The (financial) State of UC Post-Employee Benefits

The views expressed here are mine and do not reflect those of the UC Regents, UCOP, the UC Chief Investment Officer, Systemwide Faculty Welfare, or the Task Force on Investments and Retirements

David Brownstone, January 25, 2017
• UC Defined Benefit Pension is healthy!
• Retiree health benefits are threatened.
• At least 1/3 of new employees are making bad pension choices
  • Need better counseling from all of us!
• Future retirees will depend more on “defined contribution” (403B)
• UC Defined Contribution plan is now world-class
  • But very few of us know this!
Pension Definitions

- **liabilities**: this is the discounted stream of the payments required to meet the obligations. For example if my pension is initially $100,000/yr, my contribution to the UC pension liability is \(100,000 + \text{COLA}_1 \times 100,000 / \text{discount}_1 + \ldots\) (until I die). Currently $73 billion.
- **Discount Rate (currently 7.25%)**: This is the assumed long-run rate of return on pension system assets (currently $62 billion).
- **Funding Ratio** – assets/liabilities (currently 85%)
- **Normal Cost** = amount needed to keep the funding ratio constant - currently about 22% of payroll (8% employee, 14% employer)

Note that these calculations assume that inflation will be 3% forever. There is obviously considerable uncertainty about future returns on pension assets and future inflation. Relative to these uncertainties the aggregate retirement rates and death rates are quite accurate. The 7.25% return on investment assumption is about equal to what the UC Pension assets earned over the previous 20 years, but above recent 5 and 10 year returns.
These data are for all UC retirees as of July 1, 2016
“core” are government and investment-grade corporate bonds, “high yield” are below investment (“junk”) bonds, TIPS are Treasury Inflation Protected Securities that provide protection against unexpected inflation, “absolute return” are hedge funds, “real estate” includes Real Estate Investment Trusts (REIT) as well as direct ownership of commercial real estate, “real assets” include commodities and things like forest land.
Paying off Pension liability

- In addition to normal cost, UCOP is committed to paying off the liability (approximately $11 billion) over the next 25 years.
- UC employer costs to pay normal cost + retire liability is currently 20% of payroll, declining smoothly to 16% of payroll in 2025, then declining more steeply to 14% in 2027 and 12% in 2036.
- These projected costs assume that the active membership of the UC pension plan grows by 0.7% per year.
Pension Guarantees

• Once you retire, pension is guaranteed by the assets plus legal opinions giving pensioners first claim on UC Assets.

• (If plan was 100% funded and shut down, then assuming 7.25% investment return and 3% inflation, assets would be sufficient to pay all claims).

• Retiree health benefits have no guarantee, and no assets (pay as you go)

• Monthly pension payments are subject to incomplete cost of living adjustment.
The calculation in the first bullet point assumes 80% of portfolio in S&P 500, 10% in 3-month US Treasury Bills, and 10% in 10 year US Treasury bonds. I used data on returns on these assets form 1945 through 2016 and simulated 200 draws from the joint distribution of the returns and CPI inflation. For each draw I calculated the present discounted value of the UC pension scheme and compared it to the lump sum cashout value. I assumed the familiar “4% rule” – initially I simulated a 4% withdrawal from the lump sum and increased that amount each year to keep the real value constant after inflation. After-tax (tax rate assumed to be 30%) UC pension payments in excess of the 4% rule withdrawals are reinvested in the same portfolio.

The average discounted value of the UC pension over an assumed 30 year retirement length was 95% of the lump sum value, the 25th percentile average discounted value was 90% of the lump sum, and the 75th percentile average discounted value was essentially equal to the lump sum. Of course if you die earlier than 30 years the lump sum leaves a bigger bequest to your heirs.
Retiree Health Costs

- Current annual cost about $7000/retiree (3% of annual UC payroll) - $18,000 annual per non-Medicare retiree and $3500 annual per Medicare retiree.
- Under current policy costs are expected to grow linearly to 5% of payroll in 2032 and then levelling off.
• Increase in retiree health costs due to 1) medical cost inflation (7% tapering down to 5%) and 2) increase in number of retirees.
• But retiree health is the cheapest form of post-retirement benefit since it is double tax-free!
• Current retiree health is 22% of post-employment compensation and equivalent to about $162,000 lump sum at retirement.
• UC’s total employer post-employment benefit costs are projected to peak at 22% of payroll in 2018, remain around 21% though 2024, then slowly decline to 15.9% of payroll in 2032.
• These costs are manageable and don’t constitute a crisis!
Pay as you go (PAYGO) versus Funding

- PAYGO is more efficient as long as there is growth in the underlying funding entity.
  - Implies PAYGO Social Security is efficient in U.S. but not Japan.
- But PAYGO schemes are vulnerable to current workers reneging on obligations to retirees. (high turnout of elderly voters counteracts this effect for US Social Security).
  - The tendency for young to not properly discount future makes this worse.
- Funding retiree health starting now would be prohibitively expensive.
  - But PAYGO requires believable commitment that each generation of workers will pay the retirees!

If there is underlying growth then it is cheaper (relative to their higher income) for younger workers to pay for retiree benefits rather than taxing workers to build up a fund to pay them.
2016 Pension Tier Problems

- Employees hired after July 1, 2016 choose between a capped defined benefit ("pension") or a defined contribution ("savings") scheme.
- Defined benefit capped at "PEPRA Cap" — currently $120,000/yr
- Defined contribution includes 8% UC and 7% employee contribution to 403B
- New employees have 90 days from hiring to choose.
- After 90 days defaulted into pension, but they lose 90 days of service credit and 90 days of UC contributions!
- About 1/3 of new faculty (and staff hires) default.
UCOP is waiting for an IRS private letter ruling on whether we could allow a one time shift from savings to pension choice. This would be useful for junior faculty who are uncertain about their tenure prospects.

2016 Pension Tier Cont.

- Pension choice is irrevocable, but there may be an opportunity to switch from savings to pension after 5-7 years. But no service credit for time in savings.
- Pension choice includes a 5% UC contribution to 403B for faculty (just 3% on amount above PFPRA cap for staff).
- The pension choice is probably better for faculty who get tenure.
- But waiting to default to pension choice is throwing away $$$$.
Defined Contribution

- UC Investment Office is switching to “white label” funds that allow UC to use bargaining power to reduce fees.
- New fee structure charges everybody about $30/year to cover administrative costs ($20/yr goes to Fidelity, the rest to UC Human Resources).
- Investment fees on core index funds are the lowest anybody has heard of (e.g., .005% for US Index vs .03% for equivalent Vanguard or Schwab fund).
- UC will likely allow Exchange Traded Funds purchased through Fidelity Brokerage Window.
- Should consider moving IRA funds into UC 403B!
Defined Contribution Problems

- UC Planning tools are simplistic and not consistent with Fidelity planning tools.
- Fidelity planners are required to use the Fidelity retirement and investment planning tools (available through Netbenefits).
- Fidelity planning tool does a good job of representing investment uncertainty.
- But Fidelity tool (and UC tools) does not properly account for the partial cost of living adjustments in our pensions — this is relevant whenever inflation is above 2%.
The lump sum cashout is better for males since by law it is calculated using mortality tables for men and women combined, but men tend to die younger than women. See Malkiel’s book for justification for the 50 – 50 US –foreign equity split.