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Office of the President

TO MEMBERS OF THE FINANCE AND CAPITAL STRATEGIES COMMITTEE:

ACTION ITEM

For Meeting of September 18, 2019

UNIVERSITY OF CALIFORNIA RETIREMENT PLAN – PROPOSAL TO ADOPT CHANGES IN ACTUARIAL ASSUMPTIONS AND AUTHORIZATION TO INCREASE THE EMPLOYER CONTRIBUTION RATES

EXECUTIVE SUMMARY

Actuarial best practice and the terms of the University of California Retirement Plan (UCRP or Plan) call for periodic experience studies to compare the expected experience under the Plan to actual experience in order to determine whether actuarial valuation assumptions are still appropriate. The Regents' Consulting Actuary, Segal Consulting (Segal), has completed an experience study covering the period July 1, 2014 through June 30, 2018 and issued a report on its findings and recommendations regarding the Plan's actuarial valuation assumptions and actuarial equivalence basis.

Segal's recommendations from its report include a decrease in the investment return assumption from 7.25 percent to seven (7.00) percent, a decrease in the inflation assumption from three (3.00) percent to 2.75 percent, no change to the real "across the board" salary increase assumption of 0.5 percent and a modification of the mortality assumption along with other changes in assumptions. The recommendations, including a proposed increase to the employer contribution rate, were discussed at the July 2019 Regents meeting by the Finance and Capital Strategies Committee. The Committee requested that an alternative recommendation for a lower investment return assumption, along with a proposal to also increase member contributions, be brought back for consideration at the September meeting. ~~A potential proposal to increase the member contribution rates has been deferred to a future Regents meeting to allow more time for analysis and consultation with the UC community.~~

As a result, the President of the University recommends that the Finance and Capital Strategies Committee recommend to the Board that, effective for the July 1, 2019 valuation, the Regents adopt the following changes in actuarial assumptions:

- A 6.75 percent investment return assumption,
- A 2.5 percent inflation assumption,
- A 0.75 percent real "across the board" salary increase assumption,
- The merit and promotion salary increase assumptions for Staff and Safety members shown in Attachment 1, and

- All other assumptions recommended by the Consulting Actuary in their report, other than those described above.

The total impact of these changes is estimated to be an increase in the Plan's actuarial accrued liability of $7.2 billion (resulting in an approximately eight percent decrease in funded percentage) and an increase in the Plan's long-term annual ongoing cost, also known as the "normal cost" (NC) of $434 million (which can be represented as 3.1 percent of payroll).

To offset the increase in costs, the item requests authorization for the President of the University to phase in a three percent increase in the University contribution rate as outlined below. The increase in the University contribution rates were deemed necessary to continue the Plan's positive progress towards full funding.

At the request of the Regents, key actuarial assumptions will be reviewed on a more frequent basis, given capital market expectations and market volatility, and, based on these more frequent reviews, changes in contribution rates could be accelerated or paused if economic circumstances dictate.

RECOMMENDATION

The President of the University recommends that the Finance and Capital Strategies Committee recommend to the Regents that:

A. For the UC Retirement Plan (UCRP or Plan), a 6.75 percent investment return assumption, a 2.5 percent inflation assumption, a 0.75 percent real "across the board" salary increase assumption, and the merit and promotion salary increase assumptions for Staff and Safety members as summarized in Attachment 1 be adopted.

B. The Consulting Actuary's recommendations regarding all other economic and non-economic actuarial valuation assumptions for the UCRP, other than those described above, summarized in Attachment 1 be adopted.

C. With respect to the UC-PERS Plus 5 Plan and the UC Retiree Health Benefit Program, the actuarial valuation assumptions summarized in Attachment 2 be adopted.

D. Authorize the Plan Administrator to implement the recommended changes.

E. Approve the following schedule of increases in the University contribution rate on behalf of active members in the Campus and Medical Centers (C/MC) and Lawrence Berkeley National Laboratory (LBNL) segments of UCRP and on behalf of active participants in "Savings Choice" from 14 percent and six percent, respectively, to:

Effective Date	UCRP Employer Contribution Rate	
	UCRP Active Members[1]	Savings Choice "UAAL Surcharge"[2]
July 1, 2020	14.5%	6.5%
July 1, 2021	15.0%	7.0%
July 1, 2022	15.5%	7.5%
July 1, 2023	16.0%	8.0%
July 1, 2024	16.5%	8.5%
July 1, 2025	17.0%	9.0%

F. It is the intent of the Board that members share in the normal cost increases over this same period. The Board hereby directs Office of the President staff to model options for increasing member contribution rates to achieve this cost-sharing for consideration at the November 2019 Board meeting.

BACKGROUND

Since resumption of University and member contributions to UCRP in FY 2010-11, the University has incrementally increased contribution rates, but total contributions remain below the funding policy contribution level, also known as the "actuarially determined contribution" or ADC. Since July 1, 2014, employer and member contribution rates have remained at 14 percent for the University as employer and eight percent for most members[3], respectively. The University has also funded UCRP with internal borrowings from the Short Term Investment Pool (STIP) and external borrowings to meet or approach the ADC. Most recently, in July 2017, the Regents approved internal borrowings from STIP to fund UCRP in amounts up to $500 million in FYs 2018-19 and 2019-20, up to $600 million in FY 2020-21 and up to $700 million in FY 2021-22.The total cumulative amount of internal and external borrowings to fund UCRP through FY 2019-20 is about $5.2 billion. The STIP internal borrowings and external borrowings are paid back through campus assessments on covered payroll.

In September 2015, the Regents approved an alternate method for determining the employer contribution rate for the LBNL segment, based on the ratio of the Lawrence Berkeley National Laboratory (LBNL) segment funded percentage compared to the lower funded percentage for the C/MC segment. This alternate contribution rate method is in place through the Plan Year ending June 30, 2020, at which time the LBNL segment would revert to the same rate as the C/MC segment for Plan Years 2020-21 and later.

As of July 1, 2018, the C/MC segment of UCRP was 85.2 percent funded, with actuarial value of assets (AVA) of $57.4 billion and an actuarial accrued liability (AAL) of $67.4 billion.

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[1] Excludes UCRP member class known as "Tier Two", which is a frozen group that had four active members as of July 1, 2018. For Tier Two, employer rates are one-half of the rates for non-Tier Two members.
[2] The "UAAL Surcharge" is the employer contribution to UCRP on behalf of active employees who elected "Savings Choice" as their primary retirement benefit and are current participants in the Defined Contribution Plan. The UAAL Surcharge pays down UCRP's Unfunded Actuarial Accrued Liability (UAAL).
[3] Nine percent for Safety members and members represented by certain unions (Modified 2013 Tier); seven percent for 2013 and 2016 Tier members. For 1976 Tier and Safety members, member contributions are reduced by $19 per month.

The terms of UCRP require an experience study every three to five years to compare expected experience under the Plan to the actual experience over a recent period of time. Using the results of the experience study, the Plan's Consulting Actuary, currently Segal Consulting (Segal), makes recommendations to adjust or maintain the Plan's actuarial valuation assumptions as necessary to provide accurate estimates of the Plan's future liabilities. An experience study was last performed in 2015 and the recommendations became effective with the July 1, 2015 valuation. Segal's latest experience study, covering the period July 1, 2014 through June 30, 2018, specifically analyzes:

- The Plan's actual as compared to expected experience with respect to:
  - Mortality, retirement, termination and disability incidence rates, salary increases; and
  - Other valuation assumptions, including the percentage of UCRP members with eligible survivors, spousal age differences, the amount of unused sick leave converted to service credit for retirees electing monthly retirement income, future benefit accrual rates, lump sum elections, and the retirement age for inactive members;
- Whether actual Plan experience as compared to the expected experience reflects a significant pattern or trend that indicates a change should be made to the Plan's actuarial valuation assumptions; and
- Whether the current economic assumptions (including price inflation, wage inflation, administrative expenses and investment return) are still appropriate. For this particular analysis, Segal consulted with the Office of the Chief Investment Officer (OCIO).

A copy of the complete UCRP Actuarial Experience Study – July 1, 2014 through June 30, 2018 is included as Attachment 3.

Highlights from Segal's Experience Study

A summary of all of Segal's recommendations from the experience study can be found in Attachment 3. The key economic assumption recommendation from Segal is a decrease in the 7.25 percent per annum investment return assumption to seven (7.00) percent and the key demographic assumption recommendation from Segal is a modification of the mortality assumption, including using benefit-weighted mortality tables with a "generational" projection of mortality improvement. These changes will have the largest financial impact on the Plan.

Segal's recommended decrease to the investment return assumption is mainly the result of a 0.25 percent decrease in the inflation assumption. Segal's recommended investment return assumption of seven (7.00) percent per annum is based on UCRP's current target asset allocation.

Plan experience shows that UCRP members are living longer than currently expected. This is also true for the general population and is reflected in the new standard mortality table recommended by Segal, which, for the first time, is based exclusively on public sector pension plan experience in the U.S. The table includes mortality rates developed on a "benefit-weighted" basis, since the Society of Actuaries has observed that benefit amount and salary are a significant predictor of life expectancy. The recommended assumption incorporates a provision for future improvements in mortality consistent with current Actuarial Standards of Practice; however, also for the first time, Segal is recommending use of a "generational" mortality improvement scale, which is the emerging practice within the actuarial profession.

Some of Segal's proposed demographic assumption recommendations were a joint effort between Segal and the Consulting Actuary for the UC Retiree Health Benefit Program, Deloitte Consulting LLP. To the extent possible and as appropriate, both retiree health and pension considerations were incorporated into the proposed assumptions. In addition, Segal's work in analyzing the experience and developing the recommendations underwent an actuarial audit by Cheiron, Inc., an independent actuarial consulting firm. Segal incorporated Cheiron's suggestions in some minor details; however, the overall audit result showed no significant audit findings.

Recommended Changes in Actuarial Assumptions

Segal's recommendations, along with a proposed increase to the employer contribution rate, were discussed at the July 2019 Regents meeting by the Finance and Capital Strategies Committee. The Committee requested that an alternative recommendation for a lower investment return assumption be brought back for consideration at the September meeting.

As an alternative, the recommendation is to adopt a 6.75 percent investment return assumption, a 2.5 percent inflation assumption, a 0.75 percent real "across the board" salary increase assumption, and the merit and promotion salary increase assumption for Staff and Safety members shown in Attachment 1, plus all other recommended changes in actuarial assumptions made by Segal, other than those described above. The decrease in the recommended investment return to 6.75 percent is the result of the decrease in the inflation assumption.

Compared to current practice amongst other large California public sector retirement systems, a 6.75 percent investment return assumption is a relatively conservative assumption, as only a few of these systems have reduced their investment return assumption below seven (7.00) percent. Compared to public sector retirement systems nationwide, it is even more conservative, as the median investment return assumption used by those systems is still 7.5 percent. Segal Consulting has estimated that the "confidence level", based on a 6.75 percent total return assumption, increases to 57 percent (from 54 percent under the seven percent return assumption).

Due to the recommended reduction in the inflation assumption to 2.5 percent, the real "across the board" salary increase assumption is recommended to be increased from 0.5 percent to 0.75 percent. This is so that the combined inflation and real "across the board" salary increase or wage inflation assumption is 3.25 percent, which is consistent with Segal's proposed wage inflation assumption. In addition, there are some relatively minor refinements to the merit and promotion salary increase assumptions for Staff and Safety members that are being recommended.

If changes to the investment return and mortality assumptions are adopted, there will be Plan amendments required to create a new Actuarial Equivalence Basis used to determine optional benefit payment forms payable under UCRP for retirements and lump sum cash-outs occurring on or after July 1, 2020.

Financial Impact of Changes on UCRP Cost and Funded Status

As an illustration of the financial impact of the recommended changes in the Plan's actuarial valuation assumptions, if all recommended changes had been applied to the actuarial valuation for the Plan Year beginning July 1, 2018, the combined impact across all segments would have been an increase in the actuarial accrued liability (AAL) of $7.2 billion (9.4 percent of AAL) and an increase in the normal cost (NC) of about $434 million (20.9 percent of NC in dollars and 3.1 percent of payroll). The recommended changes to the investment return and mortality assumptions would be the most significant causes of these increases.

The recommended changes that are approved as well as updated investment performance data through June 30, 2019 will be incorporated in the July 1, 2019 actuarial valuation. The actual net impact of these combined changes will be available when the valuation is completed. The results will be presented at the November 2019 Regents meeting.

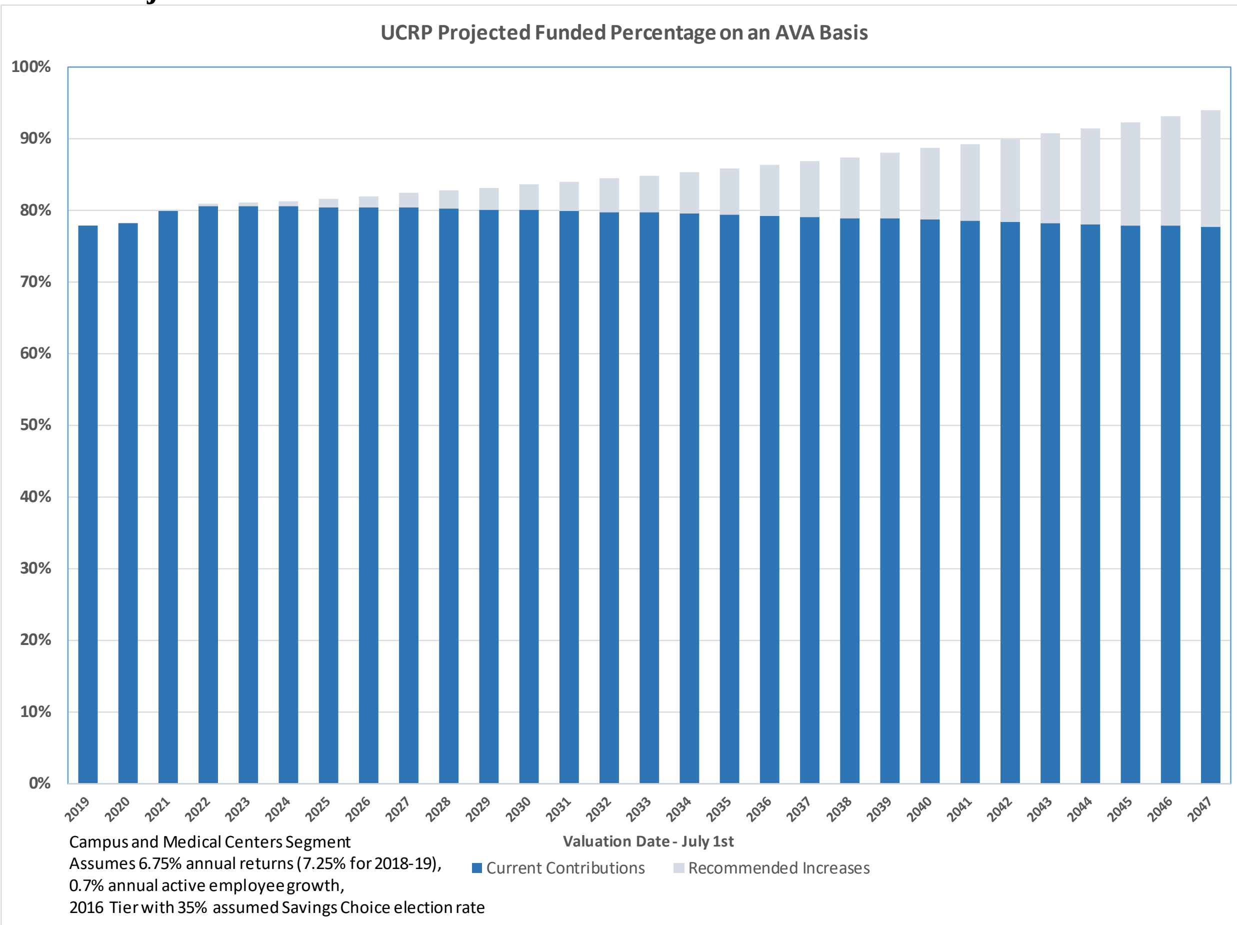
Any changes in assumptions that apply to the University of California-California Public Employees' Retirement Plan Voluntary Early Retirement Incentive Program ("UC-PERS Plus 5 Plan") or the UC Retiree Health Benefit Program will be effective with the July 1, 2019 valuations for those plans.

Proposal to Increase Employer Contribution Rates

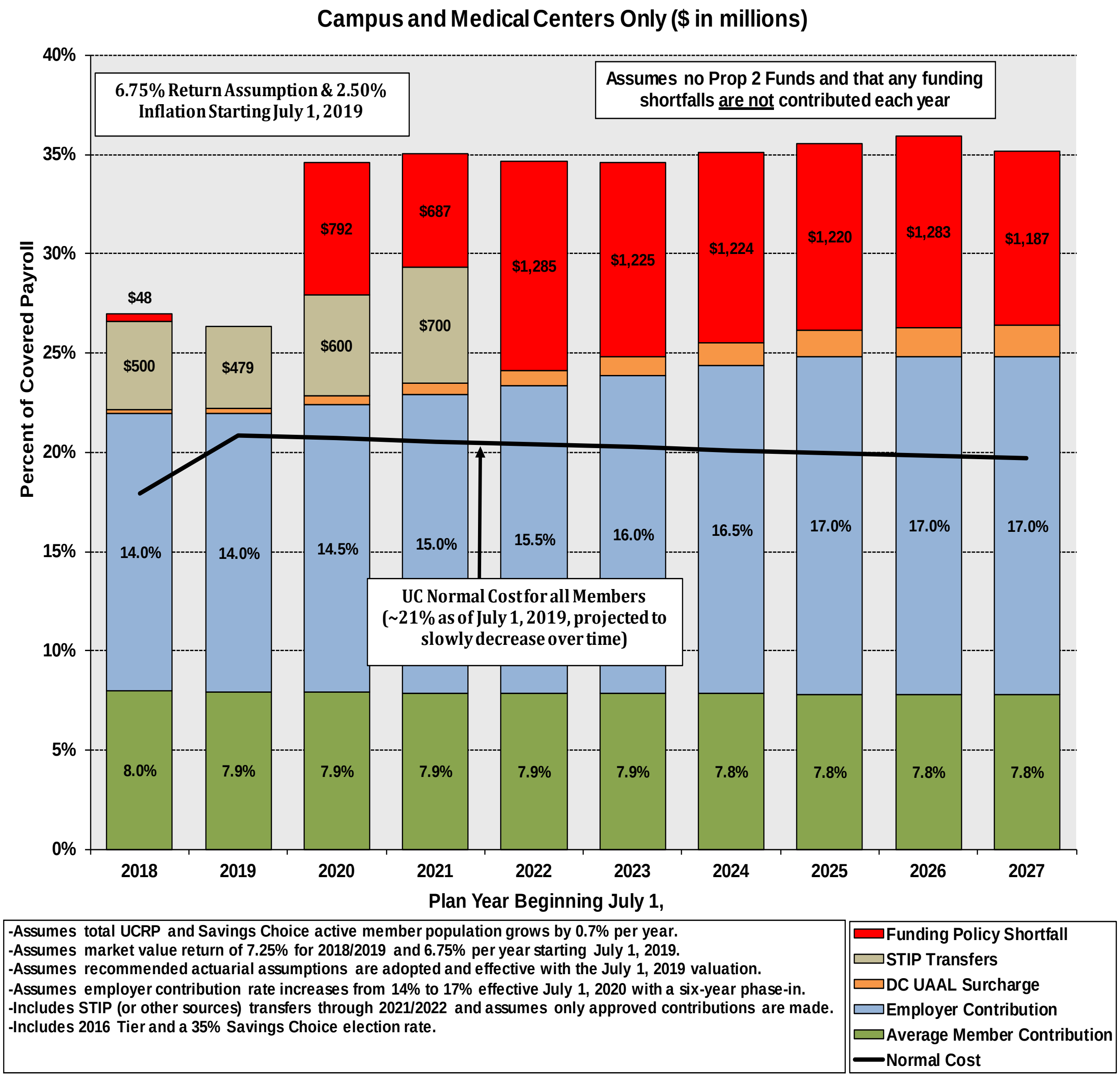
In order to mitigate the effect of these impacts on the C/MC and LBNL segments, primarily the estimated 3.1 percent increase in the NC rate, the University reviewed different options to maintain progress towards improving the funded status of the segments beyond FY 2021-22, including increasing University contribution rates, transferring additional funds from STIP and/or external financing to UCRP, and/or a combination thereof. After settling on a contribution rate increase, the University determined that, in order to ease the impact on campus, medical center, and laboratory operations, a three percent increase in the employer contribution rate will be phased in over a six-year period, along with corresponding increases in the UAAL Surcharge rate, effective for Plan Year 2020-21. Employer contributions for the LANL and LLNL Retained Segments of UCRP will continue to be governed by the terms of each Laboratory's contract with the U.S. Department of Energy.

At the request of the Regents, key actuarial assumptions will be reviewed on a more frequent basis, given capital market expectations and market volatility, and, based on these more frequent reviews, changes in contribution rates could be accelerated or paused if economic circumstances dictate.

UCRP Projections



As of July 1, 2019, the employer contributions to the C/MC segment of UCRP are 14 percent of covered compensation while the average member contribution rate is just below eight percent of covered compensation. If employer and member contributions remain at these levels, future Plan experience matches the assumptions and no additional contributions are made to UCRP beyond what has already been approved, including the planned STIP transfers in FY 2019-20, FY 2020-21, and FY 2021-22, the C/MC segment of UCRP funded percentage is projected to decrease over time. If the University contribution rates on behalf of active members increase as recommended beginning July 1, 2020, with no additional funds from the State or transfers from STIP and/or external financing, an increase in the C/MC segment funded percentage is projected starting after July 1, 2019, with attainment of 90-percent funding estimated in 2042.



The above chart, modeled and based on the July 1, 2018 actuarial valuation, illustrates the funding elements and projected ADC for the C/MC segment of UCRP over the next ten years. These projections reflect the adoption of all recommended assumptions effective with the July 1, 2019 valuation, along with the proposed phase-in of a three percent increase in the University contribution rates. Furthermore, the projections reflect that all assumptions are met, including a 7.25 percent market return during 2018-19. The red bars represent the shortfall of the projected total contributions to UCRP when compared to the ADC.

The Board also intends to consider, at the November 2019 meeting, increases to member contribution rates so that the employer and members share in paying for increases to the normal cost.

Notice

The University will take appropriate action concerning proposed changes that may trigger notice, consultation, and meeting and conferring obligations under the Higher Education Employer-Employee Relations Act, if any such action is required.

Attachment 1 – Summary of Recommendations Regarding Changes in Actuarial Valuation Assumptions for UCRP

Attachment 2 – Summary of Recommendations that also apply to other UC Benefit Plans

Attachment 3 – UCRP Actuarial Experience Study report completed by Segal Consulting

KEY TO ACRONYMS

AAL	Actuarial Accrued Liability
ADC	Actuarially Determined Contribution
AVA	Actuarial Value of Assets
C/MC	Campus and Medical Centers
DC	Defined Contribution
FY	Fiscal Year
LBNL	Lawrence Berkeley National Laboratory
LANL	Los Alamos National Laboratory
LLNL	Lawrence Livermore National Laboratory
LLP	Limited Liability Partnership
NC	Normal Cost
OCIO	Office of the Chief Investment Officer
UC-PERS Plus 5 Plan	University of California-California Public Employees' Retirement Plan Voluntary Early Retirement Incentive Program
STIP	Short Term Investment Pool
UAAL	Unfunded Actuarial Accrued Liability
UC	University of California
UCRP	University of California Retirement Plan
U.S.	United States of America