## Causes for the Unfunded Liability

In the second of its three reports, the PFM Consulting Group describes seven major causes of the underfunding and also computed the value of these for the eight pension plans they are studying – those administered by KRS, TRS (the teachers plan), KJRP (the plan for judges), and KLRP (the plan for legislators). In their report, they show that the unfunded liability for the eight plans increased by about $25.5 billion over these eleven years. (These years were chosen as they reflect the largest growth period in the unfunded liability.) The causes are listed and explained as follows:

- **Actuarial Back-loading**: ARC payments not sufficient to offset the interest on the Unfunded Liability in a particular year. This is an inherent characteristic of a level percent of payroll plan where payments increase each year presumably with an increase in payroll. While this is a common and acceptable method, earlier payments during the pay-down period, in this case 30 years, are not sufficient to keep the debt from growing.
- **Actuarial Assumption Changes**: Reductions made to the assumed rate of return or increases made to the expected life expectancies of plan participants.
- **Plan Experience**: The fiscal gain/loss associated with comparing actual versus expected workforce members and their life expectancies.
- **Investments – Market Performance Below Assumptions**: How much the benchmark portfolio performance was less than the plan's assumed rate of return.
- **Investments – Plan Performance Below Assumptions**: How much the pension plan's assumed rate of return was below the benchmark portfolio performance.
- **Funding Less than the ARC**: The amount of funding provided by the employer was less than the amount recommended by the actuary.
- **COLAs**: Increases in pension benefits that were not anticipated in prior funding measurements.

The chart below tracks the dollar value of each of the causes in each plan. The color coding applied to the chart is called "heat mapping" in which the causes are assigned a color to better illustrate their relation in comparison. The color key below ranges from red, the color indicating the highest causality, to purple, the color indicating lowest causality.

| Category | Causes of Growth in Unfunded Pension Liability: FY 2005 - FY 2016 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | KERS-NH | KERS-H | CERS-NH | CERS-H | SPRS | TRS | KJRP | KLRP | TOTAL | % of Total |
| Actuarial Back-loading | 1153 | 89 | 1269 | 353 | 111 | 3278 | 31 | 2 | 6286 | 25% |
| Actuarial Assumption Changes | 2319 | 82 | 984 | 249 | 50 | 1958 | 25 | 5 | 5672 | 22% |
| Plan Experience | 539 | 39 | 372 | 107 | 107 | 232 | 43 | 2 | 1441 | 6% |
| Investments: Market Performance Below Assumption | 639 | 80 | 931 | 297 | 45 | 1926 | 5 | 3 | 3926 | 15% |
| Investments: Plan Performance Below Assumptions | 610 | -5 | 207 | 82 | 8 | 1014 | 14 | 0 | 1930 | 8% |
| Funding Less than the ARC | 2561 | -10 | -220 | -133 | 42 | 1588 | -11 | 3 | 3820 | 15% |
| COLAs | 1291 | 68 | 672 | 267 | 72 | 0 | 27 | 3 | 2400 | 9% |
| Total | 9112 | 343 | 4215 | 1222 | 435 | 9996 | 134 | 17 | 25474 | 100% |

*** Numbers in millions of dollars*

Higher Causality <-- <-- <-- --> --> --> Lower Causality

In looking at the chart, something immediately becomes apparent – the primary contributor to the change in the unfunded liability for KERS NH has been underfunding the ARC. This is especially noteworthy since, in five of the other eight plans, this is the last or second-to-last cause. For most of the plans, the biggest concern is actuarial back-loading, where the future payments to be made increase more sharply toward the end of their 30-year payback periods while the unfunded liability continues to rise in the first several years.

None of this is good, but it appears to be a more solid analysis of the situation than that provided by The Bluegrass Institute (BI) in its presentation, "Sound Solutions for Kentucky's Public Pension Crisis." On page 40 of this report they state, "Unfunded liabilities are primarily the result of retroactive benefit enhancements, not investment/ funding issues." As I understand their phrase "retroactive benefit enhancements", BI says that because the benefit factor has increased over the years, the ones that were in place for each year of your career should be combined to compute your benefit. Instead, each of us received pension benefits based on the benefit factor in place at the time of our retirement - this is the "retroactive benefit enhancement". Their contention on cause, however, seems overly simplistic, does not appear to have any actuarial analysis to support it, and looks only to serve as a basis to justify a reduction of pension recipient's benefits. PFM does not mention "retroactive benefit enhancements" at all. Defined benefit plans around the country compute benefits in a similar manner. BI also claims that it and PFM are in agreement that "KRS and TRS benefits are extraordinarily generous." I've read PFM several times now and don't see that remark anywhere.

Evaluation of causes will move to remedies later this month with PFM's third report.