

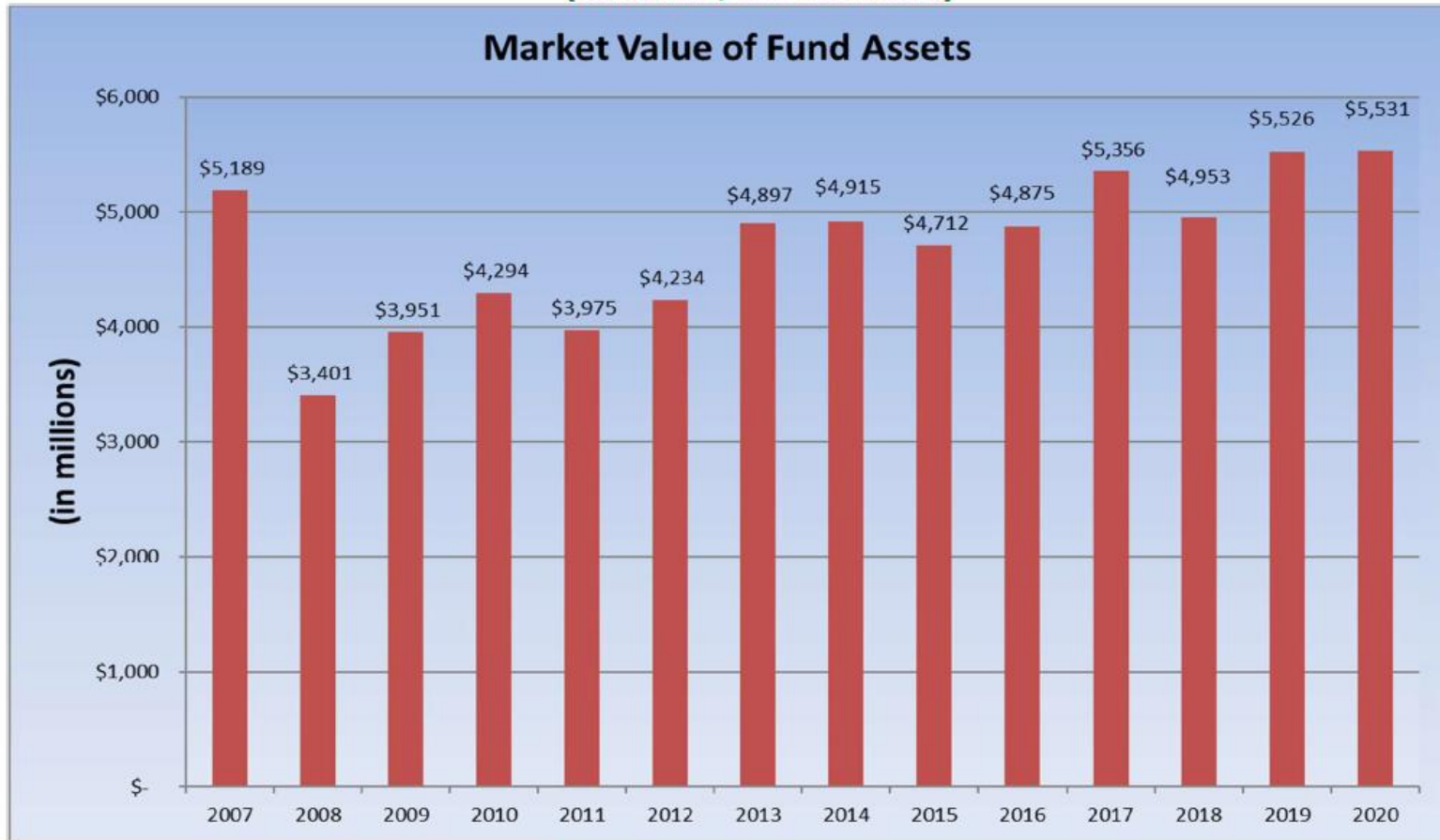
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# ERS Status Update

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Employes' Retirement System  
April 8, 2021

## Fund Value of Assets: 2007 – 2020 (Reflect 12/31 Fund Values)



Most recent Actuarial valuation projects benefit payments to total \$5.0 billion in next 10 years.

<b>Benefit Payments</b>	\$4.3 billion
<b>Expenses</b>	\$231 million
<b>Contributions</b>	\$1.2 billion
<b>Investment Gain</b>	\$3.7 billion

13 Year Estimates (1/1/2008 - 12/31/2020)

## Milwaukee Employees' Retirement System - March 22, 2021

### Fund as of February 28, 2021

\*Fund value of \$5.65b.  
 \*Fund return of 2.1%, gross of fees, outperformed the blended benchmark by 120bp.  
 \*Fund's returns underperformed in the 1, 5, 10 and 15-year periods, and outperformed in the YTD and 20-year periods, net of fees.

### February Relative Perf. Drivers

#### Manager Selection

\*DFA strategies 27bp  
 \*Brandes 15bp  
 \*UBS 14bp

#### Style Bias 43bp

\*Primarily Value and Small Cap

### March Update (as of 3/18/21)

\*Fund return is 1.5% in March.  
 \*Fund return is 3.6% YTD, net of fees.  
 \*Fund's approx. value is \$5.74b.  
 \*10 out of 16 active managers outperforming YTD, net of fees.  
 \*Public Equity, Fixed Income and Absolute Return asset classes, along with the Total Fund, are exceeding their respective benchmarks YTD, net of fees.

### YTD, the Fund has generated:

\*Investment Gains: \$201.6m  
 \*Benefits & Expenses: 76.7m  
 \*Contributions: 80.3m

### Monthly Withdrawals:

\*DFA US Small Cap Value \$9m  
 \*DFA Large Cap Value 5m  
 \*CastleArk 4m

### Total Fund - 10-Year Rolling Returns

11/28/1997 to 02/28/2021



### Growth of \$100 - Total Fund & ERS Benchmark

11/28/1997 to 2/28/2021



### Return Data

Source Data: Monthly Return

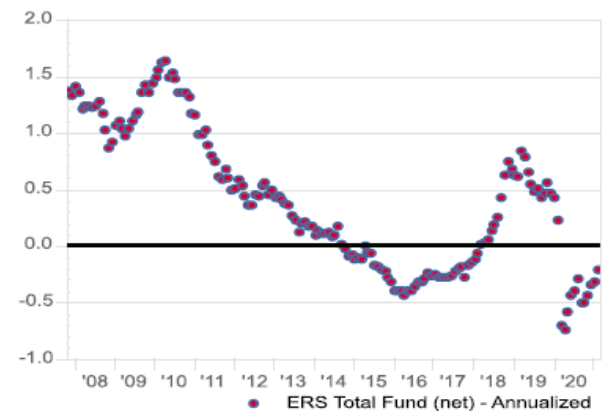
	1 Month	YTD	1 Year	5 Year	10 Year	15 Year	20 Year
Total Fund (net)	2.1	2.0	14.9	10.3	8.0	6.5	6.9
ERS Benchmark	0.9	0.6	17.1	10.4	8.2	6.8	6.5

### Total Fund - 20-Year Risk & Return Data

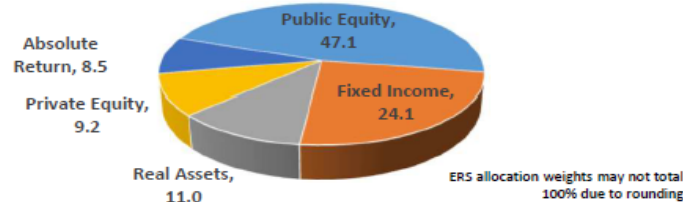
	Return	Std Dev	Tracking Error	Info Ratio (arith)	Sharpe Ratio	Alpha	Beta
Total Fund (net)	6.9	10.6	2.4	0.2	0.5	-0.2	1.1
ERS Benchmark	6.5	9.4	--	--	0.5	0.0	1.0

### Total Fund - 10-Year Rolling Excess Returns

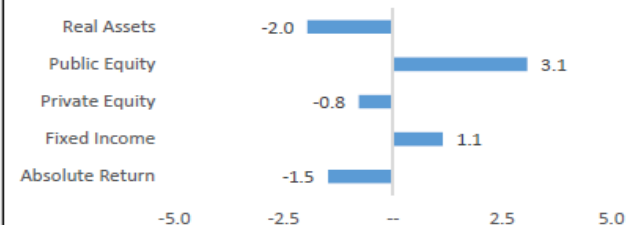
11/28/1997 to 2/28/2021



### ERS Allocation as of February 28, 2021



### Asset Allocation vs Policy as of February 28, 2021



# Projections (Assuming All Assumptions Are Met)



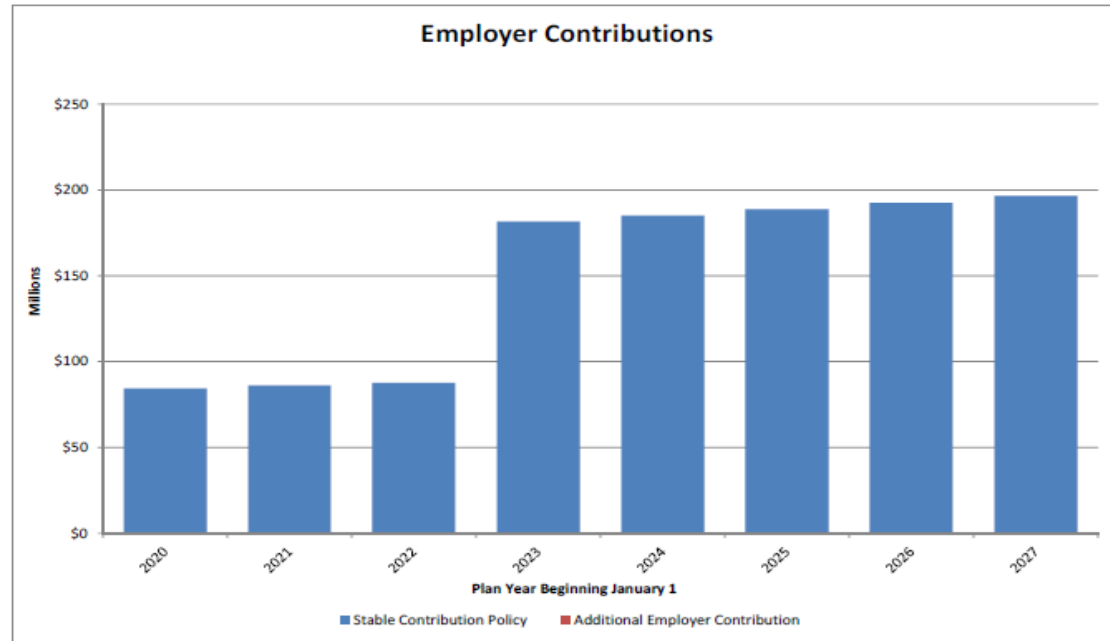
**Inputs**

- Membership Data
- Asset Data
- Benefit Provisions
- Assumptions
- Funding Methodology

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**Results**

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



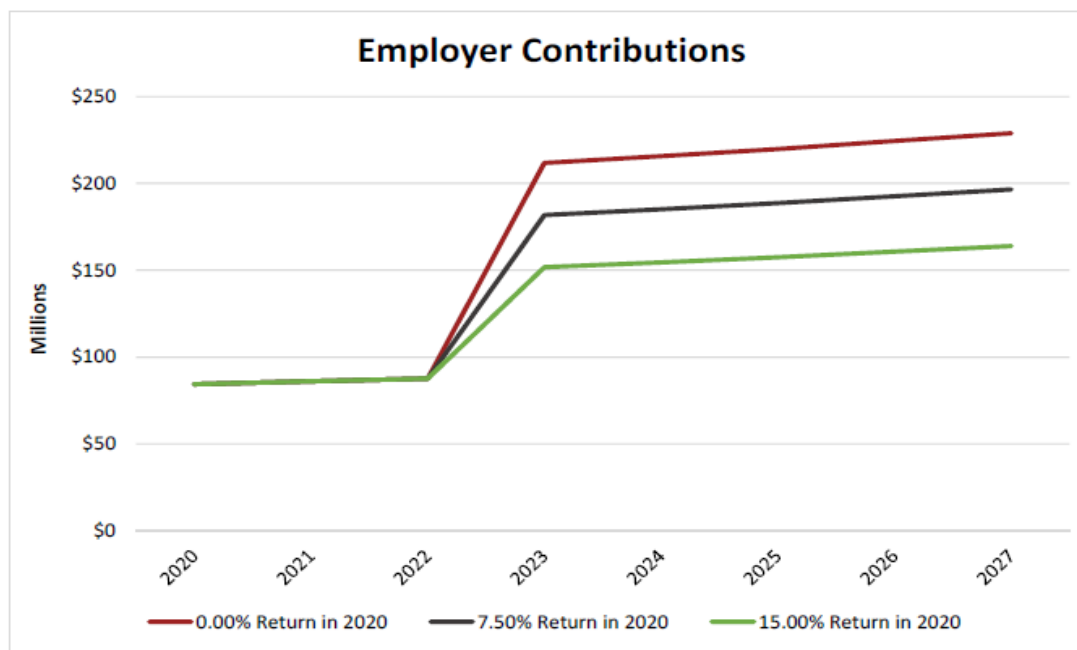
This graphs shows the projected dollar amount of aggregate employer contributions in the future, if all actuarial assumptions are met.

# Projections

## (Alternate Investment Returns for 2020)



- Inputs
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- ↓
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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.

# Actuarially Determined Employer Contribution

(Combined Fund only as of January 1, 2020)

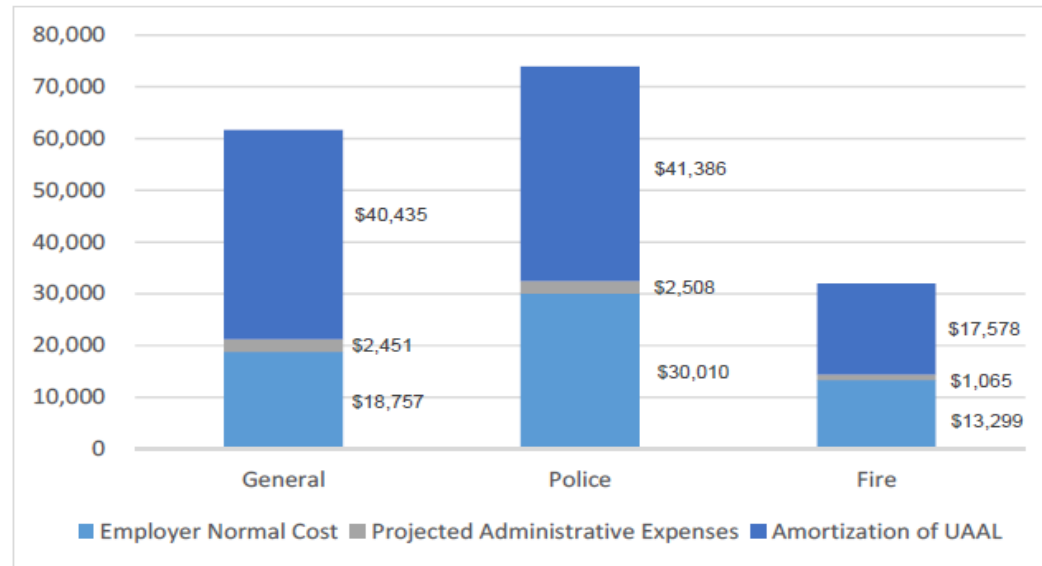
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The normal cost is just part of the actuarially determined contribution. The amortization of the unfunded actuarial accrued liability (UAAL) is a major component of the actuarial determined contribution.