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August 9, 2006

Mr. Randolph R. Scott, SPHR
Executive Director
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Office of the President
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**Re: University of California Retirement Plan (UCRP)**
**Discussion of Venuti and Associates Report**

Dear Mr. Scott:

At your request we have reviewed the June 27, 2006 report on "UC Retirement Plan – Funding Issues", prepared for the University of California Union Coalition by Venuti & Associates (hereinafter "Venuti report", "Union Coalition" and "Venuti").

**Summary**

Venuti concludes that "UC [the University of California] has not justified the need to restart contributions at this time." This is based on Venuti's "opinion" that "the Regents … have not had the benefit of projections and analyses that would constitute best practices for making this type of decision."

This conclusion and the analysis on which it is based are severely flawed in three major respects:

No discussion of the Regents' policy for restarting contributions

Contributions to UCRP by both UC and the UCRP members have been suspended since 1990. This suspension is the result of UCRP being in a surplus position, where assets exceed liabilities, so that each year's current costs ("Normal Cost") can be funded out of surplus, rather than by contributions. Actuarial projections prepared by Segal in 2005 for the Regents show that, under the actuarial assumptions recommended by the UCRP actuary and adopted by the Regents, the surplus will be exhausted in 2009. Once the surplus is exhausted, maintaining UCRP funding will require contributions equal to the full Normal Cost, which is approximately 16% of compensation.

The key strategic policy underlying the Regents' schedule for restarting contributions is their decision not to wait until the surplus runs out before starting contributions. This "soft landing" policy allows for better budget planning, mitigates the cost impact on employees and the University, and provides for a more gradual and predictable transition from no contributions to full contributions.

The Venuti report makes no mention whatsoever of this crucial aspect of the Regents' contribution policy. Instead, it cites "the lack of an impending crisis" to justify delaying starting contributions at any level. As a result, the Union Coalition apparently has not received any discussion of the clear advantages of the "soft landing" policy. Furthermore, Venuti recommends additional analyses and projections that would attempt to pin down the probable timing of when the surplus would be exhausted. Because the Regents, as fiduciaries of UCRP, have adopted a well-advised policy of not waiting for that event, these additional analyses are in no way essential to the process.

Misleading expectations of future investment returns

Venuti correctly notes that (1) a consistent investment return of over 10% would be sufficient to keep UCRP in a surplus position and (2) the past 3 year and 20 year average investment returns have exceeded 10%. Venuti then combines these two factual statements to support the conclusion that "UC has not justified the need to restart contributions at this time."

This inference is contradicted by the fact that, for a balanced retirement plan portfolio like UCRP's, no actuary (including Venuti), economist or investment consultant would recommend a 10% investment return assumption for setting or planning future contribution rates. As is well known, sound investment practice is based on the understanding that past performance does not guarantee future results. If anything, the consensus among investment consultants, including the UC Treasurer's office and its advisors, is that it will be difficult for funds to meet their long-term return assumptions over the next several years.

In this context, we note as information that a sample of investment return assumptions used by Venuti for their valuation clients generally ranged from 6.00% to 7.00%, with one at 5.5% and one at 8%. This is not a perfect comparison as the Venuti clients vary from UCRP in maturity, size and asset allocation.

As for trying to quantify the probability of higher than expected returns, this is of very limited usefulness. Clearly, absent any contributions, higher investment returns will delay the date the surplus is exhausted, and lower returns will accelerate that date. Here we must look back to the Regents' policy of not waiting for the surplus to run out. This policy is based on the Regents' best estimate assumptions of future returns, and does not gamble on those returns being higher than any reasonable expectation.

Unsupported claim of incomplete analysis

Venuti indicates several of what they consider shortcomings in the analysis on which the Regents have based their decision to restart contributions, including the use of single point estimates, limited stochastic analysis and out of date assumptions, as well as excluding the effect of the Los Alamos transfer. However nothing in the Venuti report contradicts the simple

fact that all of the studies performed by the UCRP actuary for the Regents as fiduciaries of UCRP are in full compliance with all of the Actuarial Standards of Practice (ASOPs) promulgated by the Actuarial Standards Board.

The several references to "best practices under accepted actuarial guidelines" in the Venuti report must be read carefully. These are not in any way universal standards or requirements for actuarial practice. Instead, candidly, they are the opinions of one individual practitioner, and in every case we respectfully disagree. Some appear to be a selective choice among alternatives, such as considering higher than expected returns and ignoring lower than expected returns. Others, like stochastic modeling, are tools that are appropriate for some tasks and contexts, but are of limited use in setting definite amounts for future contribution rates, especially under the Regents' policy.

**The Venuti Report – A Missed Opportunity**

Clearly, the need to restart contributions is a watershed event in the history of UCRP and its members, justifying the great amount of study by the Regents and interest from the members that it has generated. We were encouraged to learn that the Union Coalition retained independent actuarial advice on this issue. While the basic principles are straightforward, pension funding mechanics can be complicated. Our experience as actuary to many public retirement systems is that having independent actuarial advisors can increase the level of understanding among all parties.

Unfortunately, in our opinion the Venuti report will not advance the Union Coalition's or other interested parties' understanding of this issue, because it does not address the substance of the Regents' policy. Instead the Venuti report raises misleading and peripheral issues that distract from the need to begin these discussions now. If we were advising the Union Coalition, we would respectfully suggest they direct their advisors to develop an analysis that substantively addresses the need to restart contributions to UCRP and the Regents' policy for doing so.

In this context it is appropriate to quote from the Code of Professional Conduct as adopted by the five U.S. based actuarial organizations. This Code sets standards defining "the Actuary's responsibility to the public and to the actuarial profession." Precept 8 of the Code states:

> An Actuary who performs Actuarial Services shall take reasonable steps to ensure that such services are not used to mislead other parties.

The remainder of our report provides the details of our review, organized under the three topics summarized above.

Sincerely,

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Senior Vice President and Actuary

PA/mep:jc

**University of California Retirement Plan (UCRP)**
**Discussion of Venuti and Associates Report: "UC Retirement Plan – Funding Issues," prepared for the University of California Union Coalition, June 27, 2006**

## A. The Venuti report does not discuss the Regents' policy for restarting contributions

To determine the contribution requirements for a defined benefit plan like UCRP, actuaries take the total value of each members projected benefit and allocate to each year of service a portion of that value, called the Normal Cost. For UCRP, that Normal Cost is about 16% of compensation. All things equal, that is the amount that must be contributed each year.

Because of favorable experience, by 1990 the UCRP assets were substantially greater than what was needed to cover the liability for Normal Costs for years prior to 1990. That allowed the Regents to suspend contributions. The Normal Cost still accrued each year, but it was "paid for" out of surplus, rather than by new contributions from UC and from UCRP members.

No pension plan is contribution-free forever. Under any reasonable set of assumptions, eventually the year-by-year Normal Costs will use up the surplus, and contributions will have to resume. One possible strategy would be to wait for that day to come. Contributions would be zero until the surplus ran out, and then would restart at the full Normal Cost rate of 16% of payroll. Projections prepared for the Regents show that, under the UCRP actuarial assumptions, this is expected to happen between 2009 and 2010.

Note that the Venuti report does not dispute the basic fact that, under reasonable assumptions, contributions will have to restart. It does discuss a scenario where the fund is assumed to earn over 10% per year, which we will discuss in the next section.

From a budgeting standpoint, waiting for the surplus to run out before restarting contributions would be traumatic for both the University and the members. For that reason, the Regents have focused their policy discussions on a contribution strategy that starts contributions at a low level before the full Normal Cost is required (that is, before the surplus runs out), and then gradually ramps up to that full Normal Cost amount over a period of years.

This "soft landing" policy has clear advantages:

- As noted, it allows both UC and the members to budget for the ultimate contribution levels gradually over several years, instead of suddenly in a year or two.

- It allows the specific contribution amounts during the phase-in to be planned with more certainty. This is consistent with the fact that most member contribution rates will have to be negotiated and set into multi-year contracts.

- Starting contributions before the surplus runs out can help extend the surplus, thereby delaying the date when the full Normal Cost amount has to be contributed.

- Phasing in the contributions allows greater equity among different years of members, compared to the all-or-nothing approach.

The Venuti report contains no discussion – pro or con – of the Regents strategy to phase in contributions. This is striking in that it is so integral to the entire "soft landing" contribution policy. This omission has some distinct disadvantages:

- It leads Venuti to focus on short-term refinements in actuarial assumptions, and the timing of those refinements, that will have little impact on the ultimate contribution rate, and possibly no impact on the specific transitional contribution rates.

- It leads Venuti to focus on analytical tools that are only useful if you are trying to time the exact year when the surplus will run out, or to assign probabilities to the surplus running out earlier or later than expected.

- It deprives the Union Coalition of the opportunity to discuss this policy with their advisor, including the relationship of the transition contribution rates to the ultimate rate, the effect of different bargaining cycles, and a host of other issues.

## B. Misleading expectations of future investment returns

One of the most important determinants of the long-term cost of a pension plan is the return on plan assets. While no one can predict what that return will be, one of the Regents' responsibilities in governing UCRP is to set an actuarial assumption for that long-term investment return. That assumption is currently 7.5%, and it has been at that level since 1994. The Regents are well aware that actual returns will vary around that assumption. However, in planning for the restart of contributions the Regents, as fiduciaries of UCRP, do what all plan sponsors and retirement boards do: use their best estimate of future returns.

The Venuti report does not actually say that the Regents should change their best estimate assumption for future returns. Instead it includes statements like "the effect of potential higher returns should be considered in the funding analysis," without mentioning the effect of potential lower returns. Venuti justifies this upward bias by using a comparison that, while superficially convincing, conflicts with both investment consulting and actuarial practice in a way that is misleading to the reader.

Venuti connects two technically accurate statements:

(1) A consistent investment return of over 10% would be sufficient to keep UCRP in a surplus position. (In broad terms this is a fairly simple calculation. The current annual Normal Cost is about $1.3 billion. A 10.5% return would be 3 percentage points above the assumed rate of 7.5%. On $40 billion in assets that would produce an actuarial gain of $1.2 billion, roughly enough to fund the Normal Cost and leave the surplus undiminished.)

(2) The past 3 year and 20 year average investment returns have exceeded 12%. (Note that, while true, even this is a selective reading of the data. It is also true that, through March 31, 2006, the 5, 6, 7 and 8-year average returns are 6.06%, 3.50%, 5.62% and 6.10% per year, respectively.)

This juxtaposition invites the reader to the false conclusion that it is reasonable to think that contributions will never have to restart. This conclusion arises from a common and dangerous fallacy that is warned against by both the investment and actuarial communities:

- Investment advisors routinely caution that "past performance does not guarantee future results."
- The governing Actuarial Standard of Practice (ASOP #27) states as a "general consideration" that "the actuary should not give undue weight to recent experience" when setting economic assumptions.

This inference is further contradicted by the fact that, for a balanced retirement plan portfolio like UCRP's, a 10% long term investment return assumption is clearly outside the reasonable range for setting contribution rates. For example, in California public retirement systems use assumptions ranging from 7.5% to 8.5%, and if anything it is those above 8.0% that get the most discussion.

We also looked at a sample of investment return assumptions used by Venuti for its valuation clients. Of the 11 assumptions from 2003 – 2004 that we found in a commercially available database, the rates used were 8.00% (1), 7.00% (3), 6.5% (3), 6.00% (3) and 5.5% (1). Of course, this is not an apples-to-apples comparison as the Venuti clients certainly vary from UCRP in maturity, size and asset allocation.

As noted earlier, Venuti does not specifically use the 10% argument to address the long-term best estimate assumption for future returns. However, in the short-term a 10% best estimate assumption is even less defensible. Our recent experience is that the clear consensus among investment consultants is that it will be difficult for funds to meet their long-term return assumptions over the next several years. Furthermore, in our June 14, 2006 meeting with Venuti, Venuti Associate Sherman Lieberman readily agreed that was his experience as well. Finally, the most recent best estimate of future returns from the UC Treasurer's office and its advisors is about 6.9%, substantially less than the long-term assumption of 7.5%. This difference was explained to the Regents as due to the difference between short- and long-term assumptions.

Thus when Venuti says "the effect of potential higher returns should be considered in the funding analysis", the only possible valid interpretation is to consider these as variations from the expected return assumption of 7.5%, not a change in that assumption. At the most basic level, that consideration is already part of the Regents analysis. With every projection based on the 7.5% assumption, the Regents are aware not only that higher investment returns make the projections better, but also that lower returns will make them worse.

Venuti is correct that the Regents' analysis has not focused on trying to quantify either the specific effect of a particular level of variation in investment return (deterministic sensitivity analysis) or the probability of such variations (stochastic analysis). This is consistent with the Regents' "soft landing" policy for restarting contributions. Variations in returns will cause variations in the date the surplus is exhausted. However, quantifying the amount of variation in that date or assigning probabilities to those variations is not useful to a policy intended to restart contributions well in advance of that date.

We close this section with comments on some of Venuti's specific "findings" regarding the investment earnings assumption.

**(a)** ***Single-Point Estimate.*** With regard to the 7.5% investment earnings assumption, Venuti's statement that "a single-point estimate is of limited value" is curious at best. The contribution requirements produced by any actuarial valuation are definite amounts, not ranges or probabilities, and so must ultimately be based on a single-point assumed rate of return. Contrary to Venuti's statement, actuarial standards do not "warn against the danger of using a single-point estimate." In fact, Venuti's footnote quote from ASOP #27 states that "the actuary should determine the best-estimate range for each economic assumption, and ***select a specific point from within that range*** (emphasis added)".

Furthermore, UC and UCRP must account for the cost of pensions so as to comply with Governmental Accounting Standards GAS 27 and 25, both of which require the disclosure of the single point estimate of investment return used by the actuary. GAS 27 and 25 require that the selection of this investment return assumption comply with current Actuarial Standards of Practice, including ASOP #27.

**(b)** ***Extraordinary Returns.*** Venuti focuses on the term "extraordinary market gains," including the statement by a UC representative that "10% returns would not be considered extraordinary." In this context, "extraordinary" is a subjective term. What is clear from our discussion above is that a consistent 10% return – long or short term – would be ***unexpected***, and it would be imprudent for the Regents to plan the contribution restart strategy around returns that are unexpected. We find it remarkable that Venuti refers to a 10% to 11% investment return scenario as "a more comprehensive and real-world based analysis."

**(c)** ***Active Management of UCRP Assets.*** Venuti notes recent changes in UCRP asset allocation and use of active managers, and states that "the decision to restart contributions should not be made without considering potential higher returns by outside active management." This runs contrary to ASOP #27 Section 3.6.3.e that addresses the "measurement-specific factor" of investment manager performance:

> Anticipating superior (or inferior) investment manager performance may be unduly optimistic (or pessimistic). Few investment mangers consistently achieve significant above-market returns net of expenses over long periods.

## C. Unsupported claim of incomplete analysis

Actuaries practicing in the United States are subject to two sets of professional governance:

- The Code of Professional Conduct, as adopted by the five U.S. based actuarial organizations. This Code sets standards defining "the Actuary's responsibility to the public and to the actuarial profession."
- The Actuarial Standards of Practice, promulgated by the Actuarial Standards Board. The ASOPs provide specific technical guidance in specific areas of actuarial practice.

All studies prepared by The Segal Company in their role as the UCRP actuary, whether for the Regents or for the UC Office of the President, are in full compliance with the Code of Professional Conduct and with all applicable Actuarial Standards of Practice. The Venuti report contains no explicit statement that attempts to contradict this fact.

Nevertheless, Venuti makes several statements indicating that UC has not received sufficient advice from its actuary to justify its policy regarding the restart of contributions. Most of these statements are in terms of claims about what would constitute "best practices".

To our knowledge, the term "best practices" is not found in the Code of Professional Conduct or any of the ASOPs. That is because it is a subjective term, reflecting the judgment of a particular practitioner as applied to a specific consulting situation. Read carefully, the Venuti report is consistent with this fact, in that all of Venuti's references to "best practices" are qualified as being "in our opinion" or what "we believe" or "we would consider". This means that Venuti's "best practices" are in fact the opinions of one individual practitioner, and have no general authority or acceptance in the actuarial profession.

In this context, Venuti's most misleading statements involve his opinions on what constitutes "best practices under accepted actuarial guidelines." As noted above, the only "accepted actuarial guidelines" are the Actuarial Standards of Practice and the Code of Professional Conduct, and the information on which the Regents' policies are based meets all such guidelines.

As to Venuti's specific criticisms, the previous section addressed those related to the investment earnings assumption. We close this section with comments on some of Venuti's specific "findings" regarding funding analysis and actuarial assumptions.

**(a)** ***Asset-Liability Modeling, Stochastic Analysis and Sensitivity Analysis.***

Venuti lists certain analytical tools that were not an essential part of the Regents' decision to restart contributions, and concludes that any such decision is premature without the use of those tools. However, Venuti gives no indication of how or why these tools would be useful, especially in light of the Regents' "soft landing" approach to restarting contributions.

Consulting actuaries have a wide range of tools available to them. Effective consulting requires first identifying the tasks to be accomplished, and then selecting the most appropriate, practical and effective tools for those tasks.

As evidenced by the Segal newsletter cited in the Venuti report, we are well aware of the availability and uses of all the tools that Venuti recommends, including both deterministic and stochastic asset liability modeling. Where we differ from Venuti is that we do not recommend these tools until we have identified how they are useful to the client's particular situation.

Consider stochastic modeling, where instead of a single, "deterministic" projection using best estimate assumptions, the model produces a wide range of outcomes along with the probability of each range of outcomes. This is a very effective tool for decisions that are fundamentally probability based, like selecting an asset allocation based on probabilities of different investment returns.

For the task at hand, stochastic analysis would result in determining the probabilities of different dates when the surplus would run out and contributions would have to resume. Aside from the very real question of how accurately such probabilities can be determined, we do not see the usefulness of focusing on these probabilities when the Regents' policy is to restart contributions well in advance of that date.

Here again, it appears that the inappropriateness of Venuti's recommendations traces to the fact that their analysis does not address the Regents' sound policy of not waiting until the surplus runs out before restarting contributions, i.e., the "soft landing" policy.

Another way to see that a stochastic analysis is more peripheral than appropriate is to consider the basic nature of the Regents' task. Restarting contributions will involve budgeting and collective bargaining definite amounts over multiple years. These decisions cannot be made in probabilistic or "what if?" terms. Ultimately, they must be based on the Regents' prudent best estimate of future experience. To paraphrase Albert Einstein, the Regents cannot play dice with the Retirement Plan.

There is also a dark side to the "multi-scenario" analyses that Venuti believes are essential to the Regents' decision. Venuti says they "believe that better and more complete information enhances the decision-making process," and that these tools would "provide additional valuable information" However, the Venuti report shows that inappropriate use of this additional information can be used to mislead policy makers and invite imprudent decision-making.

For example, consider a simple sensitivity analysis, where in addition to projections based on our best-estimate earnings assumption of 7.5%, we would also look at "high and low" projections using, say, 10% and 5%. At our June 14, 2006 meeting with Venuti we noted that, in our experience, even such a simple analysis can be misused by focusing on one alternative scenario and ignoring the other. Despite that discussion, as detailed in the previous section, the Venuti report insists that "the effect of potential higher returns should be considered in the funding analysis," but makes no mention of the lower return scenario that would be part of any complete sensitivity analysis.

(b) ***Actuarial Assumptions***

Generally, Venuti's concerns about UCRP's actuarial assumptions trace, once again, to Venuti's focus on short-term funding levels rather than how to transition from no contributions to full Normal Cost contributions. UCRP is an ongoing plan that does periodic valuations and reviews of its actuarial assumptions so as to reflect both emerging experience and extraordinary events. There will always be a "next" experience analysis and a "next" big event. Whatever policy is adopted regarding contributions, it will be reviewed and revisited over time so as to reflect future experience and events.

We note that, except for the inflation and salary increase assumptions, Venuti raises no evidence and makes no claim that any of the many UCRP actuarial assumptions are unreasonable. As for the inflation and salary increase assumptions, there are two technical flaws in Venuti's "findings":

(i) Lower inflation generally will not "improve the projected plan funding." GAS 25 and 27 require that "projected salary increases and other economic assumptions should include the same assumption with respect to inflation." ASOP #27 also requires consistency between these assumptions. This means that, all else equal, a lower inflation assumption will lower both assumed salary increases and assumed investment returns, a combination that generally will make plan funding worse, not better.

(ii) The salary increase assumption received special attention in the last experience analysis, resulting in the relatively unusual adoption of a lower, short-term assumption. This is evidence that this assumption is being appropriately monitored. Also, the July 1, 2005 UCRP actuarial valuation indicated that actual salary increases exceeded those assumed, so we do not see any immediate fact basis for Venuti's opinion that "the assumed salary increases seem high."

As for the effect of any Los Alamos transfer, a comparison of recent UCRP and Los Alamos actuarial valuation reports indicates consistency of recent actuarial experience and stable relative funding positions over the last five years. This means that there is little evidence that any Los Alamos spin-off will materially affect the Normal Cost, which is the appropriate focus of the Regents' contribution policy.