



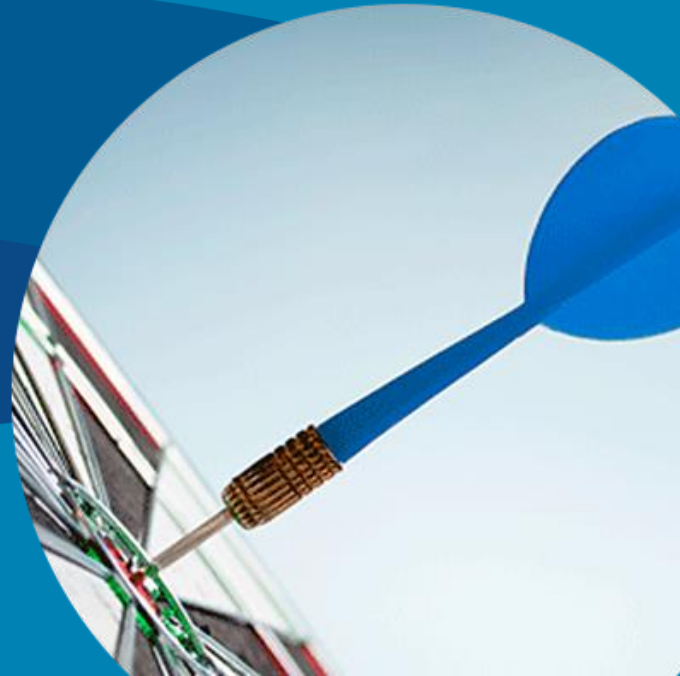
# Hawaii EUTF

January 2021

July 1, 2020 Retiree Healthcare Valuation (OPEB)

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# Key Actuarial Measurements

## July 1, 2020

(\$ millions)	State of Hawaii	Honolulu w/ HART	County of Hawaii	County of Maui	County of Kauai	Kauai DOW	Honolulu BWS	Hawaii DWS
AAL	\$ 11,273	\$ 2,465	\$587	\$593	\$282	\$19	\$159	\$35
<u>AVA</u>	<u>2,371</u>	<u>726</u>	<u>214</u>	<u>311</u>	<u>151</u>	<u>11</u>	<u>93</u>	<u>21</u>
UAAL	\$ 8,902	\$1,739	\$373	\$282	\$131	\$7	\$66	\$14
Funded Ratio								
7/1/2017	8.6%	16.6%	24.4%	39.3%	40.1%	49.0%	49.0%	46.9%
7/1/2018	12.1%	19.7%	27.3%	42.9%	43.0%	51.7%	52.2%	51.2%
7/1/2019	16.1%	23.8%	30.7%	46.0%	48.1%	54.1%	53.9%	54.5%
7/1/2020	21.0%	29.4%	36.4%	52.5%	53.4%	59.8%	58.8%	60.4%
ARC as a % of Payroll								
FYE22	24.4%	26.5%	24.4%	19.6%	20.8%	17.6%	21.0%	18.6%
FYE23	22.8%	24.8%	22.1%	19.7%	18.8%	16.1%	18.4%	17.5%
Normal Cost as a % of Payroll								
FYE23	7.0%	6.6%	7.1%	7.0%	7.1%	6.8%	6.3%	7.2%



# Actuarial Results – All Employers Combined

The 2020 results were lower than expected. 5.4% of the 6.1% liability gain was attributable to the favorable 2021 premium experience. 0.5% of the liability gain was attributable to the repeal of the excise tax, and 0.2% to the plan's non-premium demographic experience.

(\$ millions)	July 1, 2019	Expected July 1, 2020	Actual July 1, 2020	\$ Difference	% Difference
	(1)	(2)	(3)	(3) - (2)	(3) / (2) - 1
1. Actuarial Accrued Liability	\$15,569	\$16,421	\$15,412	(\$1,009)	-6.1%
2. Actuarial Value of Assets	3,133	3,914	3,898	(16)	-0.4%
3. UAAL (1 - 2)	\$12,436	\$12,507	\$11,514	(\$993)	-7.9%
4. Funded Ratio (2 / 1)	20.1%	23.8%	25.3%		
5. UAAL/Payroll	273.5%	265.8%	246.9%		
For Fiscal Year	2022	2023	2023		
6. Required Contribution (ARC)	\$1,190	\$1,229	\$1,138	(\$91)	-7.4%



# Actuarial Results – State of Hawaii Only

(\$ millions)	July 1, 2019	Expected July 1, 2020	Actual July 1, 2020	\$ Difference	% Difference
	(1)	(2)	(3)	(3) - (2)	(3) / (2) - 1
1. Actuarial Accrued Liability	\$11,383	\$12,011	\$11,273	(\$738)	-6.1%
2. Actuarial Value of Assets	1,829	2,376	2,371	(5)	-0.2%
3. UAAL (1 - 2)	\$9,553	\$9,635	\$8,902	(\$733)	-7.6%
4. Funded Ratio (2 / 1)	16.1%	19.8%	21.0%		
5. UAAL/Payroll	285.0%	277.7%	244.7%		
For Fiscal Year	2022	2023	2023		
6. Required Contribution (ARC)	\$877	\$907	\$839	(\$68)	-7.5%

The State contributed 100% of the annual required contribution in FYE20.

# Actuarial Results – Gains and Losses

## Calculation of total actuarial gain or loss

	Aggregate	State of Hawaii
(1) UAAL as of July 1, 2019	\$ 12,436	\$ 9,553
(2) Normal cost, including administrative expenses	331	247
(3) Interest (includes offset for earnings on contributions)	844	649
(4) Expected contributions (minimum required)	(1,105)	(815)
(5) Expected UAAL as of July 1, 2020	\$ 12,507	\$ 9,635
(6) Actual UAAL as of July 1, 2020	11,514	8,902
(7) Total (gain)/loss for the year (item 6 - item 5)	(993)	(733)

## Sources of gains and losses:

(8) Asset (gain)/loss for the year	59	34
(9) (Gain)/loss due to contributions*	(8)	-
(10) Other liability (gain)/loss	(961)	(708)
(11) Change in assumptions**	(83)	(59)
(12) Change in benefit provisions	-	-
(13) Total (gain)/loss for the year	(993)	(733)

\* County of Maui contributed more than required in FYE20.

\*\* Update to the healthcare trend assumption to reflect the repeal of the “Cadillac Tax”.



# Premium Experience

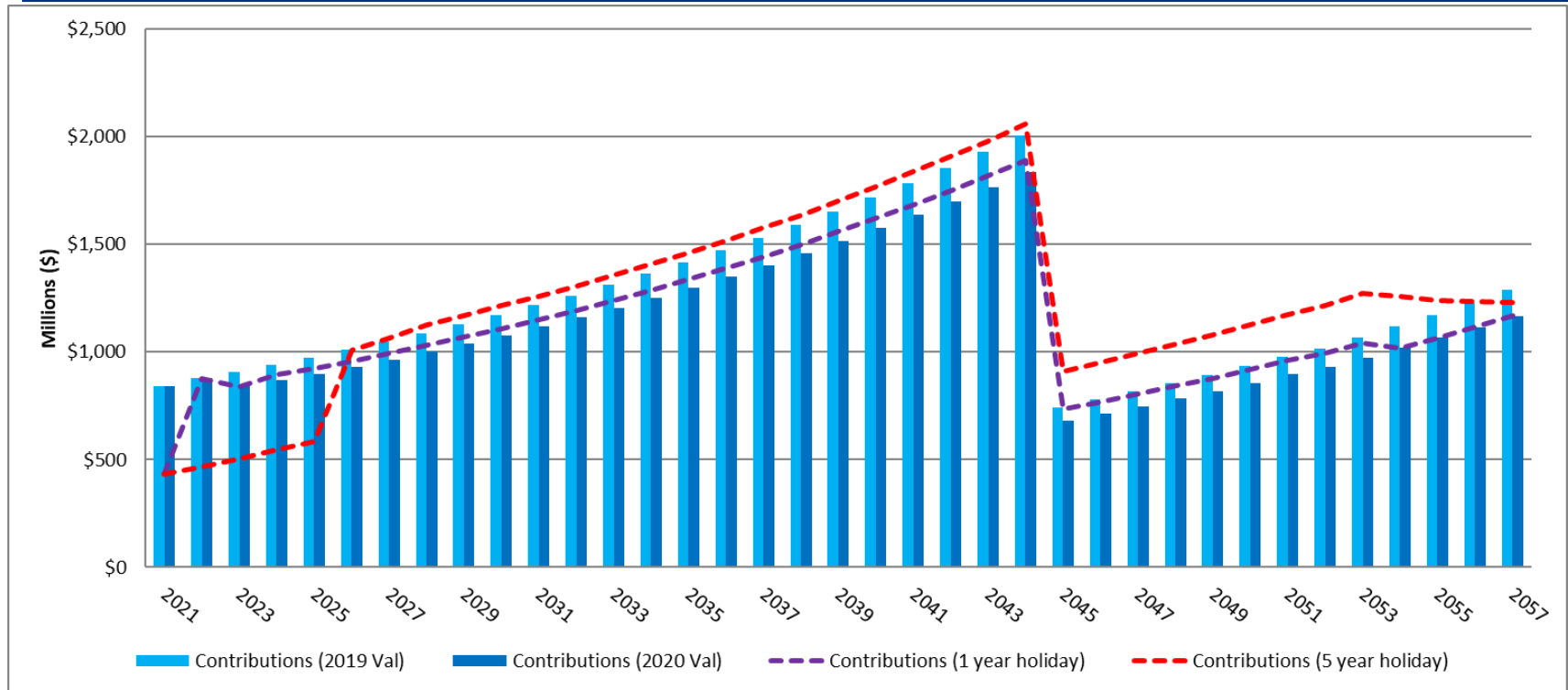
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Medical + Rx + Dental + Vision	2020 Premium	Expected 2021	Actual 2021	Actual vs Expected
Post-65 HMSA	\$526	\$566	\$530	(6.4)%
Post-65 Kaiser	507	546	502	(8.1)%
Pre-65 HMSA	860	927	862	(7.0)%
Pre-65 Kaiser	806	869	797	(8.3)%
Part B	145	152	149	(2.0)%

- Post-65 HMSA premiums have the largest impact
- Overall premium experience resulted in an actuarial gain of 5.4%.

# Long-term Outlook

## State of Hawaii's Contributions



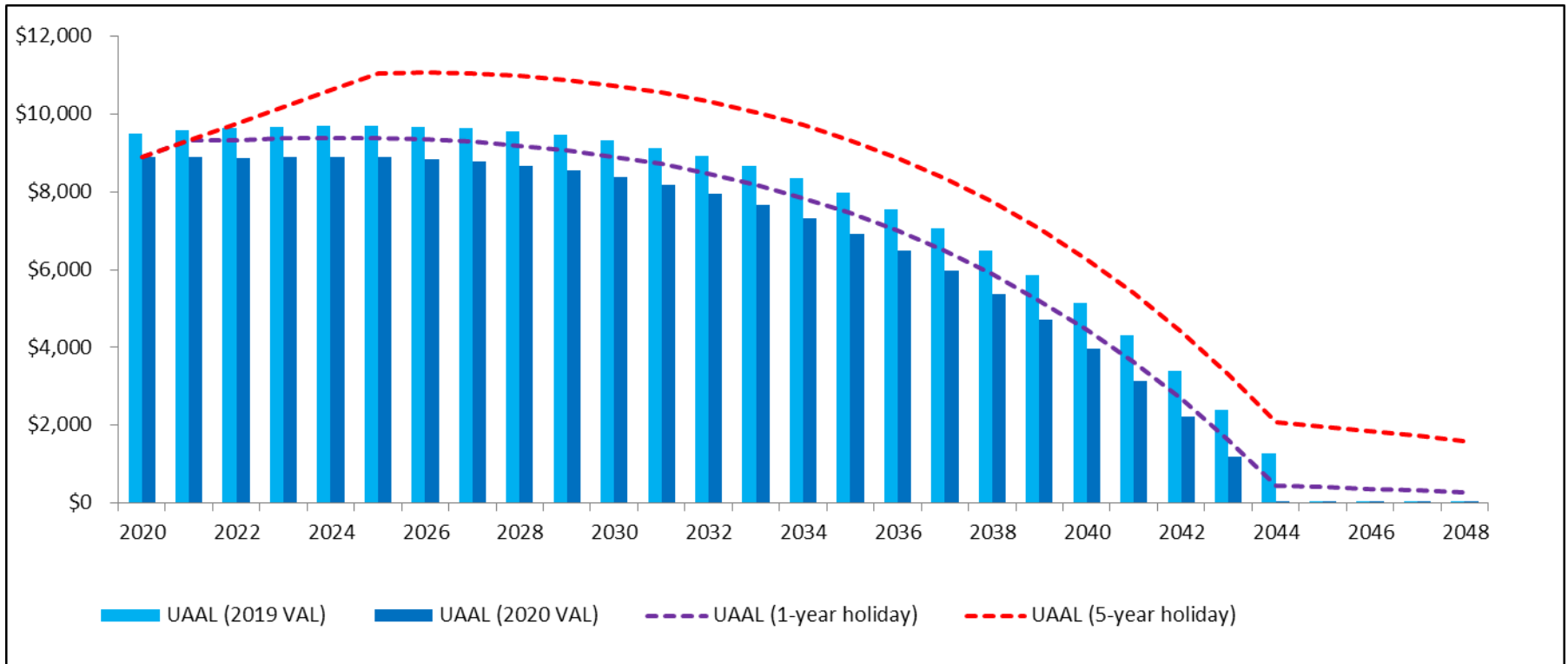
A one-year contribution holiday saves \$408 million in FYE21, but adds \$922 million to the total contributions over the next 37 years. A five-year contribution holiday would save \$1.79 billion in the short-run, but adds \$4.25 billion to the 37 year total.

Fiscal Year	ARC Reduction					Change from 7/1/19
	7/1/19 ARC	7/1/20 ARC	7/1/20	7/1/20 ARC w/5-year Act		
	(000's)	(000's)	(000's)	268 Suspension (000's)	268 Suspension (000's)	
	(a)	(b)	(c) = (b) - (a)	Revised (d)	Increase (e) = (d) - (b)	(f) = (d) - (a)
2021	842,456	842,456	-	434,226	(408,230)	(408,230)
2022	877,193	877,193	-	464,088	(413,105)	(413,105)
2023	907,124	839,445	(67,679)	504,377	(335,068)	(402,747)
2024	940,028	867,037	(72,991)	544,518	(322,519)	(395,510)
2025	974,488	897,449	(77,039)	586,587	(310,862)	(387,901)
2026	1,010,507	930,262	(80,245)	1,006,558	76,296	(3,949)
2027	1,048,136	964,554	(83,582)	1,065,641	101,087	17,505
2028	1,087,484	1,000,417	(87,067)	1,128,149	127,732	40,665
2029	1,128,586	1,037,887	(90,699)	1,170,089	132,202	41,503
2030	1,171,364	1,077,030	(94,334)	1,213,859	136,829	42,495
2031	1,216,014	1,117,755	(98,259)	1,259,373	141,618	43,359
2032	1,262,629	1,160,273	(102,356)	1,306,848	146,575	44,219
2033	1,311,343	1,204,706	(106,637)	1,356,411	151,705	45,068
2034	1,362,199	1,251,076	(111,123)	1,408,091	157,015	45,892
2035	1,415,269	1,299,449	(115,820)	1,461,960	162,511	46,691
2036	1,470,659	1,349,922	(120,737)	1,518,120	168,198	47,461
2037	1,528,431	1,402,537	(125,894)	1,576,622	174,085	48,191
2038	1,588,665	1,457,375	(131,290)	1,637,553	180,178	48,888
2039	1,651,434	1,514,489	(136,945)	1,700,973	186,484	49,539
2040	1,716,817	1,573,942	(142,875)	1,766,953	193,011	50,136
2041	1,784,874	1,635,793	(149,081)	1,835,560	199,767	50,686
2042	1,855,719	1,700,128	(155,591)	1,906,887	206,759	51,168
2043	1,929,408	1,766,997	(162,411)	1,980,992	213,995	51,584
2044	2,005,989	1,836,457	(169,532)	2,057,942	221,485	51,953
2045	742,842	682,225	(60,617)	911,462	229,237	168,620
2046	778,535	714,201	(64,334)	951,461	237,260	172,926
2047	815,868	747,566	(68,302)	993,130	245,564	177,262
2048	854,933	782,420	(72,513)	1,036,579	254,159	181,646
2049	892,461	815,496	(76,965)	1,078,550	263,054	186,089
2050	935,021	853,451	(81,570)	1,125,713	272,262	190,692
2051	979,712	897,192	(82,520)	1,174,860	277,668	195,148
2052	1,017,349	930,229	(87,120)	1,217,616	287,387	200,267
2053	1,066,193	973,529	(92,664)	1,270,974	297,445	204,781
2054	1,117,398	1,018,845	(98,553)	1,255,899	237,054	138,501
2055	1,171,110	1,066,283	(104,827)	1,240,418	174,135	69,308
2056	1,227,496	1,115,973	(111,523)	1,236,505	120,532	9,009
2057	1,286,676	1,168,008	(118,668)	1,230,672	62,664	(56,004)
Sum	44,972,410	41,370,047	(3,602,363)		4,246,169	643,806
Average			(97,361)		114,761	17,400



# Long-term Outlook

## State of Hawaii's UAAL



Financing an multi-generational defined benefit plan requires steady funding. We recommend employers fully fund the ARC, even if funding relief is extended.

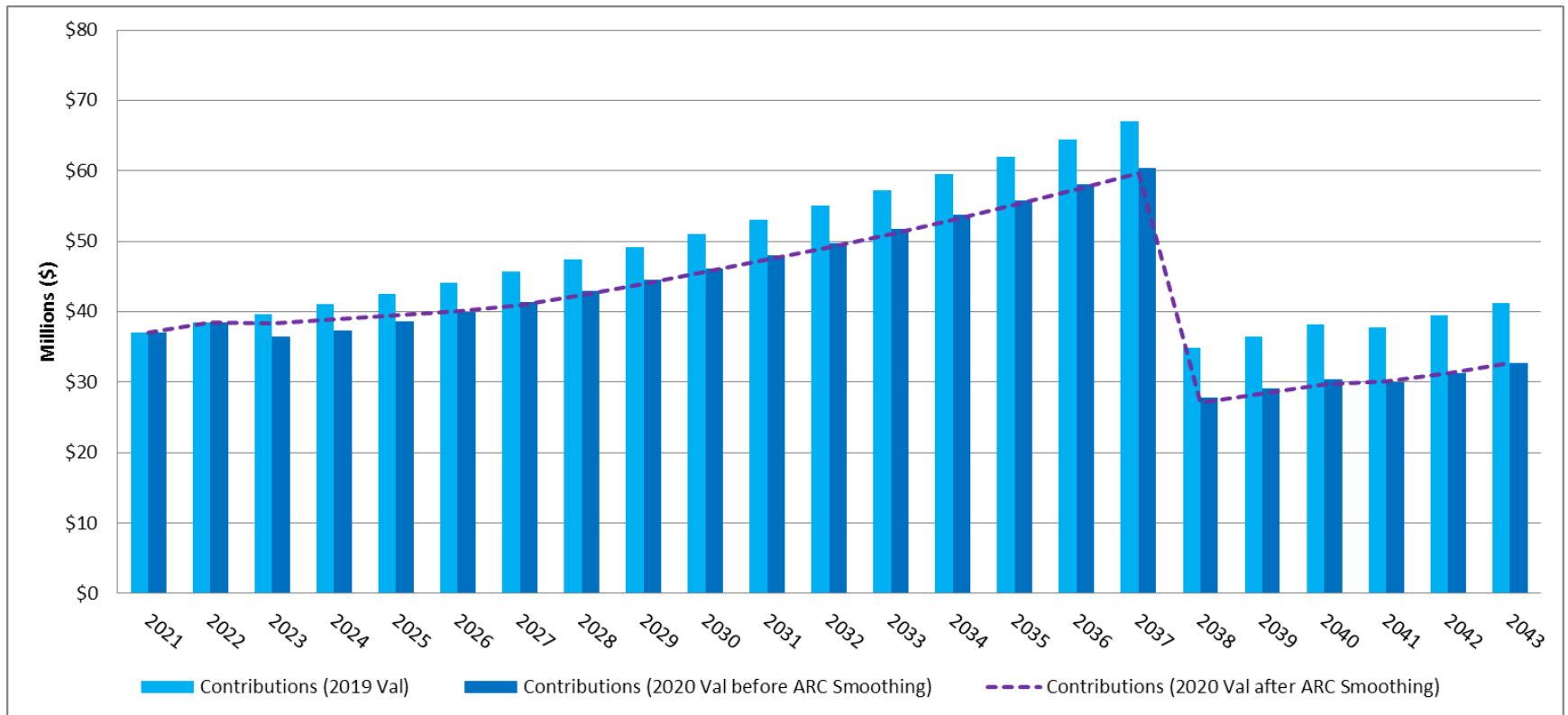
# Premiums, BMC and Asset Volatility

	HMSA Post-65 Medical	HMSA Post-65 Rx	Kaiser Post-65	HMSA Pre-65 Medical	HMSA Pre-65 Rx	Kaiser Pre-65	Dental	Vision	BMC	Asset Return Market Value
2015	-3.3%	21.2%	5.6%	-4.5%	20.4%	5.9%	7.7%	0.0%	0.0%	15.3%
2016	9.4%	16.8%	5.2%	10.8%	30.4%	6.2%	5.0%	3.0%	16.1%	3.1%
2017	5.7%	6.3%	4.2%	5.8%	12.5%	4.6%	3.7%	-2.5%	10.0%	2.6%
2018	4.6%	-24.5%	10.7%	4.6%	-18.5%	10.8%	5.6%	-7.1%	0.0%	9.5%
2019	1.3%	15.4%	1.4%	1.9%	7.3%	1.4%	1.3%	-6.5%	1.1%	7.3%
2020	9.2%	15.6%	-6.1%	9.1%	20.5%	-6.1%	5.0%	0.0%	6.7%	4.6%
2021	2.0%	-1.1%	-1.4%	3.3%	-7.8%	-1.5%	3.9%	4.3%	2.7%	1.8%
7-year average	<b>4.1%</b>	<b>6.0%</b>	<b>2.7%</b>	<b>4.3%</b>	<b>8.0%</b>	<b>2.9%</b>	<b>4.6%</b>	<b>-1.3%</b>	<b>5.1%</b>	<b>6.2%</b>

To reduce the year to year contribution volatility, we recommend direct rate smoothing for employers that are fully funding the ARC.



# County of Maui elected to implement the 2% ARC Smoothing Corridor



The 2% ARC corridor keeps contributions very level in dollar terms from FYE22 through FYE26. Maui can elect to undo this change in any future year.

# Disclaimers

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- This presentation is intended to be used in conjunction with the July 1, 2020 actuarial valuation. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.