

# Impact of Various Possible Changes to Plan Design

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Act 75 charges the Task Force with providing recommendations to reduce the unfunded liabilities and ADECs by 25-100% of the size of the Year-over-Year Increases from FY21 to FY22.

The following slides provide preliminary actuarial analysis about the impact of a range of possible options that were previously studied. Analysis was based on the FY20 valuation and the assumptions that were in place effective FY21.

Combinations of options should be modeled by actuaries together, as the sum of the parts do not equal the whole.

Scope of Changes for Each Fund		
	VSERS	VSTRS
UAAL 2019 Valuation for FY21 Budget	\$815,464,698	\$1,554,459,287
UAAL 2020 Valuation for FY22 Budget	\$1,040,465,119	\$1,933,289,366
<b>Change in UAAL</b>	<b>+\$225,000,421 (27.6%)</b>	<b>+\$378,830,079 (24.4%)</b>
ADEC FY21	\$83,876,570	\$132,141,701
ADEC FY22	\$119,967,769	\$196,206,504
<b>Change to ADEC</b>	<b>+\$36,091,199 (43.0%)</b>	<b>+\$64,064,803 (48.5%)</b>

Fiscal Targets per Act 75		
	25% of YOY FY21-FY22 Increase	100% of YOY FY21-FY22 Increase
<b>VSERS - UAAL</b>	\$56.3 million	\$225.0 million
<b>VSERS - ADEC</b>	\$9.0 million	\$36.1 million
<b>VSTRS - UAAL</b>	\$94.7 million	\$378.8 million
<b>VSTRS - ADEC</b>	\$16.1 million	\$64.1 million

# COLA Modifications

- Cost of Living Adjustments (COLAs) are post-retirement increases to benefits based on inflation. COLAs are currently tied to the CPI and the full amount of the retirement benefit is subject to the COLA.
- COLAs are a significant cause of actuarial risk because it can be difficult to predict future inflation rates.

Plan	Current Structure
VSERS Group C and D	100% CPI (1% min, 5% max) after 12 months of retirement.
VSERS Old Group F	100% CPI (1% min, 5% max) after reaching age 62 or 30 years of service.
VSERS New Group F	100% CPI (1% min, 5% max) after reaching age 65 or Rule of 87.
VSTRS Group C1	50% CPI (1% min, 5% max) after 12 months of retirement or with 30 years of service.
VSTRS Group C2	50% CPI up to max of 5%

VSERS Group C: Law enforcement and public safety

VSERS Group D: Judges

VSERS Old Group F: State employees hired before 7/1/08

VSERS New Group F: State employees hired on or after 7/1/08

VSTRS Group C1: Members who were at least 57 years old or had at least 25 years of service on June 30, 2010.

VSTRS Group C2: Members who were less than age 57 and had less than 25 years of service as of June 30, 2010

# COLA Modifications

## VSERS

Description (\$ mil)	2020 Valuation Assumptions	Included in Treasurer's Jan 15 <sup>th</sup> report					Preliminary estimates for House (excludes actives within 5 years of normal retirement eligibility)		
		Remove COLA for all actives	Remove COLA for all actives except those within 5 yrs of retirement	Remove COLA for all non-vested actives	Remove COLA for all actives except those within 10 yrs of retirement	COLA Threshold – COLAs on first \$24,000 of annual benefit	COLA Threshold – COLA on first \$24,000 of annual benefit	No COLA until 65 years old	No COLA until 67 years old
Accrued Liability	\$3,095.3	\$2,856.6	\$2,978.6	\$3,083.3	\$3,025.1	\$2,960.8	\$3,023.7	\$3,059.0	\$3,046.6
Change		(\$238.8)	(\$116.7)	(\$12.0)	(\$70.2)	(\$134.5)	(\$71.6)	(\$36.3)	(\$48.8)
Unfunded Liability	\$1,040.5	\$801.7	\$923.8	\$1,028.4	\$970.3	\$905.9	\$968.9	\$1,004.2	\$991.7
Change		(\$238.8)	(\$116.7)	(\$12.0)	(\$70.2)	(\$134.5)	(\$71.6)	(\$36.3)	(\$48.8)
Funded %	66.4%	71.9%	69.0%	66.6%	67.9%	69.4%	68.0%	67.2%	67.4%
Change		5.5%	2.6%	0.3%	1.5%	3.0%	1.6%	0.8%	1.0%
ADEC for FY22	\$120.0	\$84.7	\$99.7	\$114.8	\$106.3	\$101.2	\$108.0	\$113.7	\$111.6
Change		(\$35.3)	(\$20.3)	(\$5.1)	(\$13.7)	(\$18.8)	(\$12.0)	(\$6.3)	(\$8.4)

Preliminary estimates do not reflect any proposed changes to VSERS Group D or the impact of setting COLAs at age 60 for VSERS Group C.

## VSTRS

Description (\$ mil)	2020 Valuation Assumptions	Included in Treasurer's Jan 15 <sup>th</sup> report						Preliminary estimates for House (excludes actives within 5 years of normal retirement eligibility)			
		Remove COLA for all actives	Remove COLA for all actives except those within 5 yrs of retirement	Remove COLA for all non-vested actives	Remove COLA for all actives except those within 10 yrs of retirement	COLA Threshold – COLAs on first \$24,000 of annual benefit	COLA Threshold – COLAs on first \$20,000 of annual benefit	COLA Threshold – COLAs on first \$15,000 of annual benefit	COLA Threshold – COLA on first \$24,000 of annual benefit	No COLA until 65 years old	No COLA until 67 years old
Accrued Liability	\$3,969.0	\$3,803.9	\$3,866.9	\$3,964.7	\$3,904.8	\$3,875.1	\$3,864.5	\$3,850.2	\$3,905.7	\$3,950.5	\$3,937.2
Change		(\$165.1)	(\$102.1)	(\$4.3)	(\$64.2)	(\$93.9)	(\$104.5)	(\$118.8)	(\$63.3)	(\$18.5)	(\$31.8)
Unfunded Liability	\$1,933.3	\$1,768.2	\$1,831.2	\$1,929.0	\$1,869.1	\$1,839.4	\$1,828.8	\$1,814.5	\$1,870.0	\$1,914.8	\$1,901.5
Change		(\$165.1)	(\$102.1)	(\$4.3)	(\$64.2)	(\$93.9)	(\$104.5)	(\$118.8)	(\$63.3)	(\$18.5)	(\$31.8)
Funded %	51.3%	53.5%	52.6%	51.3%	52.1%	52.5%	52.7%	52.9%	52.1%	51.5%	51.7%
Change		2.2%	1.4%	0.1%	0.8%	1.2%	1.4%	1.6%	0.8%	0.2%	0.4%
ADEC for FY22	\$196.2	\$173.7	\$180.7	\$194.1	\$185.4	\$183.7	\$182.3	\$180.4	\$186.8	\$193.6	\$191.6
Change		(\$22.5)	(\$15.5)	(\$2.1)	(\$10.8)	(\$12.5)	(\$13.9)	(\$15.8)	(\$9.4)	(\$2.6)	(\$4.6)

# Average Final Compensation (AFC)

- Retirement benefits are calculated based on a member's length of service and AFC.
- AFC is calculated by averaging the 3 highest consecutive years of salary with the following exceptions:
  - VSERS Group C (law enforcement): 2 Highest Consecutive years
  - VSERS Group D (judges): Final salary upon retirement

Plan	Current Structure
VSERS Group C	2 Highest Consecutive, including unused annual leave payoff.
VSERS Group D	Final salary at retirement
VSERS Old and New Group F	3 Highest Consecutive, excluding unused annual leave payoff.
VSTRS Group C1 and C2	3 Highest Consecutive, excluding all payments for anything other than service actually performed.

# Average Final Compensation

Included in Treasurer's Jan 15<sup>th</sup> report

## VSERS

Preliminary estimates for House  
(excludes actives within 5 years of normal retirement eligibility)

Description (\$ mil)	2020 Valuation Assumptions	Revised AFC – Add 2 Years	Revised AFC – Add 4 Years	Revised AFC – Highest 5 Consecutive for All Members	Revised AFC – Highest 7 Consecutive for All Members	Highest 5 Consecutive for All Members	Highest 7 Consecutive for All Members
Accrued Liability	\$3,095.3 Change	\$3,056.1 (\$39.2)	\$3,013.8 (\$81.5)	\$3,048.0 (\$47.3)	\$3,006.0 (\$89.3)	\$3,072.2 (\$23.1)	\$3,051.7 (\$43.6)
Unfunded Liability	\$1,040.5 Change	\$1,001.3 (\$39.2)	\$959.0 (\$81.5)	\$993.2 (\$47.3)	\$951.2 (\$89.3)	\$1,017.4 (\$23.1)	\$996.9 (\$43.6)
Funded %	66.4% Change	67.2% 0.9%	68.2% 1.8%	67.4% 1.0%	68.4% 2.0%	66.9% 0.3%	67.3% 0.9%
ADEC for FY22	\$120.0 Change	\$113.9 (\$6.0)	\$107.5 (\$12.4)	\$112.7 (\$7.3)	\$106.3 (\$13.6)	\$115.9 (\$4.1)	\$112.2 (\$7.8)

Note: The "Add 2 Years" scenario reflects an increase for Group C from 2 to 3 years, and the "Add 4 Years" scenario reflects an increase for Group C from 2 to 5 years.

## VSTRS

Preliminary estimates for House  
(excludes actives within 5 years of normal retirement eligibility)

Description (\$ mil)	2020 Valuation Assumptions	Revised AFC – 5 Years	Revised AFC – 7 Years	Highest 5 Consecutive for All Members	Highest 7 Consecutive for All Members
Accrued Liability	\$3,969.0 Change	\$3,921.7 (\$47.3)	\$3,876.5 (\$92.5)	\$3,938.2 (\$30.8)	\$3,908.3 (\$60.7)
Unfunded Liability	\$1,933.3 Change	\$1,886.0 (\$47.3)	\$1,840.8 (\$92.5)	\$1,902.5 (\$30.8)	\$1,872.6 (\$60.7)
Funded %	51.3% Change	51.9% 0.6%	52.5% 1.2%	51.7% 0.4%	52.1% 0.8%
ADEC for FY22	\$196.2 Change	\$189.5 (\$6.7)	\$183.2 (\$13.0)	\$191.5 (\$4.7)	\$186.9 (\$9.3)

# Normal Retirement Eligibility

- Most employees must reach either a minimum age or a combination of age plus years of service (Rule of 87 or 90) to qualify for normal (unreduced) retirement.
  - “Rules” allow employees with 30+ years of service to retire earlier than age 57 (VSERS) or age 60 (VSTRS), respectively.
- VSERS Group C members may retire early without penalty at age 50 with 20 years of service, with mandatory retirement at 55.
- VSERS Group F corrections officers may retire at age 55 with 20 years of service.

Plan	Current Structure
VSERS Group C	Age 55 (mandatory) No-penalty early retirement at age 50 with 20 years of service
VSERS Group D	Age 62
VSERS Old Group F	Age 62 or with 30 years of service
VSERS New Group F	Age 65 or Rule of 87
VSTRS Group C1	Age 62 or with 30 years of service
VSTRS Group C2	Age 65 or Rule of 90

# Normal Retirement Eligibility

Blue cells reflect data contained in Treasurer’s January 15<sup>th</sup> report.

Preliminary estimates for House  
(excludes actives within 5 years of normal retirement eligibility)

## VSERS

Description (\$ mil)	2020 Valuation Assumptions	Update all pre-Rule of 87 Retirement Eligibility Requirements to Rule of 87	Update all pre-Rule of 90 Retirement Eligibility Requirements to Rule of 90	Remove Rule of 87 and Require Age-Based Normal Retirement Eligibility	Increase Normal Retirement Age to 65 for Non-Law Enforcement	Increase Normal Retirement Age to 67 for Non-Law Enforcement and Remove 50/20 Early Retirement Eligibility for VSERS Group C
Accrued Liability	\$3,095.3 Change	\$3,042.6 (\$52.7)	\$3,029.1 (\$66.2)	\$3,074.8 (\$20.5)	\$3,072.6 (\$22.7)	\$3,028.0 (\$67.3)
Unfunded Liability	\$1,040.5 Change	\$987.8 (\$52.7)	\$974.3 (\$66.2)	\$1,020.0 (\$20.5)	\$1,017.8 (\$22.7)	\$973.2 (\$67.3)
Funded %	66.4% Change	67.5% 1.1%	67.8% 1.5%	66.8% 0.4%	66.9% 0.5%	67.9% 1.5%
ADEC for FY22	\$120.0 Change	\$112.8 (\$7.2)	\$110.9 (\$9.1)	\$116.9 (\$3.1)	\$116.8 (\$3.2)	\$109.0 (\$11.0)

Preliminary estimates for House  
(excludes actives within 5 years of normal retirement eligibility)

## VSTRS

Description (\$ mil)	2020 Valuation Assumptions	Update all pre-Rule of 87 Retirement Eligibility Requirements to Rule of 87	Update all pre-Rule of 90 Retirement Eligibility Requirements to Rule of 90	Remove Rule of 90 and Require Age-Based Normal Retirement Eligibility	Increase Normal Retirement Age to 65 for Non-Law Enforcement	Increase Normal Retirement Age to 67
Accrued Liability	\$3,969.0 Change	\$3,960.2 (\$8.8)	\$3,960.4 (\$8.6)	\$3,833.2 (\$135.8)	\$3,969.0 (\$0.0)	\$3,929.4 (\$39.6)
Unfunded Liability	\$1,933.3 Change	\$1,924.5 (\$8.8)	\$1,924.7 (\$8.6)	\$1,797.5 (\$135.8)	\$1,933.3 (\$0.0)	\$1,893.7 (\$39.6)
Funded %	51.3% Change	51.4% 0.1%	51.4% 0.1%	53.1% 1.8%	51.3% 0.0%	51.8% 0.5%
ADEC for FY22	\$196.2 Change	\$195.5 (\$0.7)	\$195.5 (\$0.7)	\$177.3 (-\$18.9)	\$196.2 (\$0.0)	\$189.4 (\$6.8)

# Vesting

Blue cells reflect data contained in Treasurer's January 15<sup>th</sup> report.

Preliminary estimates for House  
(excludes actives within 5 years of normal retirement eligibility)

## VSERS

Description (\$ mil)	2020 Valuation Assumptions	Revised Vesting – 7 Years	Revised Vesting – 10 Years	From 5 Years to 7 Years	From 5 Years to 10 Years
Accrued Liability	\$3,095.3 Change	\$3,095.6 \$0.3	\$3,096.0 \$0.8	\$3,095.4 \$0.1	\$3,095.6 \$0.3
Unfunded Liability	\$1,040.5 Change	\$1,040.8 \$0.3	\$1,041.2 \$0.8	\$1,040.6 \$0.1	\$1,040.8 \$0.3
Funded %	66.4% Change	66.4% 0.0%	66.4% 0.0%	66.4% 0.0%	66.4% 0.0%
ADEC for FY22	\$120.0 Change	\$119.4 (\$0.6)	\$119.2 (\$0.8)	\$119.4 (\$0.6)	\$119.2 (\$0.8)

All VSERS and VSTRS groups have 5 year vesting for normal retirement.

## VSTRS

Preliminary estimates for House  
(excludes actives within 5 years of normal retirement eligibility)

Description (\$ mil)	2020 Valuation Assumptions	Revised Vesting – 7 Years	Revised Vesting – 10 Years	From 5 Years to 7 Years	From 5 Years to 10 Years
Accrued Liability	\$3,969.0 Change	\$3,969.6 \$0.6	\$3,970.1 \$1.1	\$3,969.4 \$0.4	\$3,969.9 \$0.9
Unfunded Liability	\$1,933.3 Change	\$1,933.8 \$0.6	\$1,934.4 \$1.1	\$1,933.7 \$0.4	\$1,934.2 \$0.9
Funded %	51.3% Change	51.3% 0.0%	51.3% 0.0%	51.3% 0.0%	51.3% 0.0%
ADEC for FY22	\$196.2 Change	\$196.2 (\$0.1)	\$196.1 (\$0.1)	\$196.2 \$0.0	\$196.2 \$0.0

*Note: The relatively small projected increase in accrued liability and decrease in ADEC are likely driven by a small number of outlier members in the actuarial data.*

# Employee Contributions

Blue cells reflect data contained in Treasurer's January 15<sup>th</sup> report.

*Note: According to the FY20 valuation studies, the FY22 total covered payrolls are projected to be:*

*VSERS: \$598,443,442 (with 3.5% annual increases)*

*VSTRS: \$697,626,571 (with 3% annual increases)*

## VSERS

Description (\$ mil)	2020 Valuation Assumptions	Increase Employee Contribution Rates by 0.35%	Increase Employee Contribution Rates by 0.60%	Increase Employee Contribution Rates by 0.85%	Increase Employee Contribution Rates by 1.10%	Increase Employee Contribution Rates by 1.35%	Description (\$ mil)	2020 Valuation Assumptions	7.4% on salary up to \$54,000 8% on salary between \$54,000-\$65,800 9% on salary between \$65,800 - \$81,000 10% on salary above \$81,000		7.4% on salary up to \$40,000 8% on salary between \$40,000-\$60,000 9% on salary between \$60,000 - \$80,000 10% on salary above \$80,000	
ADEC for FY22	\$120.0 Change	\$117.9 (\$2.1)	\$116.5 (\$3.5)	\$115.0 (\$5.0)	\$113.5 (\$6.5)	\$112.0 (\$8.0)	ADEC for FY22	\$120.0 Change	\$113.8 (\$6.2)		\$113.0 (\$7.0)	
PV of Add'l Employee Contribution from FY22-FY39	N/A	\$23.1	\$39.7	\$56.2	\$72.8	\$89.3	Effective Member Contribution Rate for Salary of \$60,000	6.65%	7.46%		7.60%	
							Effective Member Contribution Rate for Salary of \$100,000	6.65%	8.21%		8.36%	

## VSTRS

Description (\$ mil)	2020 Valuation Assumptions	Increase Employee Contribution Rates to 7.0%	Increase Employee Contribution Rates by 0.60%	Increase Employee Contribution Rates by 0.85%	Increase Employee Contribution Rates by 1.10%	Increase Employee Contribution Rates by 1.35%
PV of Add'l Employee Contribution from FY22-FY39	N/A	\$106.4	\$126.2	\$146.1	\$166.0	\$185.8

Description (\$ mil)	2020 Valuation Assumptions	6.75% on salary up to \$56,000 7.75% on salary between \$56,000 - \$66,800 8.75% on salary between \$66,800 - \$78,000 10% on salary above \$78,000		6.75% on salary up to \$45,000 7.75% on salary between \$45,000 - \$60,000 8.75% on salary between \$60,000 - \$75,000 10% on salary above \$75,000	
		Member rates for those currently at 5% contribution level are 1% lower than rates shown above	Those currently at 5% contribution level increase to levels shown above	Member rates for those currently at 5% contribution level are 1% lower than rates shown above	Those currently at 5% contribution level increase to levels shown above
ADEC for FY22	\$196.2 Change	\$189.3 (\$6.9)	\$185.7 (\$10.5)	\$188.0 (\$8.2)	\$184.5 (\$11.7)
Effective Member Contribution Rate for Salary of \$60,000	5.00% 6.00%	5.82% 6.82%	6.82%	6.00% 7.00%	7.00%
Effective Member Contribution Rate for Salary of \$100,000	5.00% 6.00%	6.80% 7.80%	7.80%	7.01% 8.01%	8.01%

*NOTE: These estimates do not reflect exempting actives who are within 5 years of normal retirement eligibility from any contribution changes.*

# Multipliers and Max Benefits

- Retirement benefits are capped at a percentage of AFC that varies by plan. (COLAs are excluded from the cap).
- Changes to these factors may influence retirement behavior (e.g. incentivize people to work longer).
- Actuarial analysis is required to cost out any changes and assess whether they result in gains or losses.

Plan	Current Structure
VSERS Group C	2.5% Benefit Multiplier with max of 50% of AFC cap. <i>A member reaches the 50% AFC cap after accruing 20 years of service.</i>
VSERS Group D	3.33% Benefit Multiplier after 12 years of service with max of 100% of Final Salary. <i>A member reaches the 100% AFC cap after accruing 30 years of service.</i>
VSERS Old Group F	1.25% Benefit Multiplier (prior to 12/31/90) plus 1.67% Benefit Multiplier (after 1/1/91) with a max of 50% of AFC. <i>A member reaches the 50% of AFC cap after accruing 30 years of service.</i>
VSERS New Group F	1.67% Benefit Multiplier with a max of 60% of AFC. <i>A member reaches the 60% of AFC cap after accruing 36 years of service.</i>
VSTRS Group C1	1.25% Benefit Multiplier (prior to 6/30/90) plus 1.67% Benefit Multiplier (after 7/1/90) with a max of 53.34% of AFC. <i>A member reaches the 53.34% of AFC cap after accruing approximately 32 years of service.</i>
VSTRS Group C2	1.25% Benefit Multiplier (prior to 6/30/90) plus 1.67% Benefit Multiplier (after 7/1/90) for first 20 years, then 2% after attaining 20 years with a max of 60% of AFC. <i>A member reaches the 60% of AFC cap after accruing approximately 33.3 years of service.</i>