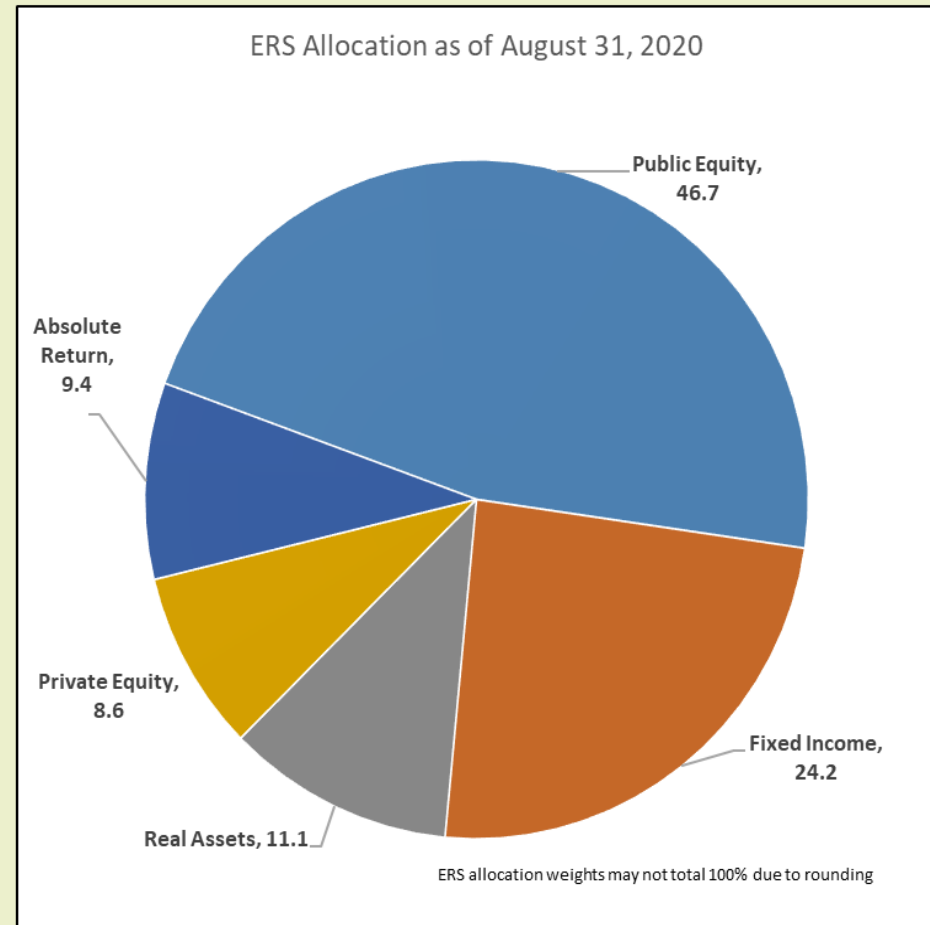# 2021 Budget Presentation

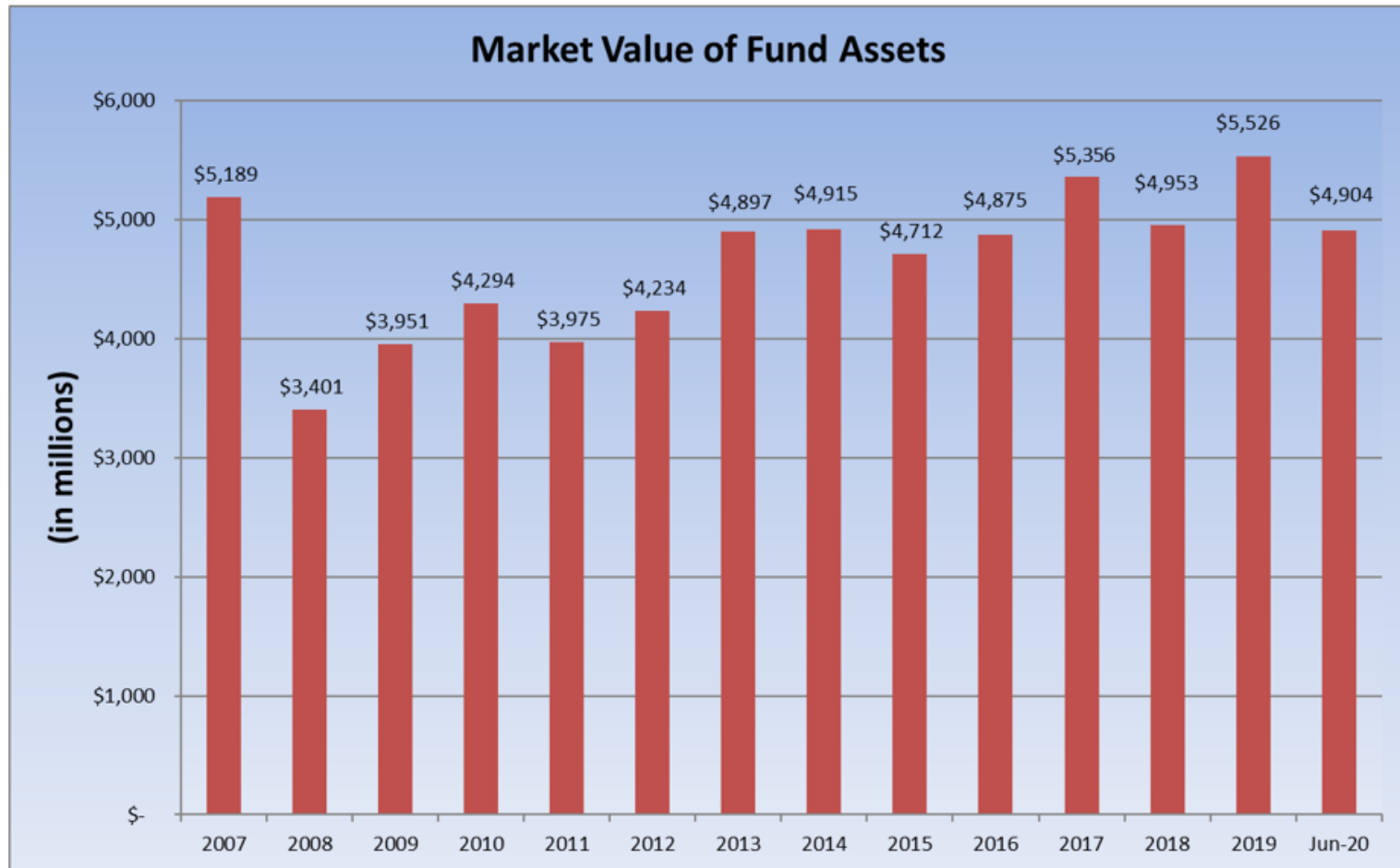Employes' Retirement System

October 7, 2020

General Pension Statistics

- **Fund Value: $5.14 billion** (as of August 31, 2020)
- **Membership Breakdown** (per 2020 valuation):
    - Actives: 10,974
    - Deferred: 4,568
    - Retirees / Beneficiaries: 13,555
    - Total: 29,097
- **Actuarial Funded Status: 80.11%** (per 2020 actuarial valuation; 84.23% based on market value)
- **Total Annual Pension Payroll: $409.5 million** (est. for 2020 based on actuals through Aug. 2020)
- **Total Annual Pensionable Wages: $604.7 million** (est. for 2020 based on YTD actuals through Aug.)
- **Total Annual Member Contributions: $34.0 million** (est. for 2020 based on YTD actuals through Aug.)

ERS Allocation as of August 31, 2020

- Public Equity, 46.7
- Absolute Return, 9.4
- Private Equity, 8.6
- Real Assets, 11.1
- Fixed Income, 24.2

ERS allocation weights may not total 100% due to rounding

MILWAUKEE
ERS
Employes' Retirement System

Fund Value of Assets: 2007 – June 30, 2020
(Year Ended Dates Reflect 12/31 Fund Values)

Market Value of Fund Assets

Benefit Payments	$4.1 billion
Expenses	$222 million
Contributions	$1.2 billion
Investment Gain	$2.8 billion

12 1/2 Year Estimates (1/1/08 - 6/30/20)

Most recent Actuarial valuation projects benefit payments to total $4.9 billion in next 10 years.

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Employes' Retirement System

An attribution of the change in funded ratio on a market and actuarial basis from January 1, 2010 through January 1, 2020

	Decade Summary	
	AVA	MVA
Beginning of year	112.8%	94.2%
expected change	-1.1%	-1.1%
valuation updates	1.1%	1.1%
change due to:		
Actual vs actuarial contribution	-1.0%	-1.0%
actuary	1.7%	1.7%
cost method	-3.0%	-3.0%
assumptions	-11.6%	-11.6%
asset return	-15.4%	7.3%
liabilities	-3.4%	-3.4%
plan	0.0%	0.0%
total	-32.7%	-10.0%
End of year	80.1%	84.2%

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Employes' Retirement System

CMERS Investment Performance History Periods Ending August 31, 2020

August 31, 2020
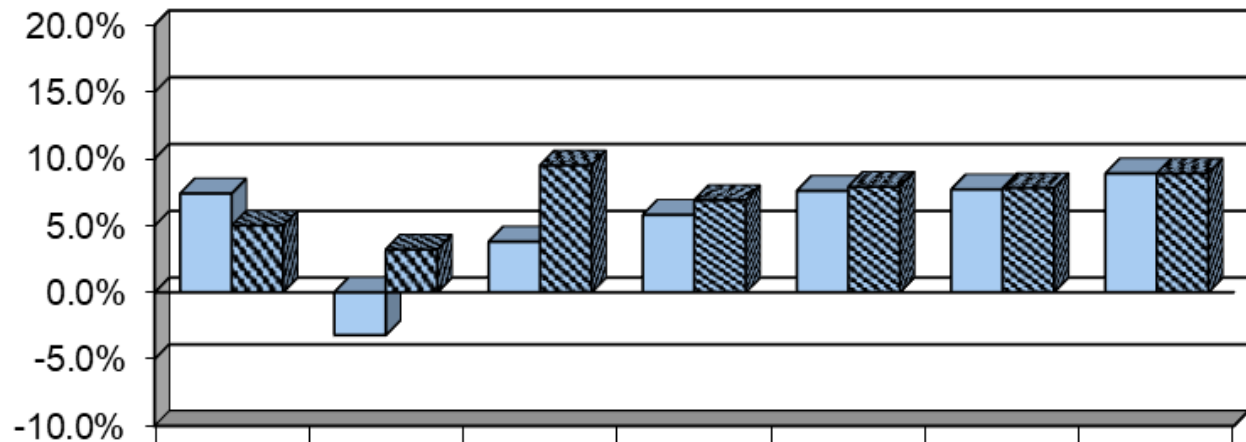
	3 Mo.	YTD	1 Year	3 Years	5 Years	7 Years	10 Years
Total Fund Gross	7.4%	-3.2%	3.8%	5.8%	7.6%	7.7%	8.9%
Total Fund Benchmark	5.0%	3.2%	9.5%	6.9%	7.9%	7.8%	8.9%

☐ Total Fund Gross ◪ Total Fund Benchmark

Active Management versus Passive Analysis
25 Years 1995-2019

MERS' decision to hire some active managers versus hiring only passive managers

| MERS Asset Class | Index | Time Weighted Returns | | | Dollar Weighted Estimates (Net of fees) | | |
| | | Annualized MERS Asset Class | | Annualized Index | Value of a Dollar Invested in | | Active Management Impact** |
		Gross	Net of fees	Net of fees	MERS Asset Class	Index	$Millions
Domestic Equity	Russell 3000	10.46%	10.20%	10.19%	$ 11.33	$ 11.32	$ 101.3
International Equity*	MSCI EAFE	7.18%	6.76%	4.68%	$ 4.68	$ 2.95	$ 354.1
Global Equity*	MSCI World / ACWI	9.65%	9.25%	9.05%	$ 2.37	$ 2.33	$ 17.4
Fixed Income	Bloomberg Barclays US Aggregate	6.92%	6.81%	5.56%	$ 5.19	$ 3.85	$ 296.7
	Estimate of Fund's benefit from its decision to hire active managers over past 25 years						$ 769.5

Manager Fees for indices are assumed to be:
Russell 3000 Index - 2 basis points
MSCI EAFE Index - 5 basis points
MSCI World / ACWI Index - 5 basis points
Bloomberg Barclays US Aggregate Index - 2 basis points
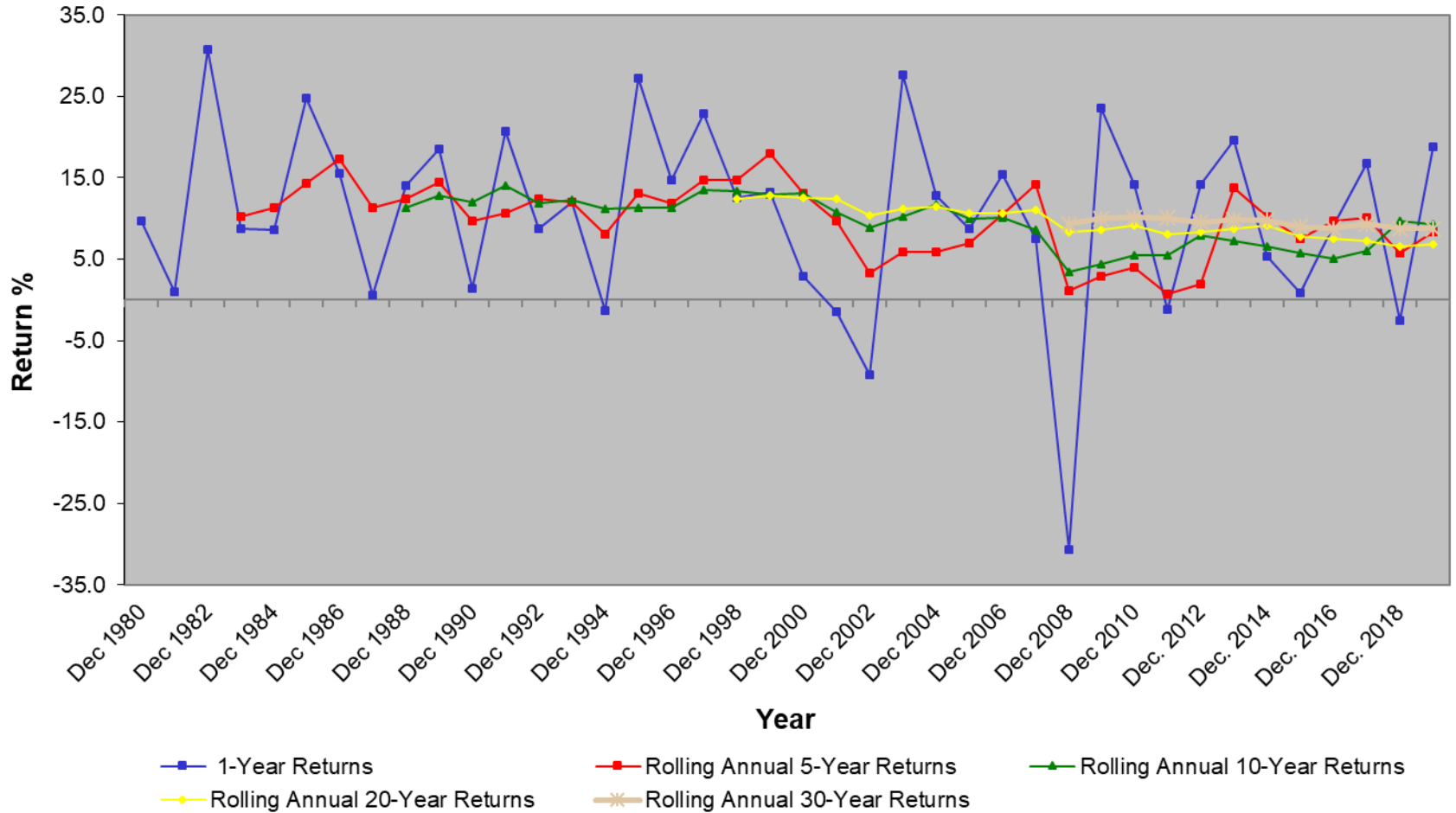
*Inception Dates if less than 25 years:
International Equity Composite is May 1, 1996
Global Equity Composite is April 1, 2010

**Active Management Impact $Millions Estimate is based on monthly ERS asset class balances.

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Rolling Fund Returns 1979 - 2019

Total Fund

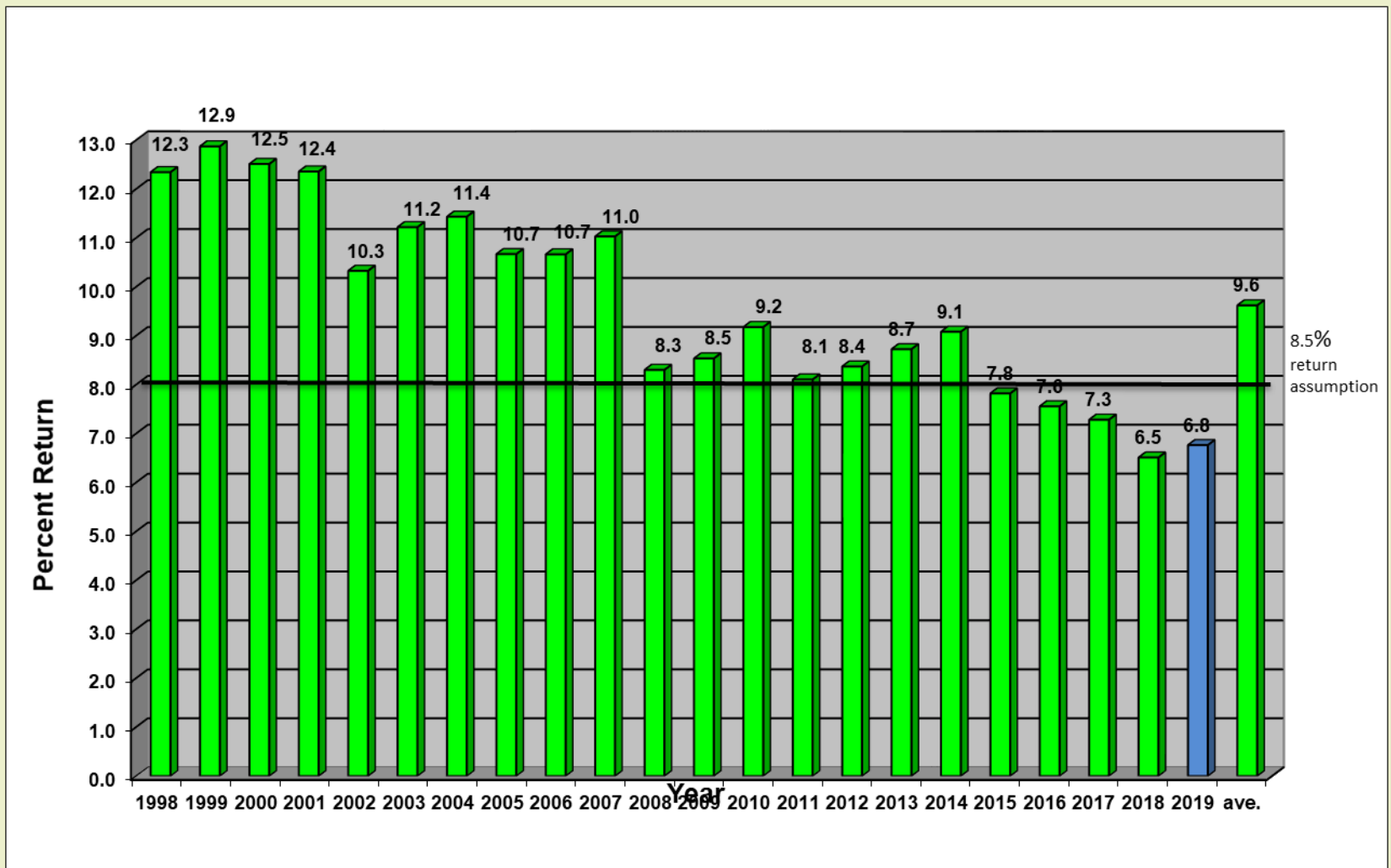# ERS 20 Year Rolling Ave. Investment Returns 1978-2019

TABLE 19

Allocation of 2020 Contribution to Agencies for Combined Fund

Group	Active Members	Covered Compensation	Employer Rate**	Dollar Amount Payable***									
				Jan 1, 2020	June 1, 2020	July 1, 2020	Aug 1, 2020	Sept 1, 2020	Oct 1, 2020	Nov 1, 2020	Dec 1, 2020	Jan 31, 2021
General City*	3,325	$185,003,090	7.48%	$13,838,231	$14,261,573	$14,347,783	$14,434,514	$14,521,769	$14,609,552	$14,697,866	$14,786,713	$14,966,022
Water Department	340	19,131,954	7.48%	1,431,070	1,474,850	1,483,765	1,492,734	1,501,757	1,510,835	1,519,968	1,529,156	1,547,699
School Board****	4,220	134,030,658	7.48%	10,025,493	10,332,195	10,394,652	10,457,487	10,520,702	10,584,299	10,648,280	10,712,648	10,842,554
Milwaukee Technical College	0	0	7.48%	0	0	0	0	0	0	0	0	0
Sewerage Commission	226	19,747,666	7.48%	1,477,125	1,522,314	1,531,516	1,540,774	1,550,088	1,559,458	1,568,885	1,578,369	1,597,509
Veolia	20	1,613,840	7.48%	120,715	124,408	125,160	125,917	126,678	127,444	128,214	128,989	130,535
Wisconsin Center District	108	5,911,646	7.48%	442,191	455,719	458,474	461,245	464,033	466,838	469,660	472,499	478,229
Housing Authority	143	8,759,072	7.48%	655,179	675,222	679,304	683,410	687,541	691,697	695,878	700,085	708,574
Policemen	1,826	158,480,563	25.22%	39,968,798	41,191,532	41,440,521	41,691,036	41,943,055	42,196,597	42,451,672	42,708,289	43,226,186
Firemen	705	61,134,488	26.85%	16,402,383	16,904,168	17,006,352	17,109,154	17,212,577	17,316,626	17,421,304	17,526,614	17,739,148
Total	10,913	$593,812,977		$84,361,185	$86,941,981	$87,467,537	$87,996,271	$88,528,200	$89,063,346	$89,601,727	$90,143,362	$91,236,474

General City: $13.838M

Police: $39.969M

Fire: $16.402M

Total: $70.209M

Employer Contributions
(Combined Fund only as of January 1, 2020)

Group	Employer Rate Based On:		
	Stable Contribution Policy	Actuarial Determined Rate	Market-Based Actuarial Determined Rate
General	7.48%	16.47%	13.71%
Policemen	25.22%	46.63%	39.95%
Firemen	26.83%	52.25%	44.89%

As a result of the events mentioned earlier, there is a significant difference between the actuarially determined employer contribution rate and the stable contribution policy rate as shown above.

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Employer Normal Cost Rate

	General Employees	Policemen	Firemen	Total
1. Retirement Benefits	$22,168	$35,342	$11,741	$69,251
2. Withdrawal Benefits	13,005	2,948	1,228	17,181
3. Disability Benefits	1,405	2,603	4,499	8,507
4. Death Benefits	668	241	110	1,019
5. Total Normal Cost	$37,246	$41,134	$17,578	$95,958
6. Projected Payroll	$376,656	$158,596	$61,134	$596,386
7. Normal Cost Rate	9.89%	25.94%	28.75%	16.09%
8. Member Contribution Rate	(4.87%)	(7.00%)	(7.00%)	(5.65%)
9. Employer Normal Cost Rate	5.02%	18.94%	21.75%	10.44%

The normal cost is the cost of benefits accruing during the current year. Member contributions offset the normal cost to determine the employer normal cost. If CMERS were fully funded, the actuarial contribution rate would be the employer normal cost rate.

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Summary of December 31, 2019 Valuation Results

| | General, Executive & Elected Officials | | Protective Occupation | | | | Average |
| | | | With Soc. Sec. | | Without Soc. Sec. | | |
	2021	2020	2021	2020	2021	2020	2021
Employer Normal Cost	6.75%	6.75%	11.75%	11.65%	16.35%	16.25%	7.45%
Participant Normal Cost	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Total Normal Cost	13.5%	13.5%	18.5%	18.4%	23.1%	23.0%	14.2%
Estimated Total NC ($ millions)*	$1,867.4	$1,797.9	$258.0	$246.6	$56.5	$54.9	

* Based on payroll projected from valuation date to fiscal year using the payroll growth assumption.

GRS
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MILWAUKEE
ERS
Employes' Retirement System

Projections
(Assuming All Assumptions Are Met)
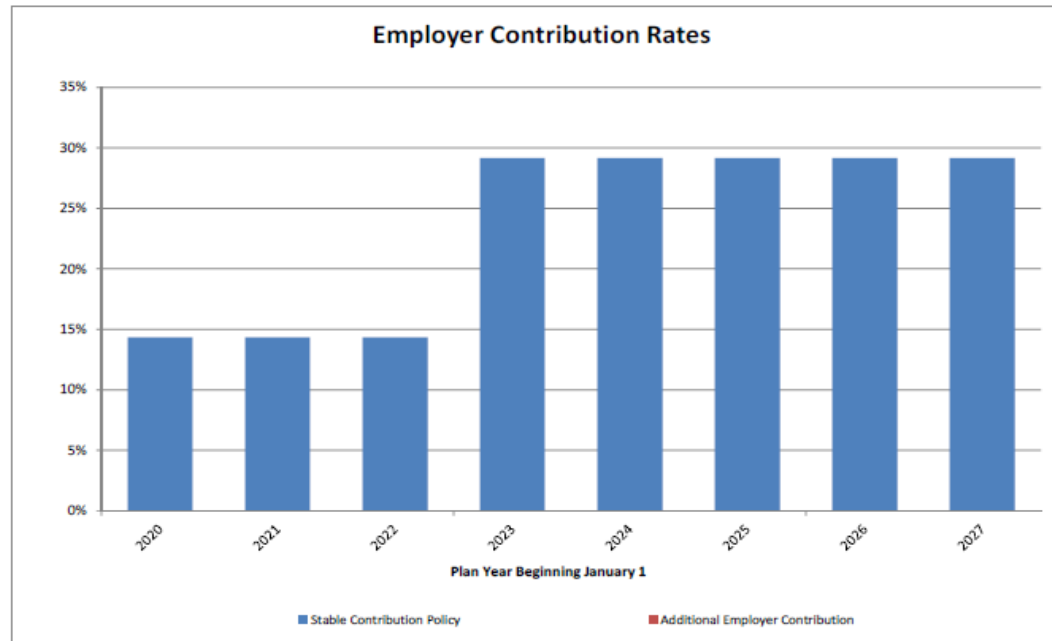
Inputs
Membership Data
Asset Data
Benefit Provisions
Assumptions
Funding Methodology
↓
Results
Actuarial Value of Assets
Actuarial Accrued Liability
UAAL/Funded Ratio
Net Actuarial Gain or Loss
Employer Contributions
Projections

Employer Contribution Rates — bar chart of Stable Contribution Policy and Additional Employer Contribution by Plan Year Beginning January 1 (2020–2027)

Given the significant difference between the projected 2023 actuarially determined contribution and the stable contribution policy in this valuation, the City and participating agencies should give serious consideration to increasing contributions and planning for a major increase in the contribution rate when it is reset in 2023.

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Projections
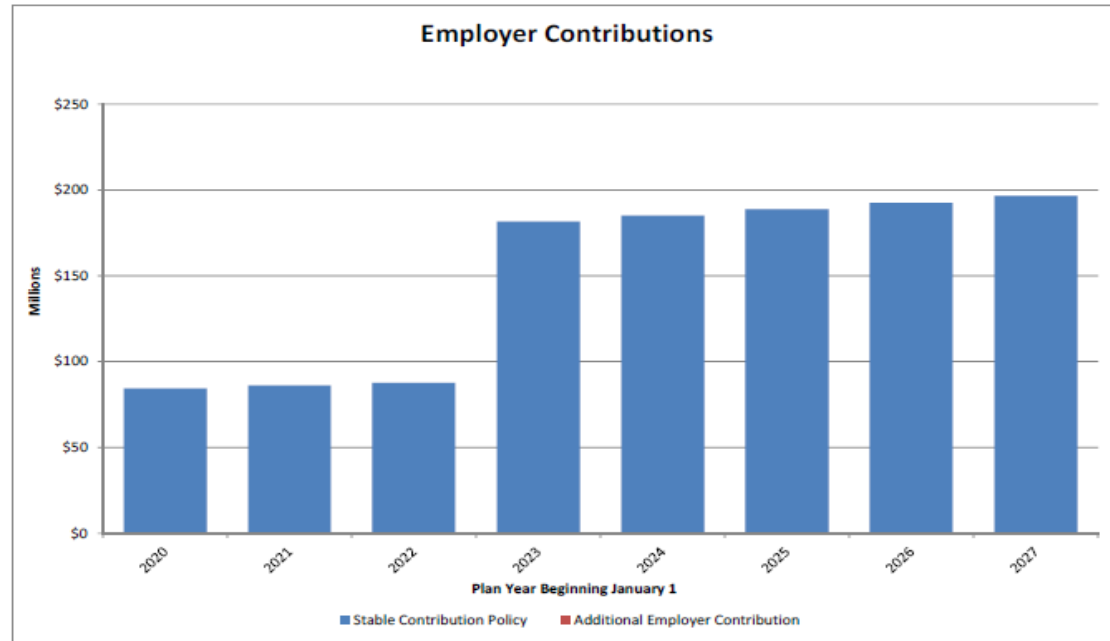## (Assuming All Assumptions Are Met)

This graphs shows the projected dollar amount of aggregate employer contributions in the future, if all actuarial assumptions are met.

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Actuarially Determined Employer Contribution
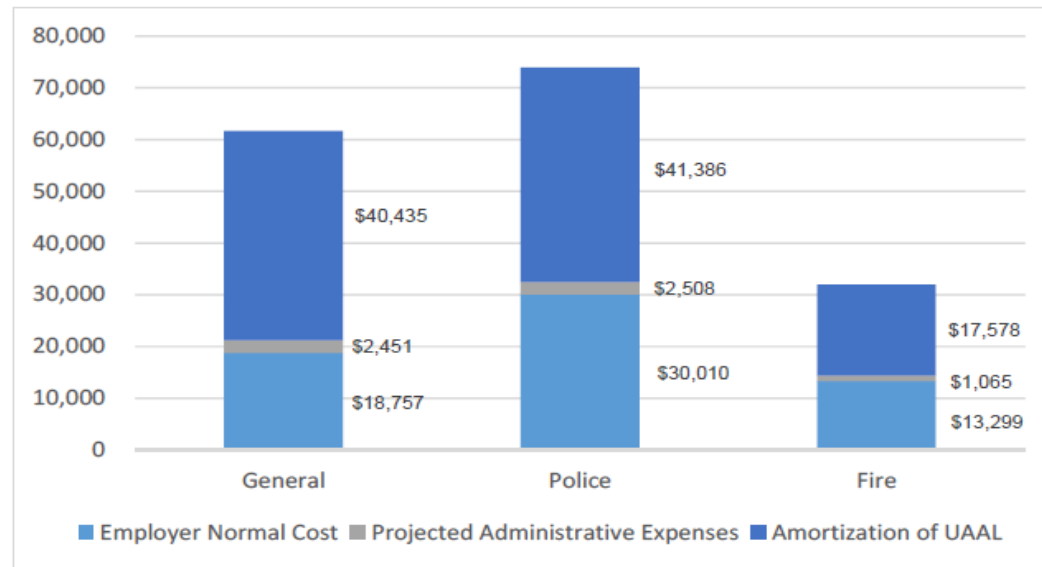## (Combined Fund only as of January 1, 2020)

Inputs
Membership Data
Asset Data
Benefit Provisions
Assumptions
Funding Methodology

↓

Results
Actuarial Value of Assets
Actuarial Accrued Liability
UAAL/Funded Ratio
Net Actuarial Gain or Loss
Employer Contributions
Projections

Chart axis labeled 0 to 80,000. Bars for General, Police, Fire.

General: $18,757 (Employer Normal Cost), $2,451 (Projected Administrative Expenses), $40,435 (Amortization of UAAL)

Police: $30,010 (Employer Normal Cost), $2,508 (Projected Administrative Expenses), $41,386 (Amortization of UAAL)

Fire: $13,299 (Employer Normal Cost), $1,065 (Projected Administrative Expenses), $17,578 (Amortization of UAAL)

■ Employer Normal Cost ■ Projected Administrative Expenses ■ Amortization of UAAL

The normal cost is just part of the actuarially determined contribution. The amortization of the unfunded actuarial accrued liability (UAAL) is a major component of the actuarial determined contribution.
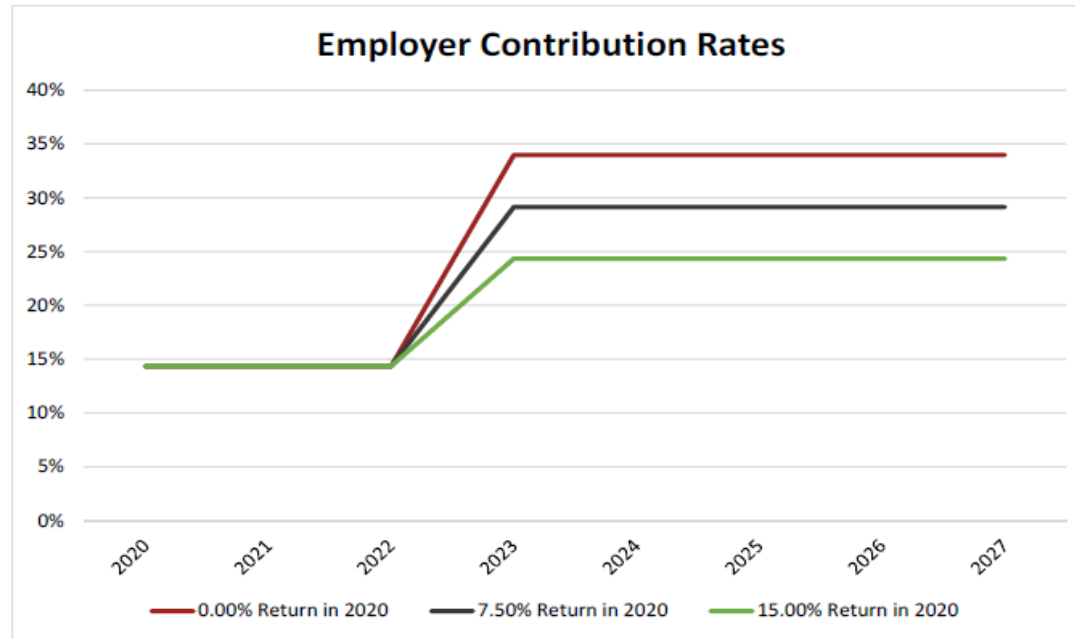
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Projections
(Alternate Investment Returns for 2020)

Inputs
Membership Data
Asset Data
Benefit Provisions
Assumptions
Funding Methodology
↓
Results
Actuarial Value of Assets
Actuarial Accrued Liability
UAAL/Funded Ratio
Net Actuarial Gain or Loss
Employer Contributions
Projections

Employer Contribution Rates

Legend: 0.00% Return in 2020 — 7.50% Return in 2020 — 15.00% Return in 2020

This graph shows the projected employer contribution rates under the Stable Contribution Policy, resulting from different investment returns during 2020 (returns for 2021+ are assumed to be 7.50%).

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Projections
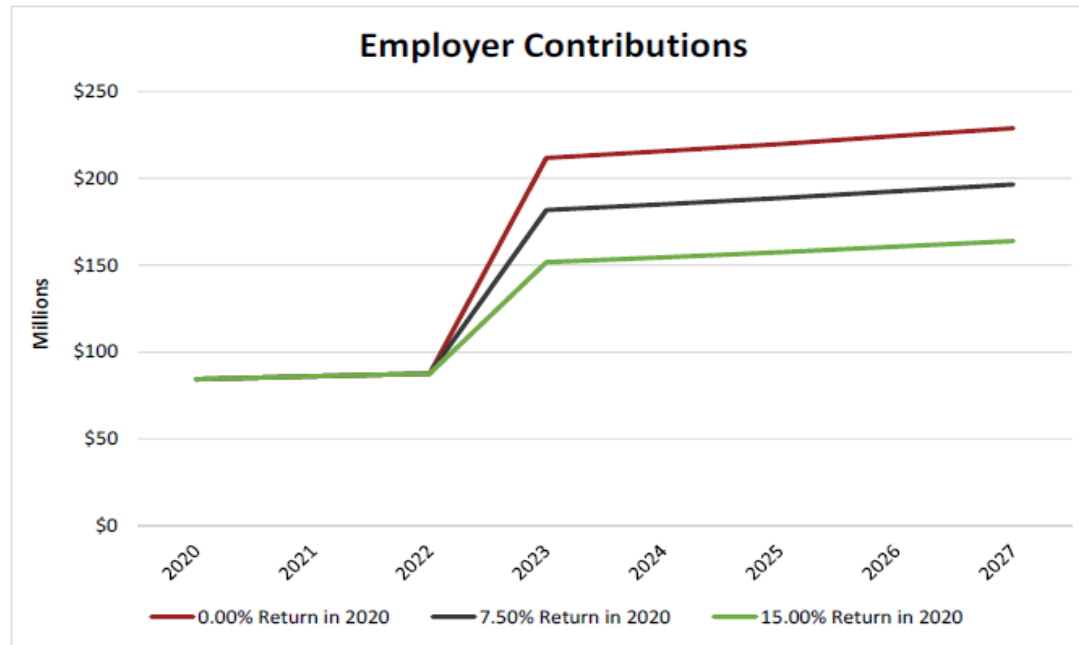## (Alternate Investment Returns for 2020)

Inputs
Membership Data
Asset Data
Benefit Provisions
Assumptions
Funding Methodology
↓
Results
Actuarial Value of Assets
Actuarial Accrued Liability
UAAL/Funded Ratio
Net Actuarial Gain or Loss
Employer Contributions
Projections

Employer Contributions

Millions

0.00% Return in 2020 — 7.50% Return in 2020 — 15.00% Return in 2020

This graph shows the projected dollar amount of aggregate employer contributions in the future under alternate investment return scenarios for 2020. Investment returns for 2021+ are assumed to be 7.50% in all scenarios.

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Appendix

CMERS Participant Headcount
(Active, Deferred and Retired)
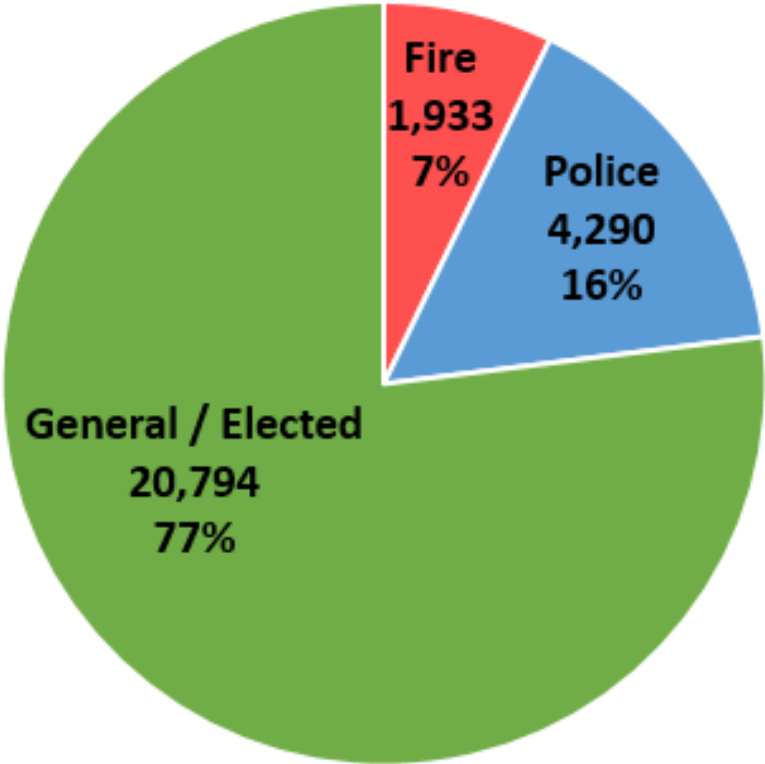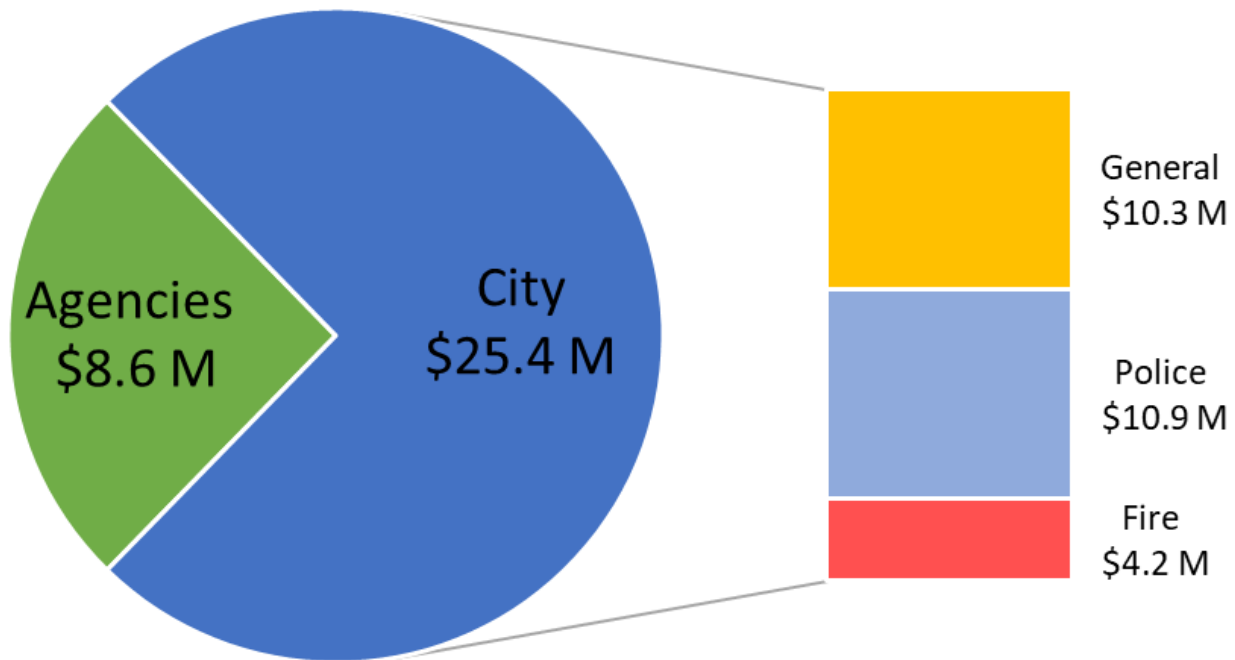## as of August 31, 2020

Chart does not include survivors/beneficiaries in payment

Total Annual Member Contributions
(in millions)
(projected for 2020)

Agencies
$8.6 M

City
$25.4 M

General
$10.3 M

Police
$10.9 M

Fire
$4.2 M

Projected Total Member Contributions ≈ $34.0M

Annual Member Contributions
(projected for 2020)

Employer / Group	Reported through PP-18-2020*				Straightline Projections for FY 2020			
	Pensionable Wages	Employer Paid Member Contributions	Employee Paid Member Contributions	Total Member Contributions	Pensionable Wages	Employer Paid Member Contributions	Employee Paid Member Contributions	Total Member Contributions
City-General	138,622,340	-	6,828,243	6,828,243	208,713,824	-	10,264,579	10,264,579
City-Police	103,821,003	-	7,266,582	7,266,582	155,034,412	-	10,851,164	10,851,164
City-Fire	40,609,055	-	2,842,657	2,842,657	60,479,994	-	4,233,634	4,233,634
City-Total	**283,052,398**	**-**	**16,937,482**	**16,937,482**	**424,228,230**	**-**	**25,349,377**	**25,349,377**
Agencies	99,860,132	51,231	4,759,712	4,810,943	180,499,707	77,855	8,553,142	8,630,996
Grand Total	**$ 382,912,530**	**$ 51,231**	**$ 21,697,193**	**$ 21,748,425**	**$ 604,727,937**	**$ 77,855**	**$ 33,902,519**	**$ 33,980,373**

*for some agencies data has been reported through PP-17-2020

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