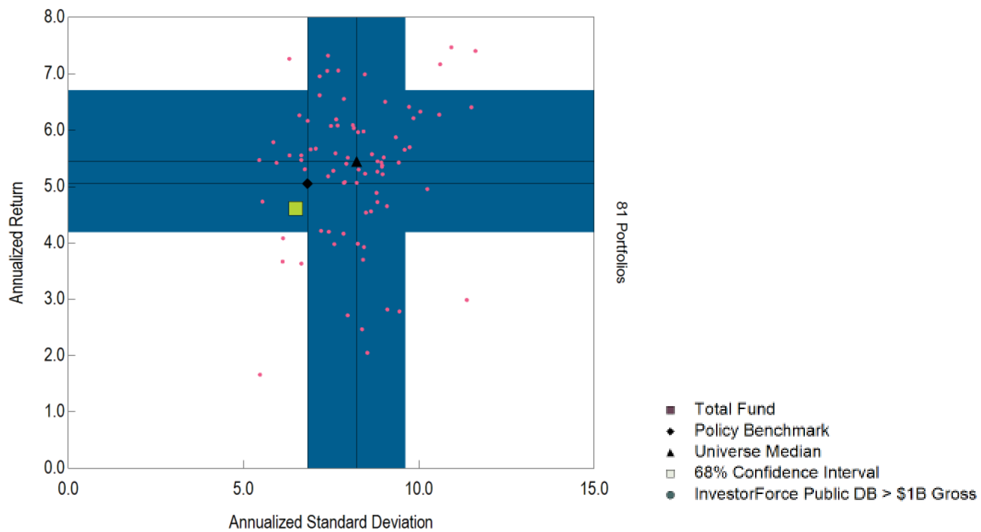
Plan Risk vs. Return – 1 Year



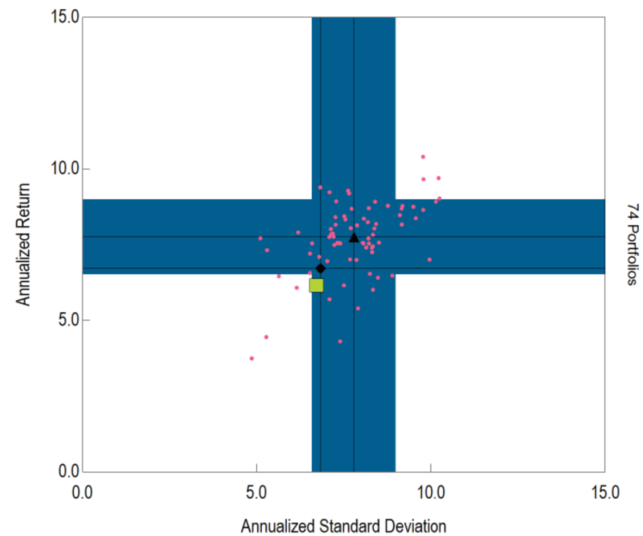
Plan Risk vs. Return – 3 Years



Plan Risk vs. Return – 5 Years



Plan Risk vs. Return – 10 Years

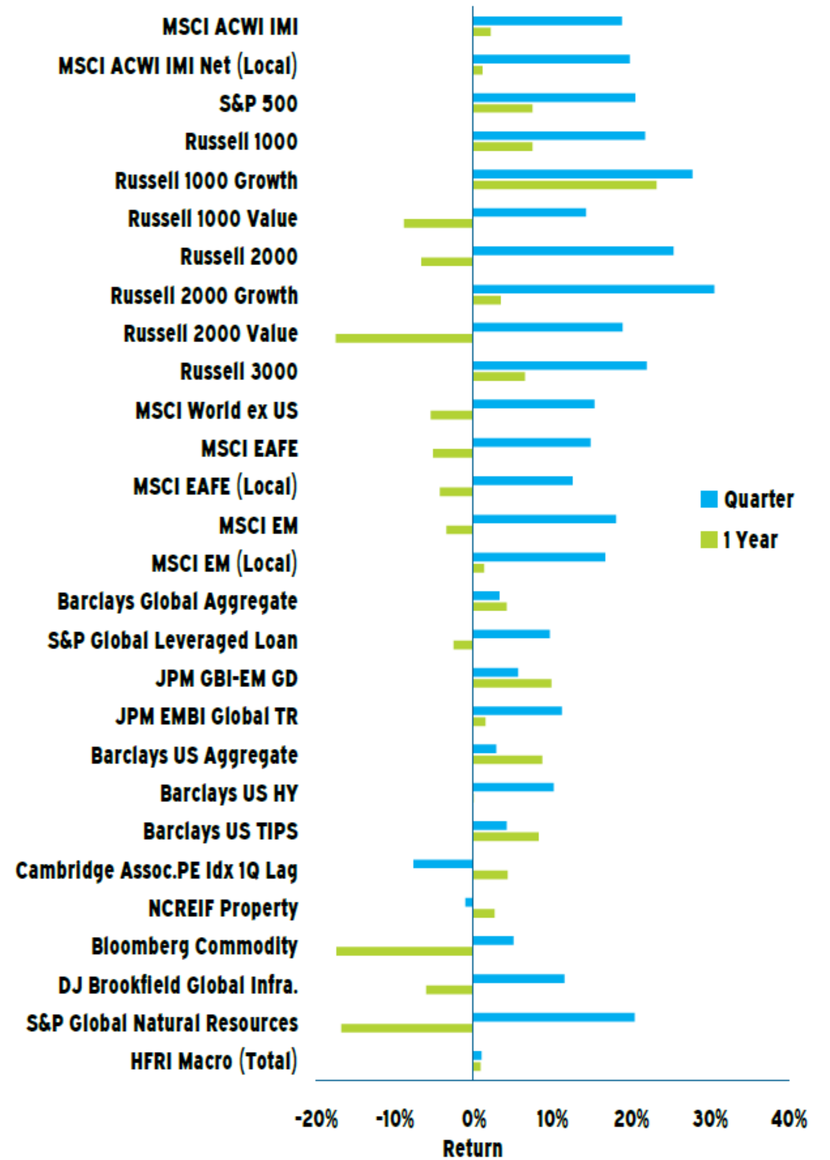


Source: Meketa. Quarterly updated.

CAPITAL MARKET OVERVIEW

Market Environment –2Q20 Overview

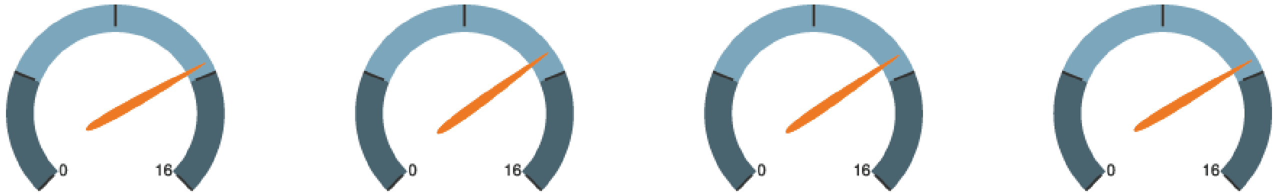
Benchmark	Scope	2Q20 (%)	1 YR (%)	3 YR (%)	5YR (%)	10 YR (%)
Global Equity						
MSCI ACWI IMI	World	19.8	1.2	5.5	6.1	9.1
MSCI ACWI IMI Net (Local)	World (Local Currency)	18.9	2.2	6.1	6.6	9.8
Domestic Equity						
S&P 500	Large Core	20.5	7.5	10.7	10.7	14.0
Russell 1000	Large Core	21.8	7.5	10.6	10.5	14.0
Russell 1000 Growth	Large Growth	27.8	23.3	19.0	15.9	17.2
Russell 1000 Value	Large Value	14.3	-8.8	1.8	4.6	10.4
Russell 2000	Small Core	25.4	-6.6	2.0	4.3	10.5
Russell 2000 Growth	Small Growth	30.6	3.5	7.9	6.9	12.9
Russell 2000 Value	Small Value	18.9	-17.5	-4.3	1.3	7.8
Russell 3000	All Cap Core	22.0	6.5	10.0	10.0	13.7
International Equity						
MSCI World ex US	World ex-US	15.3	-5.4	0.8	2.0	5.4
MSCI EAFE	International Developed	14.9	-5.1	0.8	2.1	5.7
MSCI EAFE (Local)	International Developed (Local Currency)	12.6	-4.2	1.3	2.6	6.9
MSCI EM	Emerging Markets	18.1	-3.4	1.9	2.9	3.3
MSCI EM (Local)	Emerging Markets (Local Currency)	16.7	1.4	4.5	5.1	6.0
Global Fixed Income						
Barclays Global Aggregate	Global Core Bonds	3.3	4.2	3.8	3.6	2.8
S&P Global Leveraged Loan	Bank Loans	9.7	-2.5	1.6	2.7	3.9
JPM GBI-EM GD	Emerging Markets Bonds (Local Currency)	5.7	9.9	7.9	8.0	7.6
JPM EMBI Global TR	Emerging Market Bonds	11.2	1.5	3.3	5.1	5.8
Domestic Fixed Income						
Barclays US Aggregate	Core Bonds	2.9	8.7	5.3	4.3	3.8
Barclays US HY	High Yield	10.2	0.0	3.3	4.8	6.7
Barclays US TIPS	Inflation	4.2	8.3	5.0	3.7	3.5
Other						
Cambridge Associates PE Index 1Qtr Lag	Private Equity	-7.6	4.4	13.4	12.5	13.9
NCREIF Property	Real Estate	-1.0	2.7	5.4	6.8	9.7
Bloomberg Commodity	Commodities	5.1	-17.4	-6.1	-7.7	-5.8
DJ Brookfield Global Infrastructure	Infrastructure	11.6	-6.0	2.8	3.9	9.7
S&P Global Natural Resources	Natural Resources	20.5	-16.8	-0.1	0.9	1.5
HFRI Macro	Hedge Funds	1.0	0.9	1.5	0.8	1.3



Source: Meketa, Quarterly updated.

RISK METRICS

1 Portfolio risk



Portfolio: 11.6% | Policy: 11.2% | Peer Group: 11.3% | Liability: 11.5%

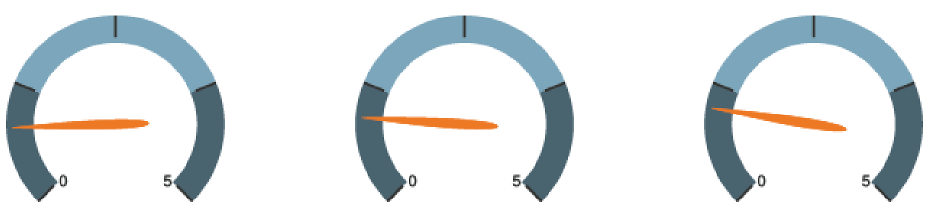
2 Portfolio equity beta

Portfolio: 0.66 | Policy: 0.64 | Peer Group: 0.66

3 Portfolio interest rate risk - Duration

Portfolio: 1.7 | Policy: 1.9 | Peer Group: 1.4 | Liability: 14.3

4 Portfolio credit risk - Spread duration

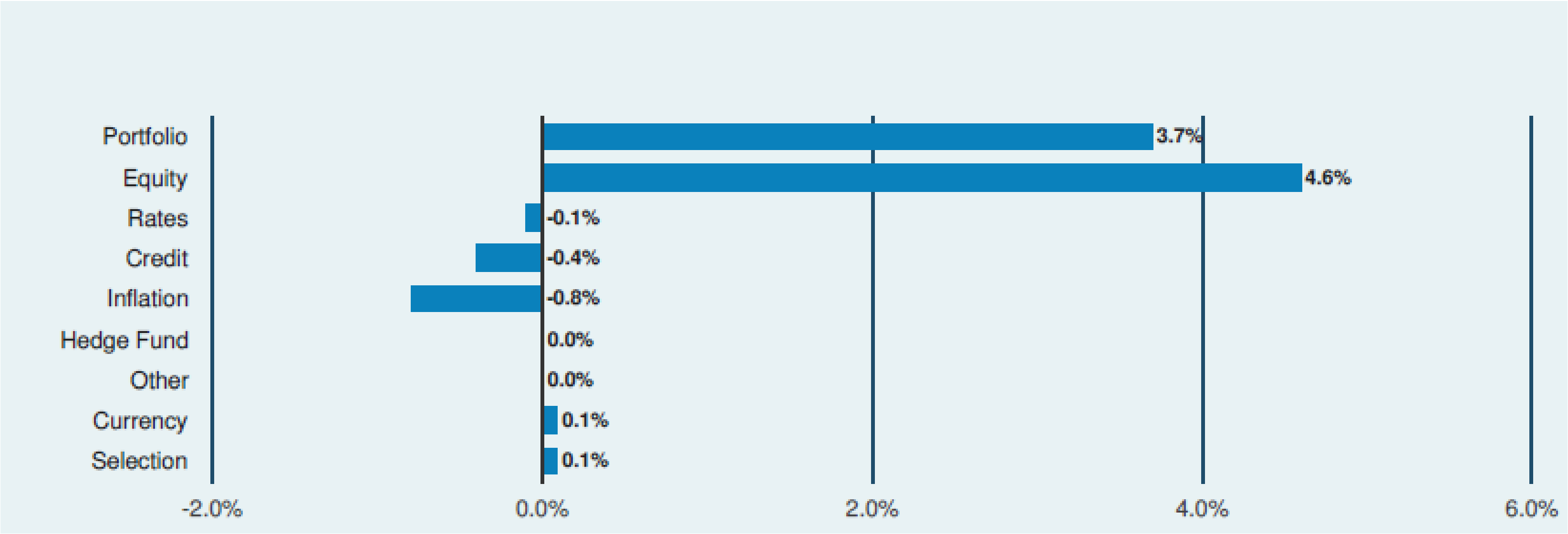


Portfolio: 0.8 | Policy: 0.9 | Peer Group: 1.0

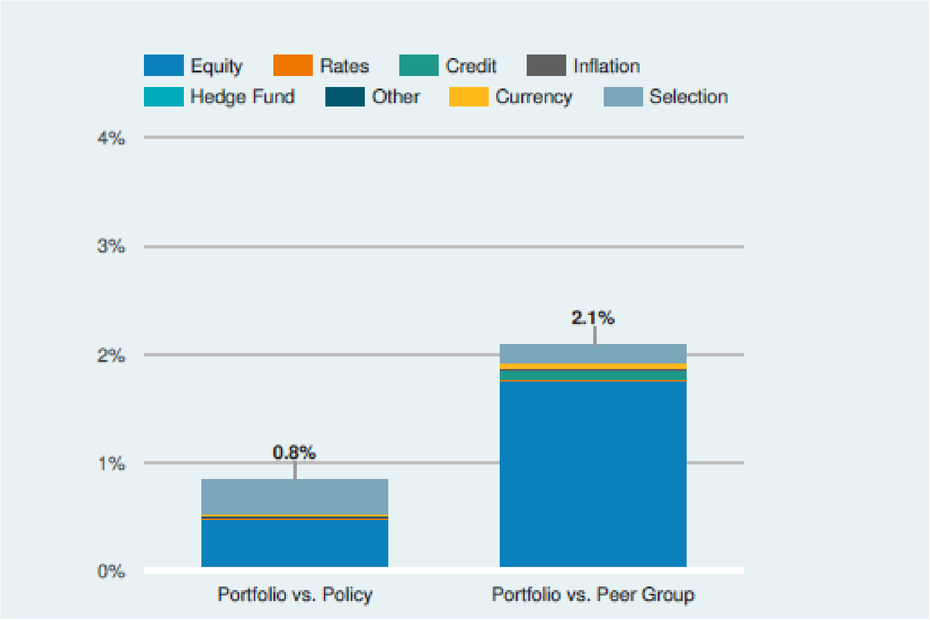
Source: Verus

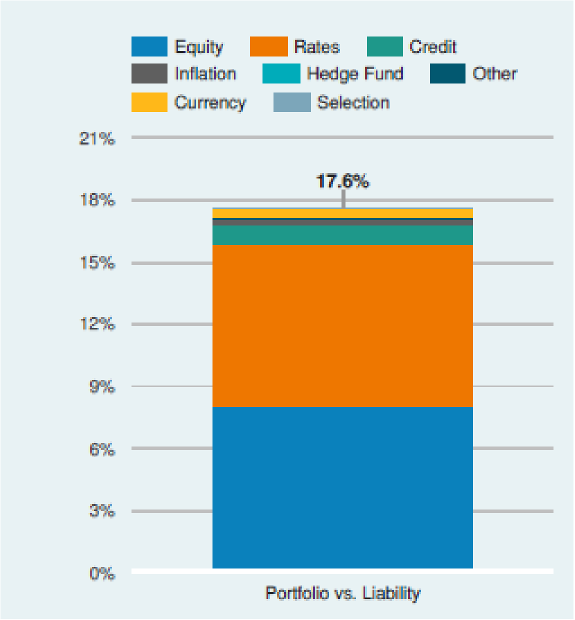
RISK METRICS

Risk factor weight relative to target



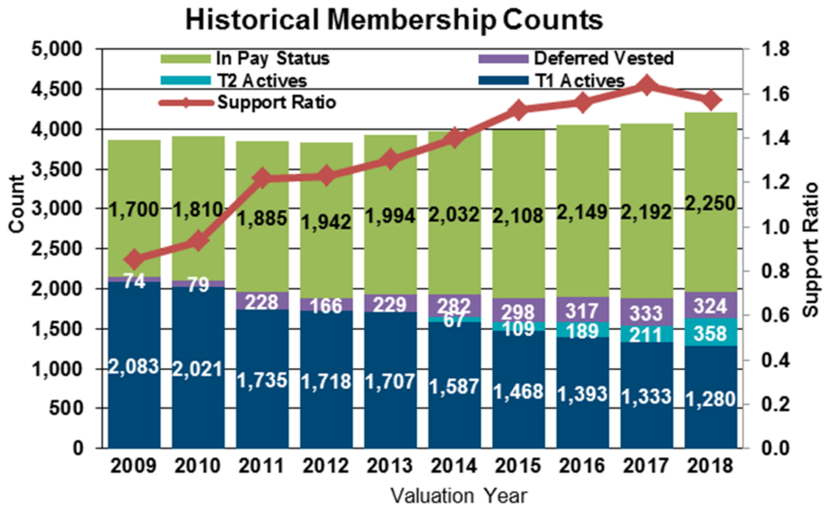
Active risk contribution by risk factor

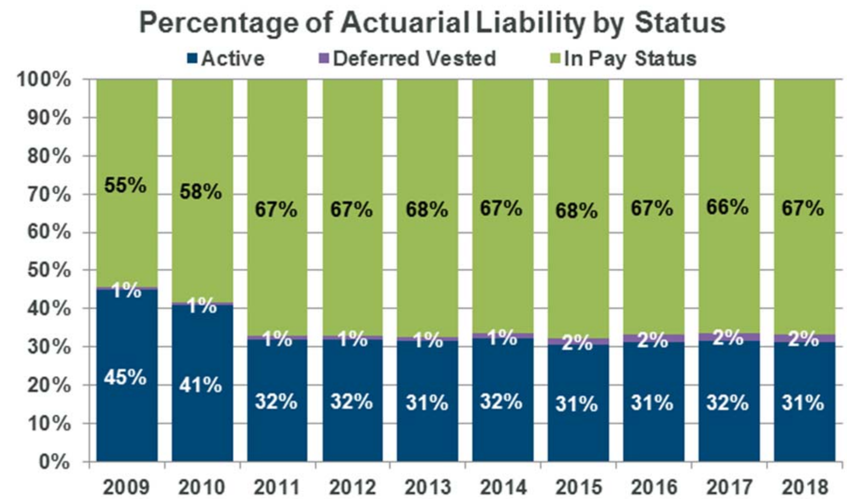


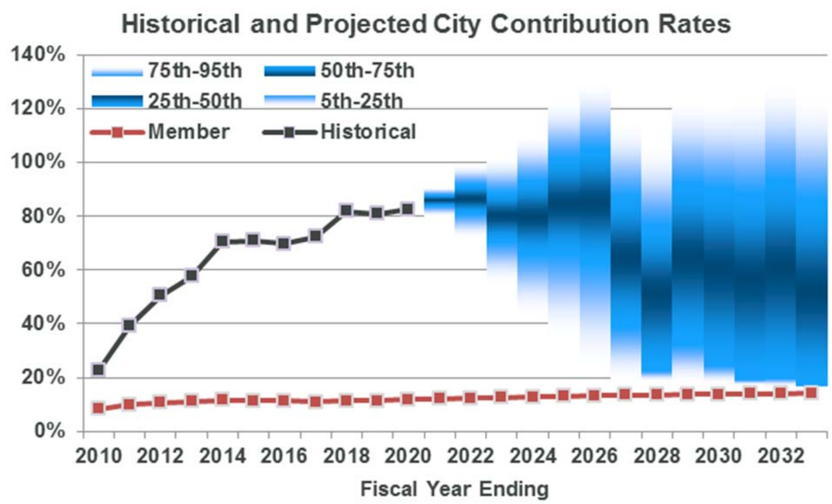


Source: Verus

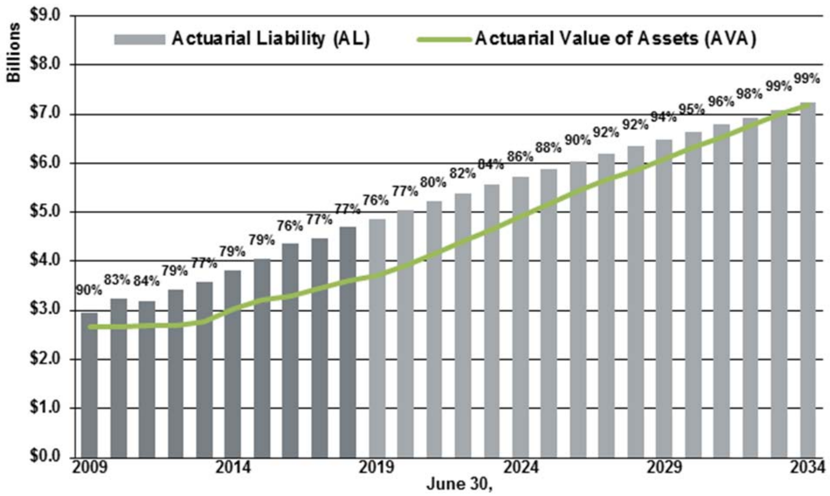
Actuarial Metrics

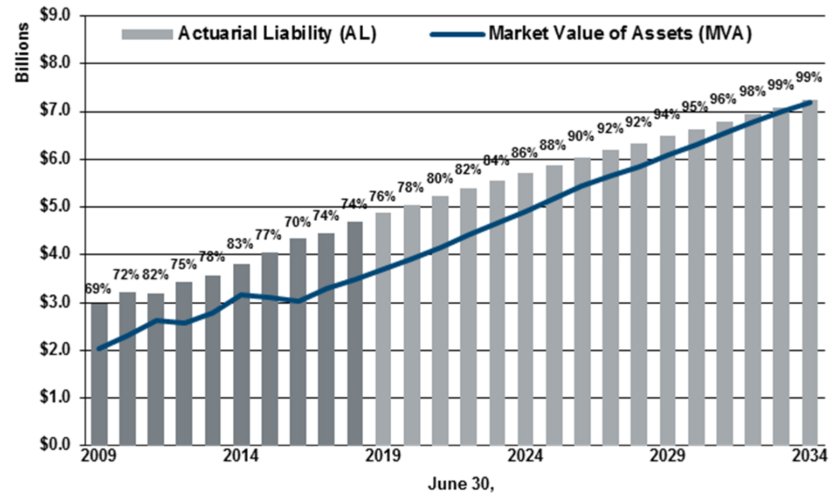


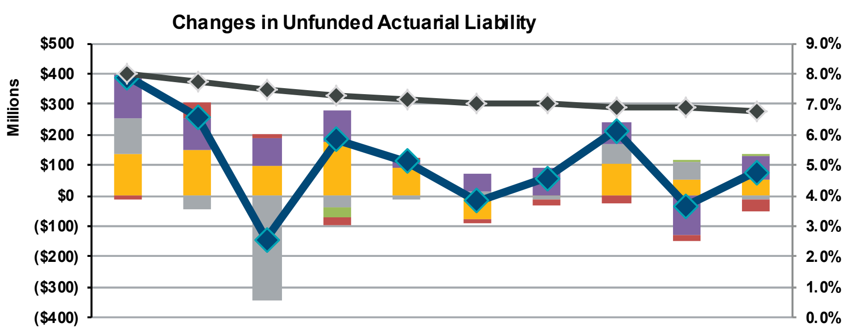




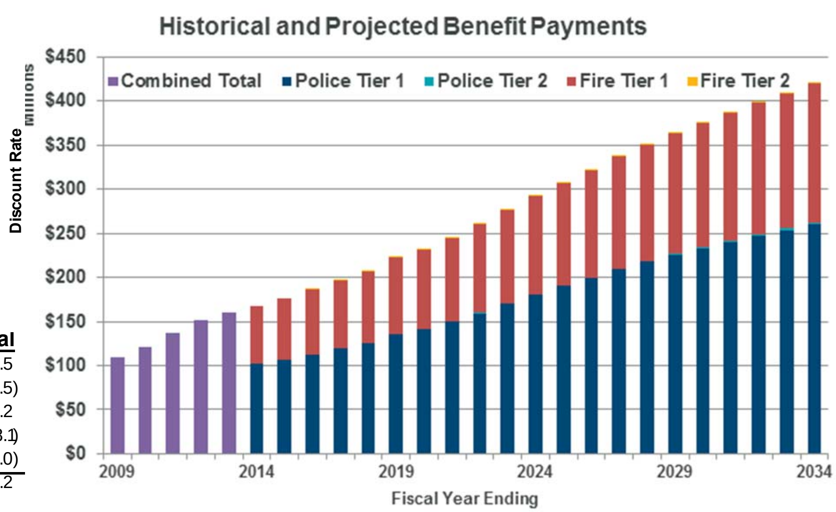
Actuarial Metrics





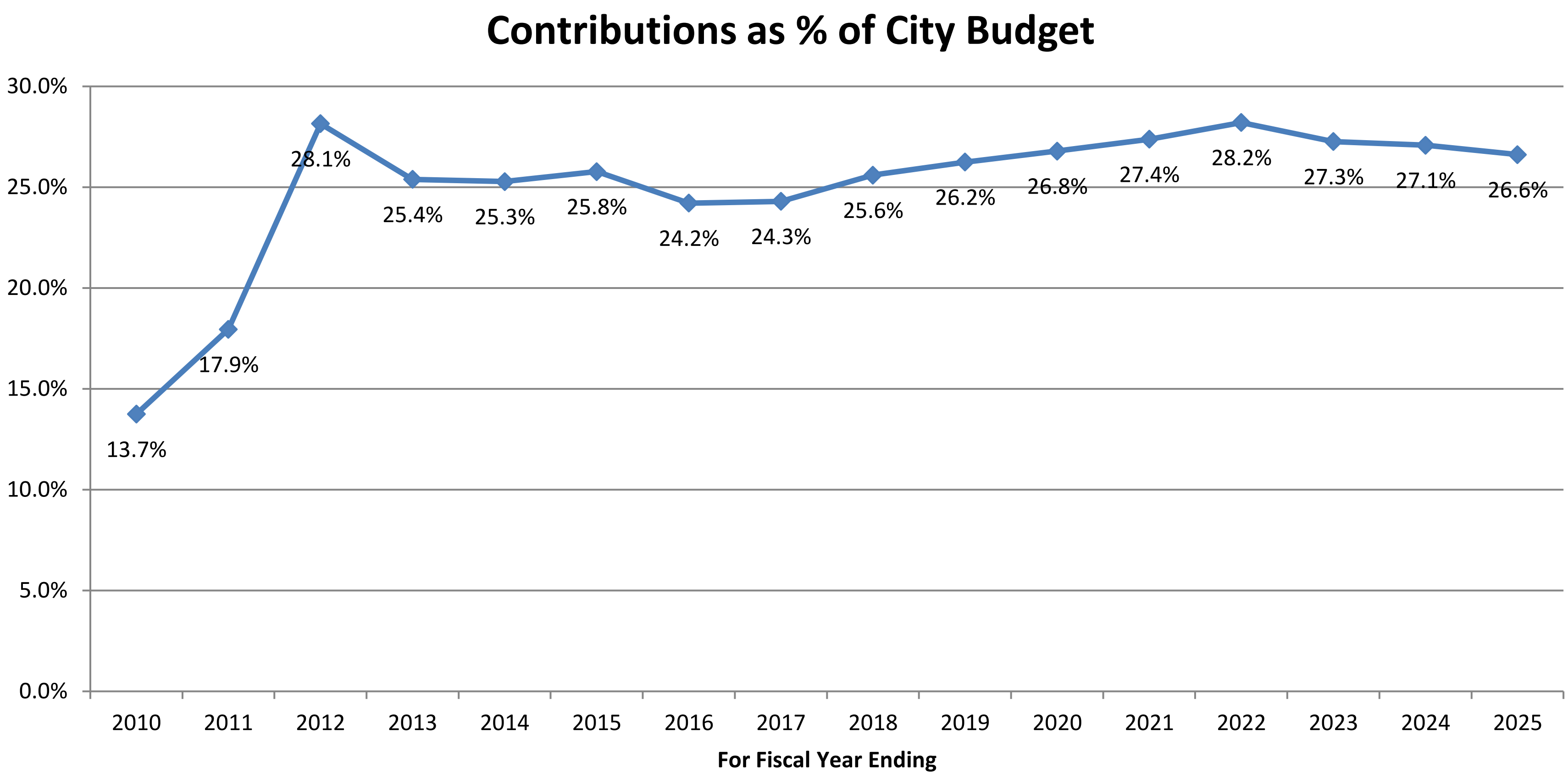


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
AVA Investment (G)/L	138.4	149.6	96.5	172.8	91.3	(78.5)	(2.8)	106.8	50.9	53.6	778.5
Liability (G)/L	113.5	(43.9)	(346.1)	(39.4)	(9.9)	14.7	(7.3)	61.3	61.8	(15.1)	(210.5)
Assumption Changes	145.4	104.2	89.1	107.7	28.2	56.3	90.0	72.7	(131.8)	76.4	638.2
Benefit Changes	0.0	0.0	0.0	(32.5)	0.0	0.0	0.0	0.0	4.3	0.2	(28.1)
Contributions	(9.9)	49.9	17.1	(24.6)	2.2	(9.9)	(23.4)	(27.0)	(19.6)	(39.7)	(85.0)
Net Change	387.3	259.8	(143.5)	184.0	111.9	(17.4)	56.5	213.7	(34.4)	75.4	1093.2
Discount Rate	8.00%	7.75%	7.50%	7.25%	7.13%	7.00%	7.00%	6.88%	6.88%	6.75%	



January 4, 2019

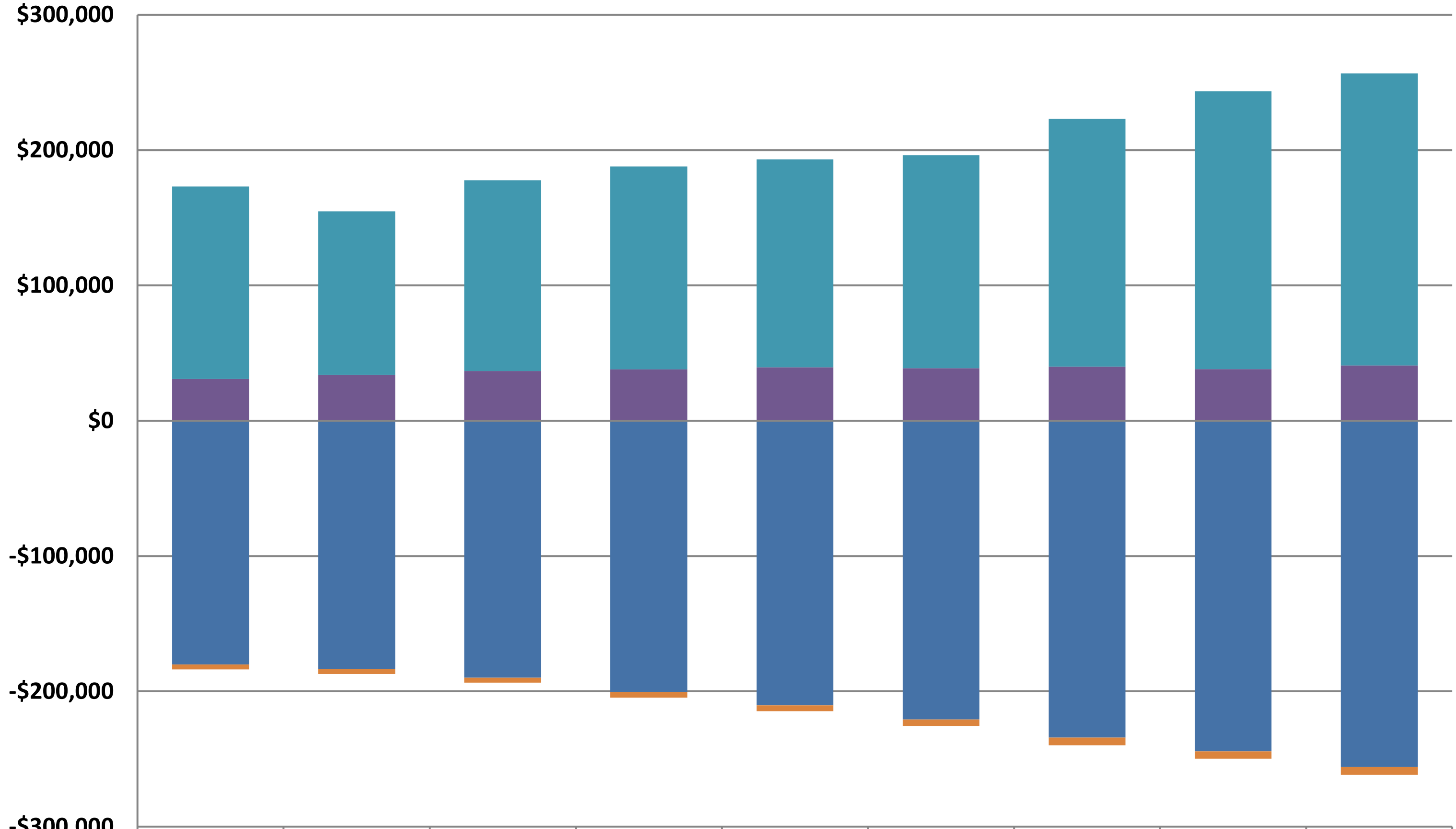
CHEIRON Classic Values, Innovative Advice



Contribution amounts represent the combined amounts for Federated and Police and Fire. Fiscal years 2021-2025 are the projected contributions and City budget based on the City's 5-Year Forecast and Revenue Projections.

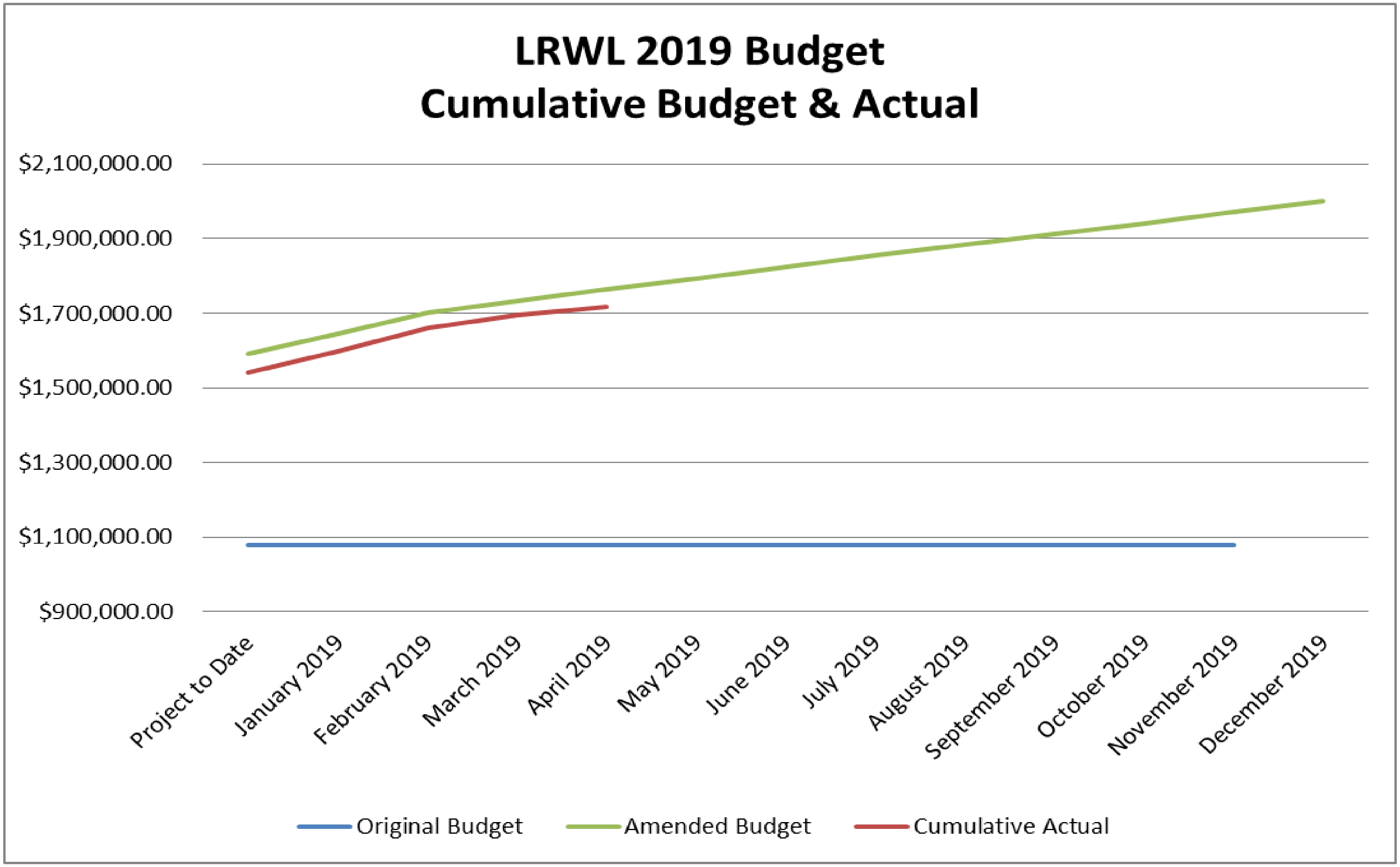
Changes as of 10/19/20

Net Cash Flow / Total Additions and Deductions Before Investment Income/Expense
(In Thousands)

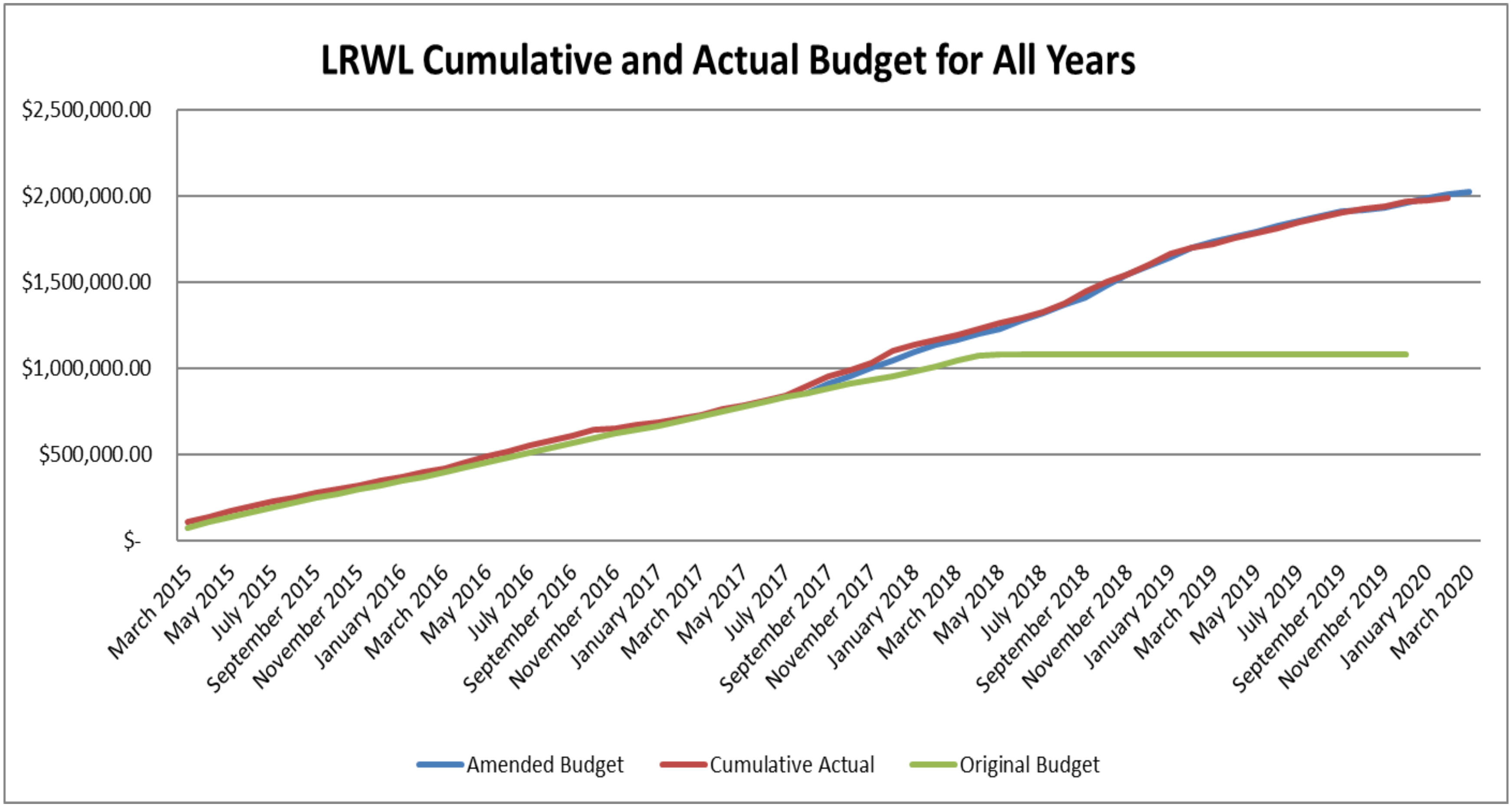


	2012	2013	2014	2015	2016	2017	2018	2019	2020
Administrative Expenses	(3,643)	(3,501)	(3,734)	(4,314)	(4,393)	(4,817)	(5,623)	(5,495)	(5,727)
Benefits	(180,199)	(183,636)	(189,907)	(200,458)	(210,389)	(220,831)	(234,316)	(244,411)	(256,039)
Employer Contributions	142,214	121,042	140,850	150,189	153,545	157,624	183,094	205,362	215,831
Employee Contributions	30,819	33,725	36,789	37,764	39,515	38,696	39,968	38,126	40,780

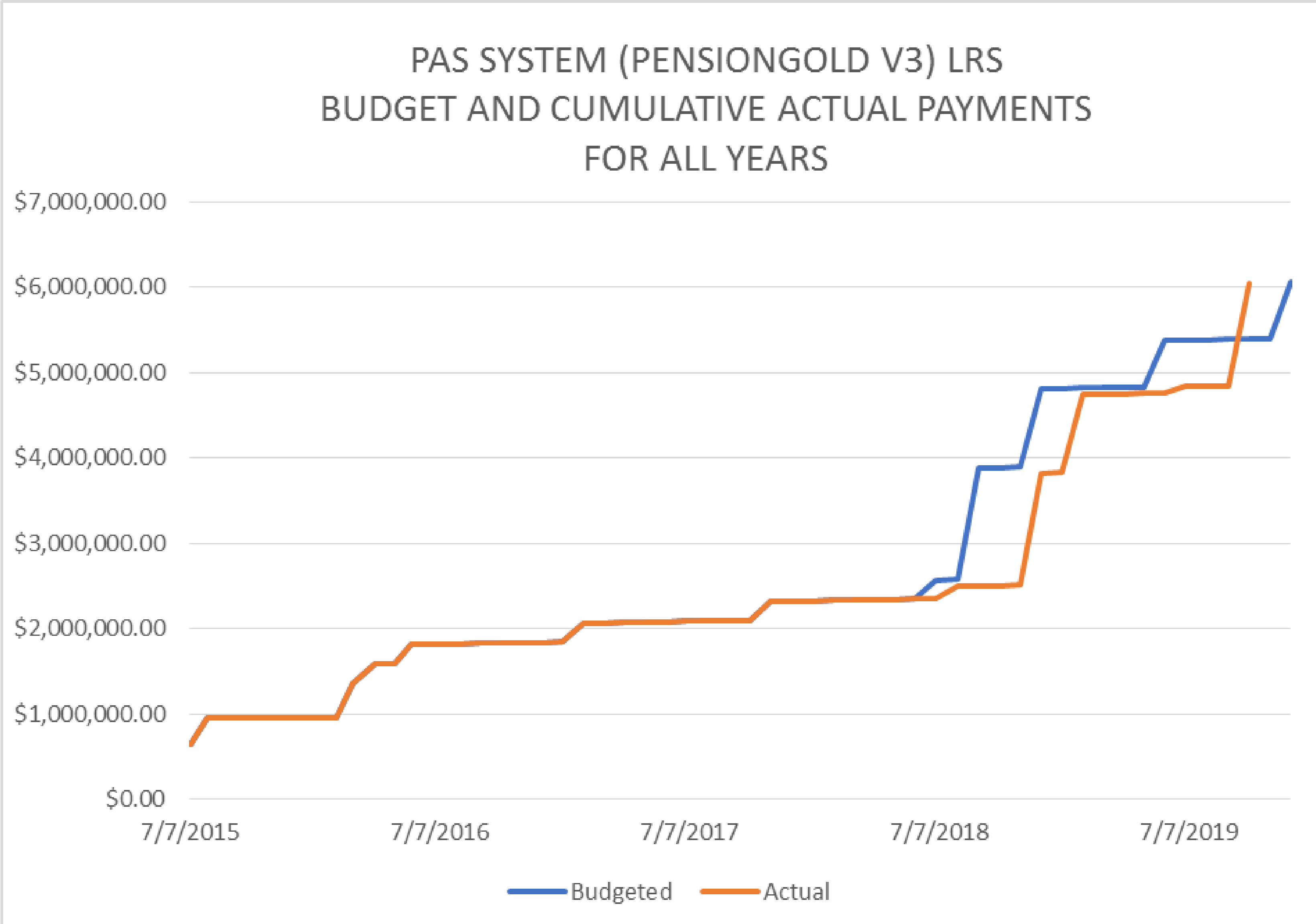
As of April 1, 2019



As of 4/1/2020



LRWL Cumulative and Actual Budget for All Years
$2,500,000.00
$2,000,000.00
$1,500,000.00
$1,000,000.00
$500,000.00
$-
March 2015
May 2015
July 2015
September 2015
November 2015
January 2016
March 2016
May 2016
July 2016
September 2016
November 2016
January 2017
March 2017
May 2017
July 2017
September 2017
November 2017
January 2018
March 2018
May 2018
July 2018
September 2018
November 2018
January 2019
March 2019
May 2019
July 2019
September 2019
November 2019
January 2020
March 2020
Amended Budget
Cumulative Actual
Original Budget

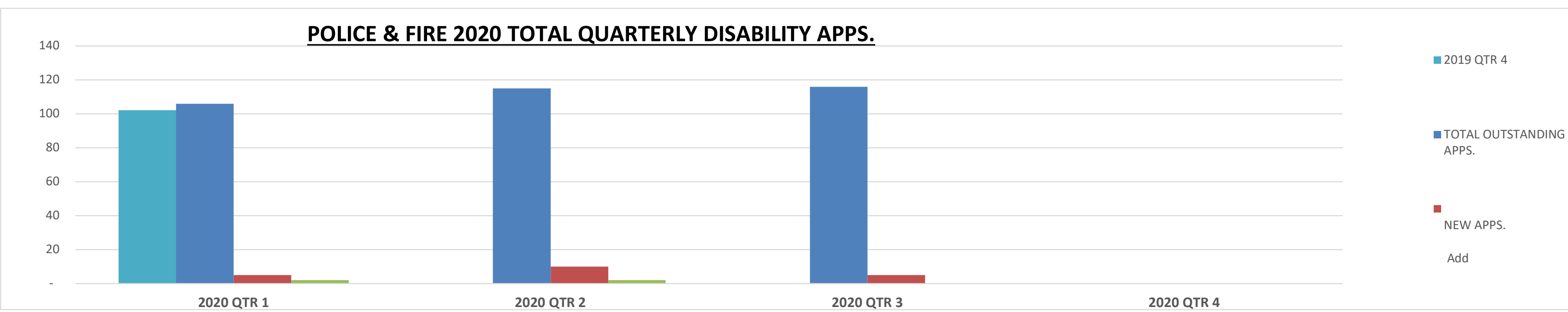

PAS SYSTEM (PENSIONGOLD V3) LRS
BUDGET AND CUMULATIVE ACTUAL PAYMENTS
FOR ALL YEARS
$7,000,000.00
$6,000,000.00
$5,000,000.00
$4,000,000.00
$3,000,000.00
$2,000,000.00
$1,000,000.00
$0.00
7/7/2015
7/7/2016
7/7/2017
7/7/2018
7/7/2019
Budgeted
Actual

POLICE AND FIRE
2020 QUARTERLY DISABILITY STATISTICS

					BREAKOUT DETAIL OF "TOTAL OUTSTANDING APPS."						
QUARTERLY STATISTICS	NEW APPS. Add	Interim Non Service-Connected (NSCD) APPROVALS SCD APPLICATON REMAINS PENDING, No Change in Census Numbers	COMPLETED APPS. Subtract	TOTAL OUTSTANDING APPS.	APPS. DEFERRED BY ATTORNEY OR APPLICANT	APPS. THAT ARE NOT MMI AND ARE NOT READY TO PROCEED	APPS. THAT ARE MMI AND ARE READY FOR INDEPENDENT MEDICAL EVALUATION (IME)	APPS. FOR WHICH IME EXAM IS DONE, IME REPORT IS REC'D. AND READY FOR BOARD MEDICAL ADVISOR REPORT	APPS. FOR WHICH BOARD MEDICAL ADVISOR REPORT WAS REC'D. AND ARE READY FOR COMMITTEE MEETING	APPS. FOR WHICH COMMITTEE DECISION WAS RENDERED AND READY TO GO TO THE BOARD	TOTAL OUTSTANDING APPS.
2019 QTR 4	10	0	2	102	29	68	3	0	0	2	102
2020 QTR 1	5	1	2	106	29	74	1	0	0	2	106
2020 QTR 2	10	1	2	115	29	80	3	2	1	0	115
2020 QTR 3	5	2	4*	116	27	82	3	1	2	1	116
2020 QTR 4											

SOURCE: QUARTERLY STATISTICS REPORT

***Includes 1 Applicant Deceased**



July - September 2020
Completed Applications Processing Times

Month of Board Approval	Fire or Police	Service Connected Disability Retirement (SCD) or Non-Service-Connected Disability Retirement (NSCD)	Change of Status (COS) From Service Ret. to Disability Ret.	Days From App. Rec'd. to MMI	Days From MMI to IME Appt.	Days From IME Appt. to Med. Advisor Report	Days From Med. Advisor Report to Committee	Days From First Agenda Date too Final Board Date	Days From App. To Final Board	Approved or Denied	Name	Notes
Sept. 2020	Fire	SCD	NO	0	215*	37	26	24	302	Approved	Jon Friesell	*ORS Clarification of Body Parts, WC Status, etc.
Sept. 2020	Police	SCD	NO	46	358*	35	33	24	496	Approved	Brian Johst	*3/20/19 App. 4/11/20 Applicant request to proceed.
Sept. 2020	Police	SCD	YES-COS	36	574*	18	160	24	812	Approved	Wendy Hoskin	*6/14/18 App. 1/16/20 Applicant request to proceed.
Sept. 2020	Police	INTERIM NSCD	NO	277	279	114	761*	24	1,455	Approved	Angelika Castanon	*Deferred by Atty. After Board Medical Advisor Report
Sept. 2020	Police	INTERIM NSCD	NO	462*	151	64	755**	24	1,456	Approved	Michelle Zanotto	*MMI more than 2 yrs. After app. **Deferred by Atty. After Board Medical Advisor Report

SOURCE: DETAILED QUARTERLY STATISTICS REPORT

Appendix

- Investment Dashboard – Updated Quarterly
- Actuarial Dashboard – Updated Annually
- Accounting Dashboard – Updated Annually
- Information Technology Dashboard – Updated Quarterly
- Benefits Dashboard – Updated Quarterly