

Marginal Cost of DC Option to 2016 Tier

To: AFSCME

Date: May 19, 2016

We have analyzed the cost impact of including a Defined Contribution (DC) option in addition to the Defined Benefit (DB) University of California Retirement Plan (UCRP) for employees hired after June 30, 2016. We estimate that over fifteen years, the cost of including a DC choice feature in the program would total nearly \$580 million.

Background

We understand that the University of California (UC) is planning to implement a new pension alternative for employees hired after June 30, 2016. This change has been instigated by the desire to include a limit on covered compensation (similar to that recently implemented throughout California public employment) as well as to accommodate UC's desire to include a DC option which reduces UC's pension risk and offers a benefit which some workers may find desirable.

We have been asked to estimate how much additional cost savings UC would be expected to realize if there were no DC alternative, but instead all future employees would have only the DB benefit provisions which are currently being proposed.

Basis for Calculations

We have been apprised of the following cost information which was calculated by UCRP and their actuaries.

- Normal Cost of DB alternative – 7.6% of pay
- Normal Cost of DC alternative – 7.8% of pay
- Cost of choice of DB or DC – 0.6% of pay
- Anticipated election of DB and DC – 80% DB, 20% DC

In addition, we have used payroll information in the 2015 actuarial valuation report in order to estimate the future payroll attribution between those in the 2016 Tier and others. We also assumed a 3.5% annual growth of covered payroll. If any of these assumptions are not met, our calculations would need to be modified.

Methodology

Based on the information above, a simple 80/20 weighting of the DB and DC normal costs would suggest that the future normal cost for future UC employees would be 7.64%. An additional cost of 0.6% of pay would also be attributed to the future employees, bringing the total to 8.24%. If only the DB alternative were offered, the total cost would be 7.60%, meaning that the marginal cost for the DC alternative is 0.64% of pay. This is developed in the table below:

Development of DC Option Costs

Component	Costs as % of Total Payroll
1. Normal Cost for those who elect DB	7.60%
2. Normal Cost for those who elect DC	7.80%
3. Weighted Normal Cost (80% DB + 20% DC)	7.64%
4. Additional Cost for DC Choice	0.60%
5. All-in Normal Cost for future employees (row 4 plus row 3)	8.24%
6. Marginal Cost for DC Choice (row 5 minus row 1)	0.64%

Very little of this cost occurs in the first few years because the pay for those hired after June 30, 2016 is a small proportion of the total UC payroll. As a result of this, UC has often described the costs or savings of the new program as a fifteen-year total and an annual average of that amount. The table below was included in Appendix 1 of the UC recommendations and is based on that approach:

Reconciliation of Estimated University Cash flow Costs and Savings for UCRP and DC Plan Benefits (New Hires On or After July 1, 2016)		
Results Not Discounted For Interest	15-Year Average Employer Cash flow Costs/Savings	15-Year Total Employer Costs/Savings
University Cash flow <u>Costs</u> for 2013 Tier	\$655 million	\$9.8 billion
Cash flow <u>Savings</u> from Implementing 2016 Tier (Not making employer contributions above CCL)	-\$51 million	-\$767 million
Cash flow <u>Savings</u> from Implementing Option B with no UAAL Contribution	-\$48 million	-\$716 million
<u>Costs</u> for Implementing DC Supplemental Benefits in Option A	+\$34 million	+\$510 million
<u>Costs</u> for Implementing 6% UCRP UAAL Contribution in Option B	+\$56 million	+\$837 million
Total Changes in Cash flow Costs	-\$9 million	-\$136 million
University Cash flow <u>Costs</u> for Option A & B	\$646 million	\$9.7 billion

To be consistent, we will express our estimate of the cost of the DC option similarly.

Payroll Projections

The critical component of determining the fifteen-year cost is to estimate what the UC payroll would be over the next fifteen years for those who will be subject to the new plan. To make this estimate, we developed the following information from the 2015 actuarial valuation report:

Basis for Payroll Projection

Item	Value (\$000)	Source of Information
Estimated Covered Payroll 2016-2017 Plan Year	\$9,997,740	Page v
Total Covered Compensation for Year Beginning July 1, 2015		
1976 Tier	9,100,881	Page 15 – 2 nd column
2013 Tier	1,279,377	Page 15 – 2 nd column
Modified 2013 Tier	667,092	Page 15 – 2 nd column
2013 Tiers as Percentage of Total	17.6%	Addition & division
Total Covered Compensation for Year Beginning July 1, 2014		
1976 Tier	9,434,631	Page 15 – 3 rd column
2013 Tier	634,809	Page 15 – 3 rd column
Modified 2013 Tier	286,451	Page 15 – 3 rd column
2013 Tiers as Percentage of Total	8.9%	Addition & division
Total Members	123,768	Page 17 – 2 nd column
Average Covered Compensation	89,578	Page 17 – 2 nd column
Total Covered Compensation	11,086,859	Multiplication
Members with 0-4 Years	48,610	Page 17 – 3 rd column
Average Covered Compensation	76,384	Page 17 – 3 rd column
Total Covered Compensation – Members with 0-4 Years	3,712,054	Multiplication
Share of Total Covered Compensation 0-4 years	33.5%	Division
Members with 5-9 Years	28,683	Page 17 – 4 th column
Average Covered Compensation	88,452	Page 17 – 4 th column
Total Covered Compensation	2,537,069	Multiplication
Share of Total Covered Compensation 5-9 years	22.9%	Division
Share of Total Covered Compensation 0-9 years	56.4%	Addition
Members with 10-14 Years	19,554	Page 17 – 5 th column
Average Covered Compensation	93,968	Page 17 – 5 th column
Total Covered Compensation	1,837,450	Multiplication
Share of Total Covered Compensation 10-14 years	16.6%	Division
Share of Total Covered Compensation 0-14 years	72.9%	Addition

Based on these shares of the payroll attributable to various groups of service, and assuming a 3.5% annual growth in payroll and a 0.64% cost, we develop the following projection of costs. The percentage figures in bold are from the table above, others are interpolated.

Development of Cost of DC Option Based On Projected Future Pay of 2016 Tier

Year	Total Payroll (\$millions)	Share of Payroll for 2016 Tier	Payroll for 2016 Tier (\$millions)	0.64% Cost of DC Choice (\$millions)
2016-2017	\$9,998	2.2%	\$222	\$1
2017-2018	10,348	8.9%	920	6
2018-2019	10,710	17.6%	1,887	12
2019-2020	11,085	25.6%	2,832	18
2020-2021	11,473	33.5%	3,841	25
2021-2022	11,874	38.1%	4,519	29
2022-2023	12,290	42.6%	5,240	34
2023-2024	12,720	47.2%	6,005	38
2024-2025	13,165	51.8%	6,818	44
2025-2026	13,626	56.4%	7,680	49
2026-2027	14,103	59.7%	8,417	54
2027-2028	14,596	63.0%	9,195	59
2028-2029	15,107	66.3%	10,017	64
2029-2030	15,636	69.6%	10,886	70
2030-2031	16,183	72.9%	11,803	76
15 Year Total	192,913	46.8%	\$90,285	\$578
15 Year Average	12,861	46.8%	\$6,019	\$39

Sensitivity to Assumptions

This information is based on data from the actuarial valuations and our projections. The UCRP actuary has very likely made more robust population projections and possibly more precise cost determinations. We would encourage them to verify these calculations and modify them as necessary. We would expect that the magnitude of the impact (nearly \$600 million over fifteen years) to be fairly close to these calculations.

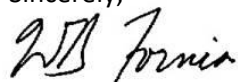
Conclusions

It has been reported that the cost of providing a choice feature is 0.6% of pay for those who have the choice. The difference between a 7.8% DC cost and 7.6% DB cost adds a bit to the total cost of offering a DC alternative. While the population for whom such a choice is offered is small in the next few years, over the next fifteen years, this group will expand, resulting in estimated total costs of nearly \$600 million for the DC option. We anticipate that the UCRP actuary would calculate similar costs should they be asked to do so.

I am a member of the American Academy of Actuaries and meet their Qualification Standards to render this actuarial opinion.

Please do not hesitate to contact us if you need additional analysis or discussion.

Sincerely,



William B. Fornia, FSA
President