HKUST Discards Faculty at Age 65 with Vastly Insufficient Retirements Funds

Carsten A. Holz (13 September and 23 December 2020, 6 May 2021)

The *Financial Times* on 6 September 2020 carried an article about the UK's "Universities Superannuation Scheme" deficit (here). The Pension fund suggested to increase pension contributions paid by university employers and scheme members to as much as 68% of employee salaries (up from 30.7%). Something similar applies to HKUST, except that with HKUST's retirement scheme being a defined-contribution rather than a defined-benefit scheme as in the UK, there is no institution to raise the alarm. HKUST faculty members can expect to retire on little more than a third of their previous income.

My calculations suggest that HKUST faculty members should, separate from the HKUST pension arrangements, save another one-third of their salary in order to be able to retire with a living standard close to the one they enjoy before their retirement.[1]

Assumptions

(1) Faculty members join HKUST at age 30. The current mandatory retirement age is 65.
(2) Real salaries rise at 2% per year. This means a base-year (age-30) salary of 1 rises to an end-year (age-65) salary of 1.96.
(3) Assume that prior to substantiation, faculty members pay 20% of their salary into a pension account of their choice.[2] After substantiation, the current HKUST practice begins, with HKUST contributing an amount equal to 15% of a faculty member's salary to the faculty member's HKUST-based pension account, and the faculty member contributing 5%.[3] The total of 20% at HKUST contrasts with the UK's vastly insufficient 30.7%.
(4) The real [before 6 May 2021 erroneously: nominal] rate of return for the HKUST-based pension account is 4.651. This is the internal rate of return based on my experience in 2002-2018. (I was substantiated in 2002; I did the calculations in 2018.) My portfolio was unchanged during this period with the following allocation: 70% "growth," 10% "balanced," and 20% "conservative."
(5) Retirement lasts from age 65 to age 95. While not all of us may live to age 95, we do not enjoy a defined-benefit pension scheme where the risk of living a long life is shared.
(6) In retirement, the pension funds are invested in cash-like instruments with 0% interest. Inflation after retirement is 0%.
(7) The U.S. Department of Labor's publication "Taking the Mystery out of Retirement Planning" (here) says (p. 18): "If you want a quick estimate of how much monthly income you'll need to cover expenses in retirement, figure on at least 70 percent of your preretirement income. Many experts are now increasing that figure to 80 or 90 percent." Given HKUST's heavily subsidized housing, one may have to increase that to 120 percent.[4]

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[1] Obviously, there is an endogeneity issue: If faculty members today save a higher share of their salary, their living standard today will fall correspondingly, and this reduced living standard will then require less retirement funding to maintain their current living standard beyond the mandatory retirement age.
[2] Prior to substantiation, HKUST pays a 15% tax-liable gratuity at the end of each 3-year contract.
[3] (1) The faculty member's contribution of 5% is currently not, as has been the case through approximately 2018, reduced by a small percentage share allocated to a mandatory life insurance. (2) A faculty member's pension account only fully belongs to the faculty member after 10 years of contributions; if one leaves HKUST earlier, HKUST claws back a percentage of its contributions (as far as I recall, declining linearly from 100% to 0% over the ten years).
[4] If one chooses to leave Hong Kong, one will have to consider taxes and health care costs.

Results

To retire with an income equal to 70% of one's last pre-retirement salary, one must save, during employment, an amount equal to 37.5% of one's salary (spreadsheet here). Given the current 20% contribution to the retirement fund, this means saving an additional amount equal to 17.5% of one's salary.

At 80% of one's last pre-retirement salary, the saving rate needs to be 42.9%
At 90% of one's last pre-retirement salary, the saving rate needs to be 48.2%.
At 120% of one's last pre-retirement salary, the saving rate needs to be 64.3%.

If the inflation rate during retirement is not 0% but 2%, then the saving rate needs to rise further. For an income in retirement equal to 70% (80%, 90%, 120%) of one's last pre-retirement salary, the saving rate becomes 51.7% (59.1%, 66.5%, 88.7%).

Perspective

The HKUST pension fiasco arises because the current pension contributions with an amount equal to 20% of one's salary are by far too low for academia. Professors do not start to contribute to a pension scheme at age 20, but at age 30. That makes a big difference in the long run.[5]

HKUST's pension fund vastly underperformed with an internal real rate of return of 4.651 vs. a market return—I am familiar with the U.S.—of more like 6-7%. In the long run, savings accumulated in the HKUST pension fund are little more than half of what they would be at the market return. About 15 years ago I wrote to the HKUST pension administration to request index funds as an option within our pension scheme (and explained why). My request was acknowledged and nothing happened. Every few years, HKUST management fires an investment company and gets a new one as the mutual funds of one company after another underperform the benchmark.

Severely underfunded pension accounts allows HKUST administrators to rehire faculty after the mandatory retirement age of 65 on a new contract that pays faculty significantly less. Faculty are desperate for any income. HKUST administrators get cheap labor.

Solutions for faculty

(1) Raise pension fund contributions immediately. Double the contribution made by HKUST. Address that past contributions have been far too low.

(2) Raise the mandatory retirement age to 70. If the inflation rate during retirement is 0% and the mandatory retirement age is 70, not 65, the saving rates (for an income in retirement equivalent to 70%, 80%, 90% and 120% of one's last salary) become 25.4%, 29.0%, 32.7% and 43.5%, a more manageable increase from the current 20% rate.

[5] At a 7% rate of return, if one were to contribute the same absolute amount to one's pension fund each year, the contributions made during the 10 years from age 20 to 30 yield as much accumulated savings at age 65 as do the contributions made during the 35 years from age 30 to 65. Professors' accumulated pension savings at retirement age thus are *half* the "average" person's.

(3) Require the HKUST pension fund administrator to offer annuitization upon retirement. This is standard practice at U.S. universities where a faculty member can see at any point in time (prior to retirement) the monthly retirement income that results from annuitization of one's projected retirement funds at retirement. HKUST faculty members may not be finance specialists; but they will understand a post-retirement monthly income figure.

(4) Faculty members unionize. The HKUST pension fiasco can continue unabated as long as we are not organized. An exploitative sweatshop management does not represent faculty interests. As the *Financial Times* reports for the case of the UK: "In 2017 proposals by the USS [Universities Superannuation Scheme] to increase pension contributions by 26 per cent — 8 per cent by employees and 18 per cent by employers — sparked the biggest wave of industrial action by staff on UK campuses in decades."

(5) On their own, HKUST faculty members will typically realize the scope of the pension fiasco only when they are in their 50s and will then find that they have to raise their saving rate to on the order of 100% of their income. Inform yourself earlier.

(6) Get a second job starting now.