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**Introduction:** The study reported herein is part of the review by the Federation of Citizens Associations of the Fairfax County 2011 Proposed Budget. In particular, this study is a review of the pension funds not from the point of view of whether the pension is too generous or too stingy to the employee, but from the point of view of whether it is adequately funded and adequately being managed.

We consider here the Fairfax County Uniformed Retirement System (Fund 600 for firemen, etc.), the Fairfax County Employees' Retirement System (Fund 601), the Fairfax County Police Officers Retirement System (Fund 602), the Educational Employees' Supplementary Retirement System (Fund 691) and the Other Post-Employment Benefits (OPEB, Funds 603 and 692). We do not consider the Virginia Retirement System (VRS), which is at the State level.

**Summary:** Except for Fund 601, under the County's reported actuarial assumptions, the pension funds are underfunded<sup>1</sup>. The assumptions could have a significant impact on the difference between assets and liabilities; therefore, the actuarial values of assets and liabilities should be reported for other economic scenarios, including one equal to the record over the last ten years. A re-computation should also be made based on a high inflation rate, which so many financial experts are currently predicting.

Because the pension fund already is a major cost to the County, the switch to a defined-contribution plan should be evaluated. The switch could be for new employees only; however, a switch might be made also for current employees for all future years, as was done in the Federal government. The change would decrease pension costs and relieve the County of the burden of the uncertainty in the economy.

The OPEB reports should be made to conform to those of the other funds in which the unrealized capital gains are separated from the realized capital gains, interest income, and dividend income.

**Discussion:** Budget data on the pensions was taken from the County web site <http://www.fairfaxcounty.gov/dmb/>, its subsidiaries such as [http://www.fairfaxcounty.gov/dmb/archives/budget\\_archives.htm](http://www.fairfaxcounty.gov/dmb/archives/budget_archives.htm) for budgets for prior years, and from <http://www.fairfaxcounty.gov/finance/FY2008CAFR.pdf> for the Comprehensive Annual Financial Reports. FY 2009, which is the most recent CAFR, has data up to and including FY2008 as listed under the Required Supplementary Information around Page 100. The reporting format changes somewhat from year to year, so it will not always be found in the same format. Additional pertinent information can be found in Section G (Retirement Plans) and in Section H (Other Post Employment Benefits, OPEB).

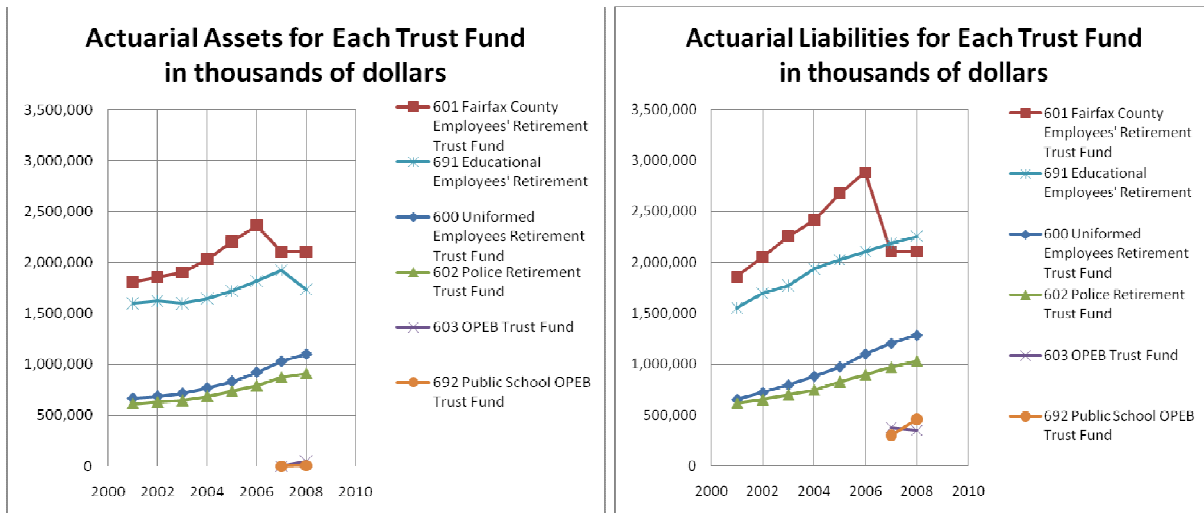
Pension data on income and expenses is found in Volume 2 of the budget documents, under the title Trust Funds. The funds are numbered 600, 601, 602, 603, 691 and 692. Data for each fund can be retrieved individually. The tables used most were those at the end of each of the .pdf files.

The OPEB funds (603 and 692) do not currently report investment income in the same way that the pension funds do. The OPEB has the return on a single line so that no distinction is made between the unrealized capital gains and the income from interest and dividends. In the 2011 statement, the income is described as "interest" whereas interest is never negative. In fact it says "Interest on investment income", which is again is never negative. Clearly, changes in asset value are included. The OPEB report should be made the same is done as for the other funds.

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<sup>1</sup> The County is aware of the funding shortfall. Page 10 of the Overview cites the funding as being "outside the corridor" of 90% to 120% so that payments into the funds must be adjusted. The budget calls for increased funding such that the funding will reach the 90% point within 15 years.

The first question is: Are the projected pension assets sufficient to cover the projected liabilities? The CAFR shows the actuarial assets and liabilities for each year for each fund (Exhibit 1). The OPEB funds are relatively new; therefore, not much data is available. The actuarial dollar values are the net present value of the assets (contributions and the investment earnings from those contributions) and liabilities (amounts to be paid to retirees in the future). The work “actuarial” implies that the health, work duration, life duration, etc., are factored into the computation.



**Exhibit 1: Actuarial Assets and Liabilities for Each of the Pension Funds**

The difference between the actuarial assets and actuarial liabilities can best be seen if the two are on the same graph (Exhibit 2). The right-hand graph of Exhibit 2 shows that only Fund 601 has assets equal to liabilities. The imbalance for the two OPEB funds is evident in Exhibit 1, so they were not repeated in the right-hand graph. The sum of the assets and liabilities shows that the sum of the liabilities has been rising at a faster rate than the assets, especially since 2006. The current difference is approximately 24%. This difference can be compared to the rate of return on investments of 4%, as discussed below, and the rate at which contributions are made to the pension funds, which is approximately 10%. The sum of these rates, 14%, is considerably less than the 24%. The pension funds appear to be under-funded.

Because the pension funds constitute a major cost to the County and the cost must be increased to balance assets and liabilities, a lower-cost system should be evaluated. For example, the pensions could be switched to a defined-contribution plan rather than the current defined-benefit plan. The switch could be for new employees only; however, a switch might be made also for current employees for all future years, as was done in the Federal government.

The second question is: Are the imbalances in the funds sensitive to the economic assumptions needed to compute the actuarial assets and liabilities? The key assumptions made in computing the actuarial values are (see, for example, Pg 70 of FY2008CAFR):

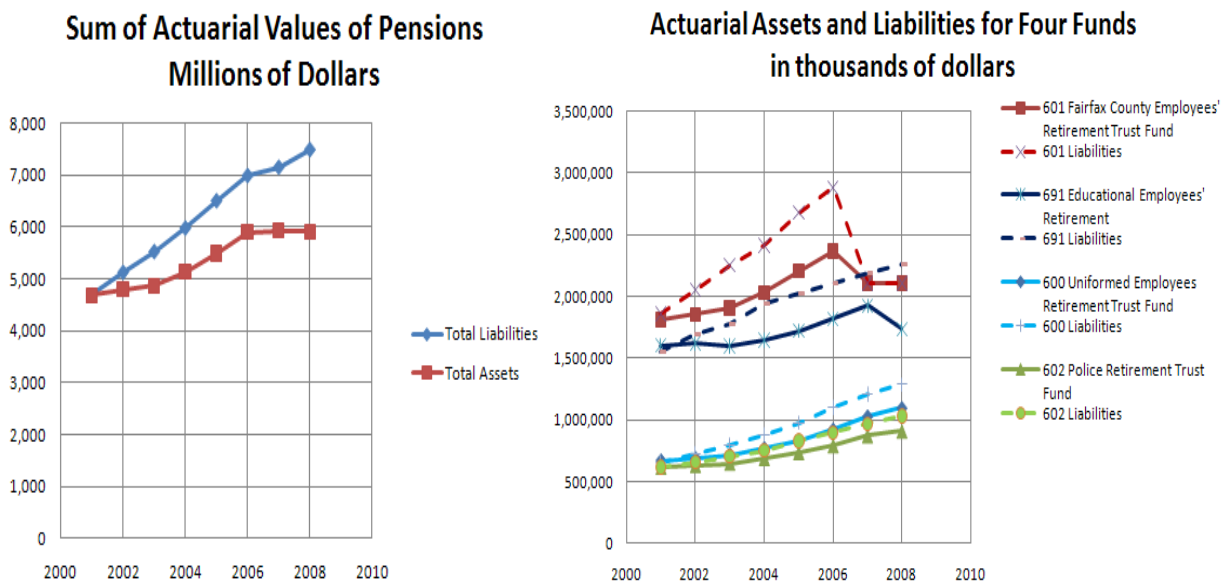
- a. A rate of return on the investment of present and future assets of 7.5 percent per year compounded annually, including an inflation component of 4.0 percent.
- b. Projected annual salary increases of 4.0 to 6.5 percent, including an inflation component of 4.0 percent
- c. Post-retirement benefit increases of 3.0 percent compounded annually.

The CAFR's for each year use different percent salary increases, but the other two factors remain the same.

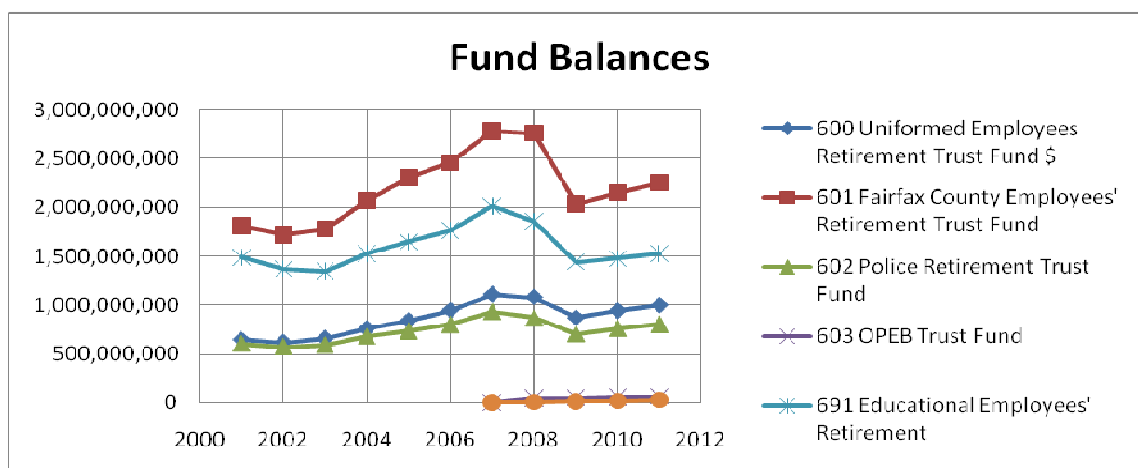
The assumptions made in computing the actuarial values can be compared to what has happened to the investments over the last decade (Exhibit 3). The effect of terrorist attack of 9/11 in 2001 is evident in the drop from 2001 to

2002. The effect of the collapse of the housing market is evident in the drop from 2008 to 2009. (The fund balances are as of June 30 in the year indicated.)

Actuarial Assumption (a) above, concerning the assumed 7.5% return on investment, can be tested against data for the last ten years. The return on investment has certainly not been constant; however, the average increase in the investment value of the pension funds has exceeded that of the Standard and Poor's 500 (Exhibit 4) – thanks to the investment advisors. The average return on investment, including the unrealized capital gains, is 4% per year, whereas the average for the S&P 500 is -1%. Dividends are included in the 4% pension-fund return, so for comparison, approximately 3% in dividends should be added to the S&P 500 rate, bring its total rate to +2%. The S&P 500, which is usually not considered to be volatile, is seen to be more volatile than the pension funds, surely because much of the pension fund is invested in bonds rather than stocks. The average Consumer Price Index (CPI-U) changed over this same period by 2.5%. (CPI-U includes the effect of food and fuel prices; the CPI does not.)

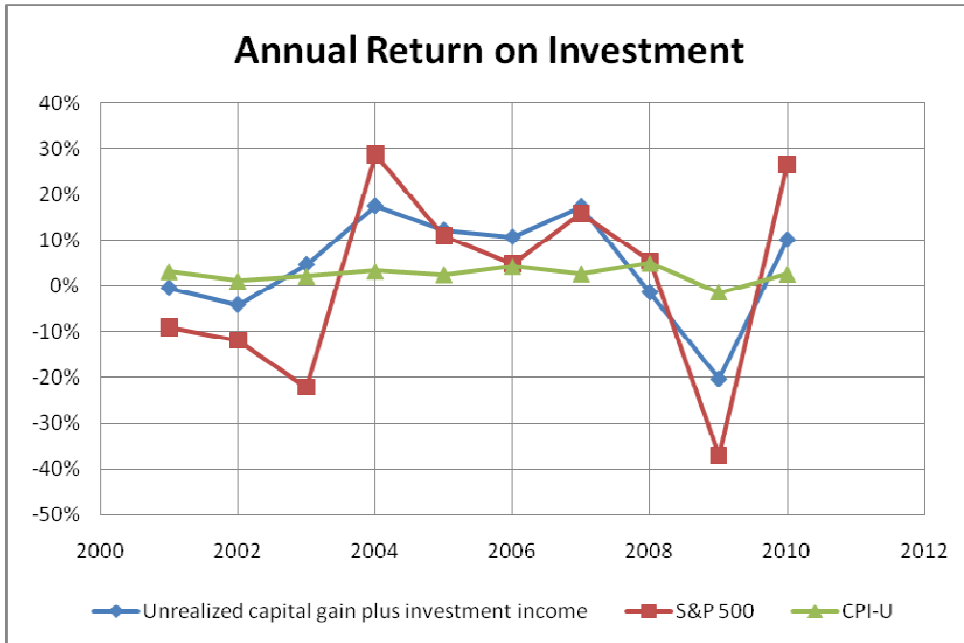


**Exhibit 2: Actuarial Assets and Liabilities for the Sum and Selected Pension Accounts**

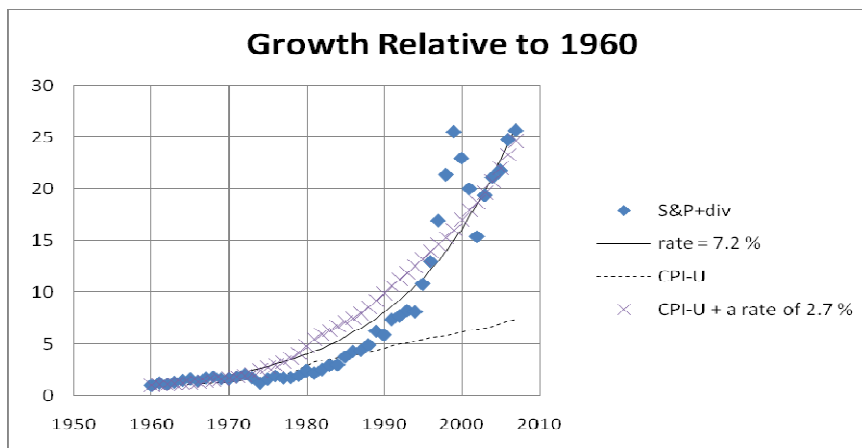


**Exhibit 3: History of the Values of the Assets**

In determining the sensitivity of the balance between actuarial assets and actuarial liabilities, the account performances should be re-computed with a return on investment of 4% and an inflation rate of 2.5%, as a second set of assumptions. The counter argument is that these two values are overly influenced by two catastrophic events: 9/11 and the housing collapse; however, we cannot be assured that another catastrophe will not happen (e.g., war in the Middle East). In addition, the current recession could last years. Even in good times, the long-term growth rate of the S&P 500, including dividends, is only approximately 2.7% above the CPI-U rate (Exhibit 5).



**Exhibit 4: Annual Return on Investment as Compared to S&P 500 and the Consumer Price Index**



**Exhibit 5: Compound Growth Rate of the Stock Market**

A thoroughly offsetting factor could be inflation, so the balance between assets and liabilities should also be re-computed for a high inflation rate – a phenomenon forecast by many economists. The increase in the pension adjustment for retirees is limited to 4% per year (Pg 68 of FY2009CAFR). If inflation were to exceed 4% and the investment values were to stay ahead of inflation, the retirees would be paid in dollars of less value so that the present rate of contributing to the pension fund could be much greater than needed.

**Appendix A: Proposed Resolutions**

**Resolution 1: Re-evaluate the actuarial assets and liabilities under historical rates of inflation and return (high priority)**

WHEREAS the actuarial values of the assets and liabilities depend on the assumed values of inflation and return on investment, and

WHEREAS the currently assumed values of the rates of inflation and return on investment differ significantly from what has been experienced over the past ten years and from the longer-term S&P 500 rate

Therefore

BE IT RESOLVED that the Federation recommends that the actuarial values be re-computed under alternative assumptions, including (1) the last decade's average values for the rate of return of the pension and the inflation rate and (2) the high inflation rates anticipated by many economists.

**Resolution 2: Evaluate changing the pensions from defined-benefit to defined-contribution plans (high priority)**

WHEREAS, under the current assumptions used by the County, the actuarial assets are less than the actuarial liabilities, indicating that the Fairfax County's defined-benefit pensions are currently under-funded;

WHEREAS the County's pension costs are already a major component of the County's expenses;

WHEREAS the County desires decreasing expenditures, not raising taxes, to meet budget limitations; and

WHEREAS most solvent private companies, as well as the Federal government, have reduced their pension expenses by changing from defined-benefit plans to defined-contribution plans

Therefore

BE IF RESOLVED that the Federation requests that the County evaluate switching from the current defined-benefit plan to a new defined-contribution plan. The switch could be for new employees only; however, a switch should also be evaluated if the new plan is applied to all employees for all of their future years, as was done in the Federal government.

**Resolution 3: Make the financial reports consistent (low priority)**

WHEREAS clarity is needed in the County's financial reports

Therefore

BE IT RESOLVED that Federation requests that OPEB reports be made to conform to those of the other funds in which the unrealized capital gains are separated from the sum of realized capital gains, interest income, and dividend income and that the titles to these items be made the same as in the other funds.