

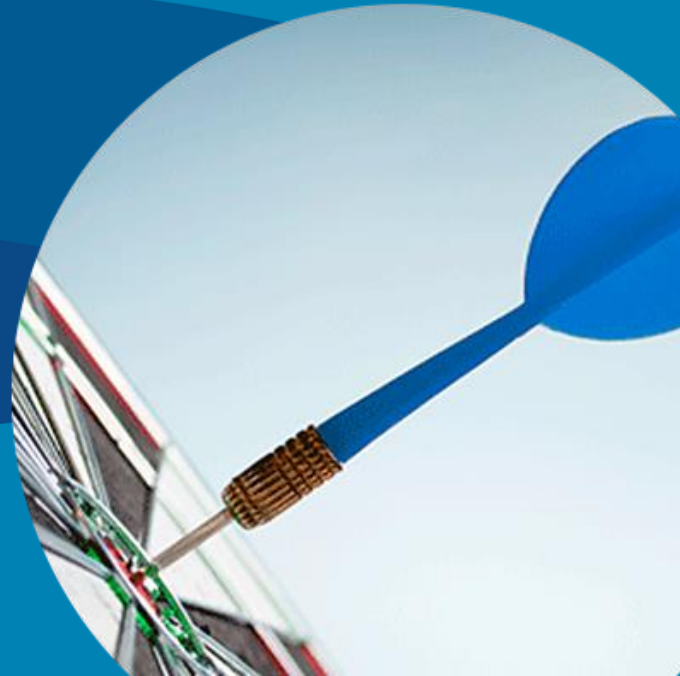
Hawaii EUTF

January 2019

July 1, 2018 Retiree Healthcare Valuation (OPEB)

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Key Actuarial Measurements

July 1, 2018

(\$ millions)	State of Hawaii	CC of Honolulu w/ HART	County of Hawaii	County of Maui	County of Kauai	Kauai DOW	Honolulu BWS	Hawaii DWS
AAL	\$ 10,705	\$ 2,365	\$551	\$554	\$262	\$18	\$153	\$34
<u>AVA</u>	<u>1,291</u>	<u>466</u>	<u>151</u>	<u>237</u>	<u>113</u>	<u>9</u>	<u>80</u>	<u>17</u>
UAAL	\$ 9,414	\$1,899	\$401	\$316	\$150	\$8	\$73	\$16
Funded Ratio								
7/1/2013	0.0%	6.9%	16.1%	7.0%	22.3%	30.6%	20.9%	29.7%
7/1/2015	2.4%	12.1%	19.6%	33.4%	32.0%	40.4%	37.0%	40.2%
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%
FYE 2021 ARC as a % of Payroll								
7/1/2018	24.2%	26.7%	23.7%	19.9%	20.6%	17.6%	21.0%	19.4%
FYE 2021 Normal Cost as a % of Payroll								
7/1/2018	7.3%	7.0%	7.4%	7.3%	7.3%	6.9%	6.9%	7.3%

Actuarial Results – All Employers Combined

Overall, the 2018 valuation results were better than expected, due mainly to favorable liability experience and contributions which exceeded the required minimums.

(\$ in millions)	July 1, 2017	Expected July 1, 2018	Actual July 1, 2018	\$ Difference	% Difference
	(1)	(2)	(3)	(3) - (2)	(3) / (2) - 1
1. Actuarial Accrued Liability	\$13,924	\$14,714	\$14,641	(\$73)	-0.5%
2. Actuarial Value of Assets	1,778	2,311	2,363	52	2.3%
3. UAAL (1 - 2)	\$12,146	\$12,403	\$12,278	(\$125)	-1.0%
4. Funded Ratio (2 / 1)	12.8%	15.7%	16.1%		
5. UAAL/Payroll	283.9%	280.1%	279.1%		
For Fiscal Year	2019	2021	2021		
6. Required Contribution (ARC)	\$1,068	\$1,149	\$1,143	(\$6)	-0.5%

Expected July 1, 2018 results based on ACT 268 minimum contribution scenario from July 1, 2017 valuation. Employers contributed \$48.3 million more than the minimum required contribution in FYE18. Market value of assets increased by 7.46% (long-term assumption is 7.00%).

Actuarial Results – State of Hawaii Only

(\$ in millions)	July 1, 2017	Expected July 1, 2018	Actual July 1, 2018	\$ Difference	% Difference
	(1)	(2)	(3)	(3) - (2)	(3) / (2) - 1
1. Actuarial Accrued Liability	\$10,194	\$10,775	\$10,705	(\$70)	-0.6%
2. Actuarial Value of Assets	880	1,248	1,291	43	3.4%
3. UAAL (1 - 2)	\$9,314	\$9,527	\$9,414	(\$113)	-1.2%
4. Funded Ratio (2 / 1)	8.6%	11.6%	12.1%		
5. UAAL/Payroll	295.5%	292.0%	289.3%		
For Fiscal Year	2019				
6. Required Contribution (ARC)	\$787				
For Fiscal Year	2020	2021	2021		
7. Required Contribution (ARC)	\$815	\$848	\$842	(\$6)	-0.7%

Expected July 1, 2018 results based on ACT 268 minimum contribution scenario from July 1, 2017 valuation. The State contributed \$40.1 million more than the minimum required contribution in FYE18.

Actuarial Results – Gains and Losses

Calculation of total actuarial gain or loss	Aggregate	State of Hawaii
1. UAAL as of July 1, 2017	\$ 12,146	\$ 9,315
2. Normal cost, with administrative expenses	309	229
3. Interest (includes earnings on contributions)	830	637
4. Expected contributions (minimum required)	(883)	(654)
5. Expected UAAL as of July 1, 2018	\$ 12,402	\$ 9,527
6. Actual UAAL as of July 1, 2018	12,278	9,414
7. Total (gain)/loss for the year (item 6 - item 5)	(125)	(113)
Sources of gains and losses:		
8. Asset (gain)/loss for the year*	\$ (2)	\$ (1)
9. (Gain)/loss due to contributions	(50)	(41)
10. Other liability (gain)/loss**	(251)	(197)
11. Change in assumptions***	179	127
12. Change in benefit provisions	-	-
13. Total (gain)/loss for the year	\$ (125)	\$ (113)

* July 1, 2018 valuation was the first valuation that incorporates asset smoothing. The FYE18 investment gains in excess of the 7.00% assumption will be phased-in over a 4 year period.

** Liability gain was driven by favorable claims experience, partly driven by the 2019 Health Insurer Fee (HIF) holiday. Liability (gain)/loss also includes demographic experience compared to assumptions (retirements, terminations, deaths, etc.)

*** Update to short-term trend assumptions, mainly to reflect the anticipated return of the HIF.

Premium and Asset Experience

- Premium experience

Medical + Rx + Dental + Vision	2018 Premium	Expected 2019	Actual 2019	Actual vs Expected
Post-65 HMSA	\$443	\$471	\$472	0.2%
Post-65 Kaiser	528	573	535	(6.6%)
Pre-65 HMSA	746	794	769	(3.1%)
Pre-65 Kaiser	842	916	853	(6.9%)

- Post-65 HMSA premiums have the largest impact
- Actual investment returns exceeded expected by \$9.5 million. Asset gain of \$2.4 million recognized in current year; remaining gain recognized in the following 3 years

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%
5-year average	3.5%	5.6%	5.4%	3.6%	9.1%	5.7%	4.6%	-2.7%	5.2%	7.5%

Managing premium volatility:

1. With current approach, losses are amortized over 30-years
2. Adjusting short-term trend assumptions
3. What's the best approach for smoothing premium experience?
4. Direct rate (output) smoothing may more desirable

Contribution Sensitivity Scenarios

State of Hawaii Only

Scenario 1: 0.00% return in FYE19, followed by 7.00%

Fiscal year ending June 30,	ARC (in millions)		\$ Increase	% Increase
	Baseline	Scenario 1		
2022	\$ 870	\$ 874	\$ 4	0.5%
2023	902	907	5	0.6%
2024	934	942	8	0.9%
2025	969	977	8	0.8%
2026	1,005	1,013	8	0.8%

Scenario 2: 4.0% return for FYE19 - FYE21, followed by 7.00%

Fiscal year ending June 30,	ARC (in millions)		\$ Increase	% Increase
	Baseline	Scenario 2		
2022	\$ 870	\$ 873	\$ 3	0.3%
2023	902	907	5	0.6%
2024	934	943	9	1.0%
2025	969	980	11	1.1%
2026	1,005	1,018	13	1.3%

Percentage impact would be greater for employers with higher funded ratios.

Contribution Sensitivity Scenarios

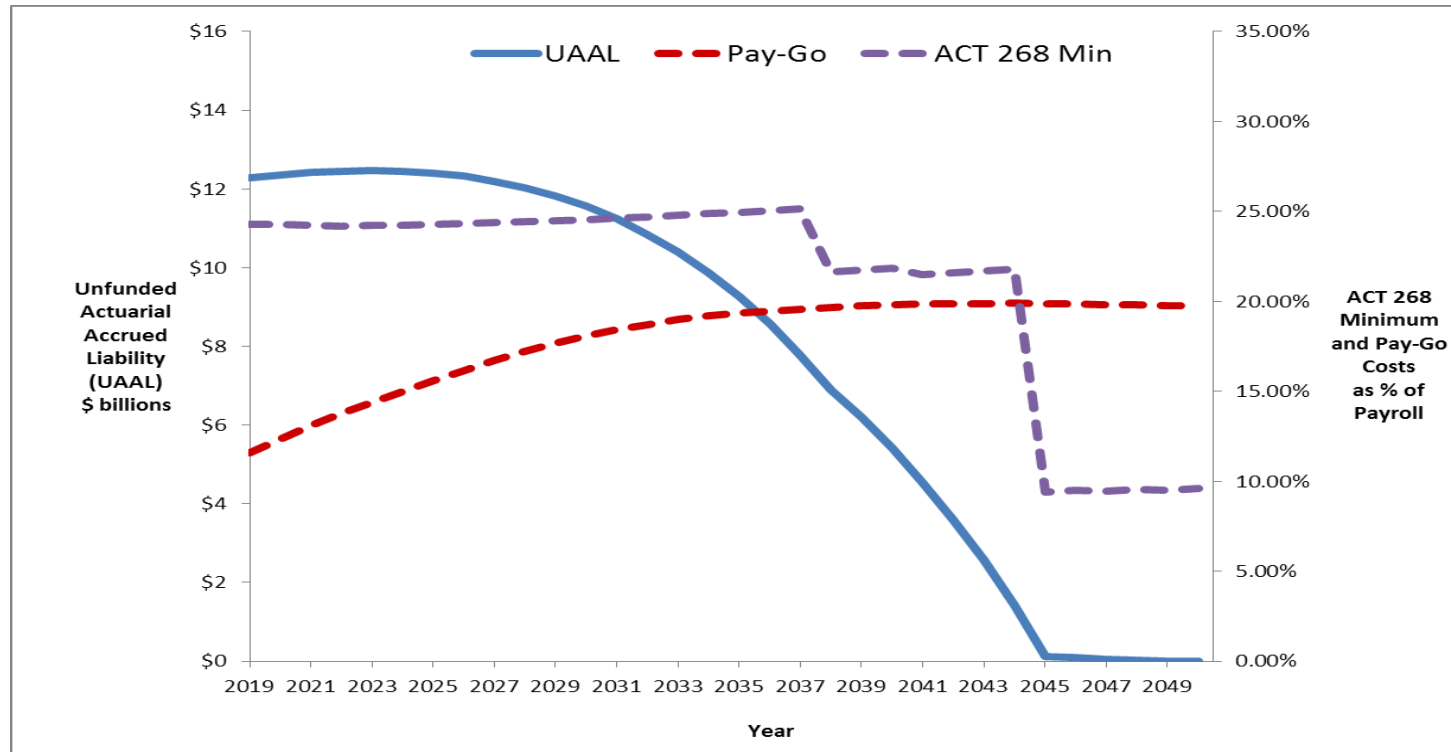
State of Hawaii Only

Scenario 3: 7.00% asset returns, 2% liability loss

Fiscal year ending June 30,	ARC (in millions)				
	Baseline	Scenario 3	\$ Increase	% Increase	
2022	\$ 870	\$ 890	\$ 20	2.3%	
2023	902	923	21	2.3%	
2024	934	956	22	2.4%	
2025	969	991	22	2.3%	
2026	1005	1,028	23	2.3%	

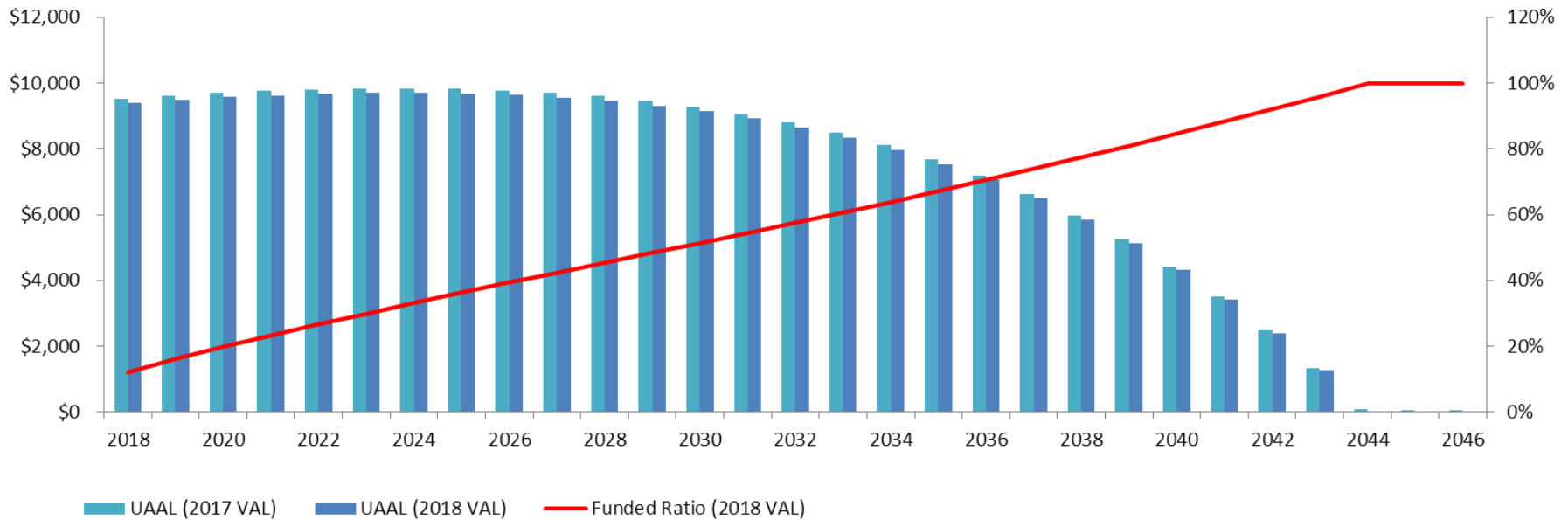
In the near term, liability experience will have a greater impact on the ARC than asset experience.

Long-term Outlook - Aggregate



Employer contributions are expected to exceed the benefit payments for the next 26 years. The additional cost of prefunding is \$10.0 billion over that period. After 26 years, the plan is projected to be 99.7% funded and the assets are projected to have grown from \$2.4 billion to \$44.8 billion.

Long-term Outlook – State of Hawaii



UAAL is expected to remain fairly level in dollar terms for the near term, but decline as a ratio of payroll. The funded ratio is expected to increase by approximately 3% per year.

Summary of Benefits

- Employer's Maximum Contribution is a % of the Base Monthly Contribution

Hire Date	Years of Service	% of BMC
Before 7/1/1996	<10	50%
	10+	100%
Post 7/1/1996*	< 10	0%
	10-14	50%
	15-24	75%
	25+	100%

*Employees hired after 6/30/2001 only receive the % of the "Self" BMC

- Approximately 67% of current active employees were hired after 6/30/2001. Approximately 6% of current retirees that have medical coverage are receiving less than 100% of the BMC.
- Part B Premium Reimbursement is in addition to the BMC subsidy. The 2019 Part B premium is \$136/month for employees enrolling in Part B for the first time or not enrolled in Social Security. The Part B premium reimbursement is provided to both member and spouse regardless of date of hire or service.

2019 Premiums and Base Monthly Contribution (BMC)

- Retiree only coverage (HMSA medical + Rx + dental + vision)

	Premium	100% BMC	75% BMC	50% BMC
Pre-65	\$769	\$951	\$713	\$476
Post-65	\$472	\$678	\$508	\$339

- Retiree plus spouse coverage (HMSA medical + Rx + dental + vision)

	Premium	100% BMC	75% BMC	50% BMC
Pre-65	\$1,499	\$1,917	\$1,438	\$958
Post-65	\$920	\$1,358	\$1,018	\$679

- By statute, the BMC increases at the same rate as Part B premiums; not the EUTF's premiums. 2019 BMC is 1% higher than 2018 BMC.
- Medicare retirees who receive 100% of the BMC are projected to have their premiums 100% paid for in future years.

Actuarial Assumptions

- ERS experience study will be completed before the 2019 valuation
 - Required every three years
 - Assumptions from ERS include mortality, retirement, withdrawal, long-term inflation, payroll-growth, and salary increases.
- OPEB specific assumptions are reviewed each year as part of the valuation process
 - 98%/90%/65% participation assumed for 100%/75%/50% tiers respectively
 - 75% and 50% tiers are starting to retire; the 90% and 65% participation assumptions agree well with recent experience
 - Short-term health care trend based on feedback from EUTF's healthcare consultants
- Suggest a review of EUTF specific, long-term macroeconomic assumptions concurrent with ERS experience study
 - 7% investment return assumption
 - Long-term trend assumption is based on macroeconomic considerations
 - US healthcare expenditures are currently around 19% of GDP
 - Current assumption expects percentage to grow to 26%-28% of GDP

Disclaimers

- This presentation is intended to be used in conjunction with the July 1, 2018 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.