

**City of Portland, Oregon
Fire and Police Disability and Retirement Fund**

Actuarial Valuation as of July 1, 2006

**A Projection of Benefit Payments, Liabilities, Actuarial Costs,
And Levy Adequacy after July 1, 2006**

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I. Summary of Results

Purpose of the Report

This report presents the results of an actuarial valuation of the City of Portland Fire and Police Disability and Retirement Fund (the Fund) as of July 1, 2006. The purposes of this actuarial valuation are as follows.

- Project Benefit Payments

Future pension, benefit, and expense payments from the Fund are projected for the next 60 years. This projection is important because the Fund is currently financed on a pay-as-you-go basis: The annual cost of the Fund to the City is the same as the Fund expenditures.

Fund expenditures are projected on an “open group” basis. This means that benefits paid to *future* new hires are projected along with benefits paid to *current* active and retired Fund members.

- Provide Information for Accounting Disclosures

Traditional actuarial liabilities and costs are computed to meet the requirements of Statement Nos. 25 and 27 of the Governmental Accounting Standards Board.

The computation of traditional actuarial liabilities and costs is performed on a “closed group” basis: Only current active and inactive Fund members are included. It is assumed that there will be no new Fund members.

- Study Levy Adequacy

Projected annual Fund expenditures are compared with estimates of the maximum property tax that can be levied to support the Fund. In this way, the adequacy of the levy can be studied.

The last actuarial valuation of the Fund was performed as of July 1, 2004. Valuations of the Fund have been performed every two years since July 1, 1990. Prior to July 1, 1998, the purpose of these biennial valuations was to generate the liabilities required for disclosure under Statement No. 5 of the Governmental Accounting Standards Board (GASB). As a result they were limited in scope.

Actuarial Assumptions

With a few exceptions, the actuarial methods and assumptions used in this actuarial valuation as of July 1, 2006 are the same as those used in the Report as of July 1, 2004.

The rate used to discount future Fund benefits for purposes of disclosure under GASB Statements 25 and 27 has been changed in this Report. Formerly, a discount rate of 8% was used; as of July 1, 2005, this rate was decreased to 6.63%. In this Report, a discount rate of 6.04% is assumed.

After a review of past increases in Member pay, in the July 1, 2004 Report we assumed that fire and police pay will grow at 1% per year above inflation for the 10 years following the valuation date, and

0.5% per year over inflation after 10 years. That assumption has been modified in this Report; Base Pay is now assumed to increase 1% per year faster than inflation indefinitely.

In preparing this Report, we reviewed the assumptions for short-term disability (STD), medical, and administrative expenses. These assumptions are employed in the projection of future Fund cash flows and the Fund levy. The data supporting our review is shown below in Chart 1.

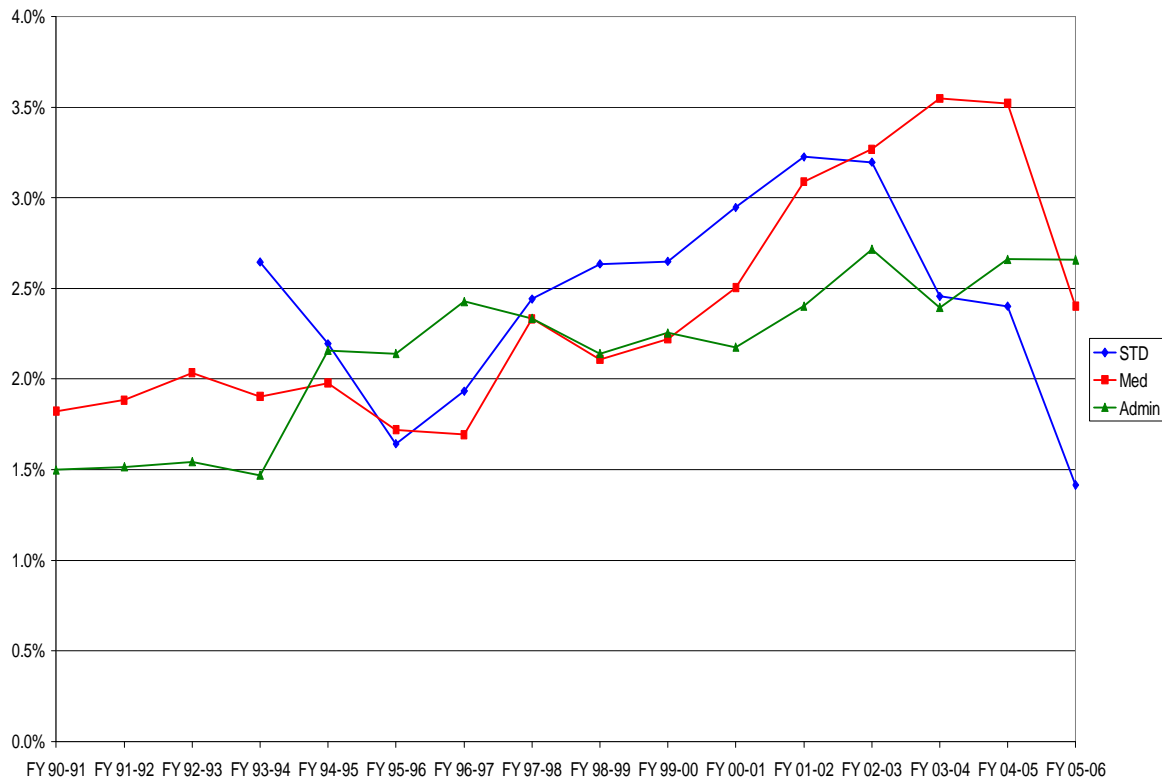


Chart 1: History of Short-Term Disability, Medical, and Administration Expenses

Short-term disability and medical expenditures are shown as a percentage of Base Pay. Administration expenses are shown as a percentage of pensions and benefits paid.

In Chart 1, we have graphed administration expenses as a percentage of pensions and benefits. We have previously assumed these expenses would be 2.5% of benefits. We see in Chart 1 that they have ranged between 2% to 2.75% of benefits since the 1994-95 fiscal year. While 2.5% is certainly reasonable, we have increased our assumption to 2.75% in this Report.

Medical expenses are graphed as a percentage of Base Pay in Chart 1. We have assumed medical expenses would be 4% of base payroll each year. In Chart 1 we see these expenses have varied from 2% to 3.5% since the 1990-91 fiscal year. However, there was a sharp drop in medical expenses during 2005-06 resulting from more aggressive cost controls, including mandatory use of preferred providers, back to work programs, and increased supervisory attention by Fund Trustees, the mayor and the City Council. To reflect the impact of this managerial effort, we have decreased our assumption to 3.5%. Further decreases in this assumption may be warranted in future years as experience emerges.

We previously assumed that short-term disability payments would average 3.5% of base payroll each year. In Chart 1 we notice that this expense has ranged from 1.5% to 3.25% of pay, with a significant decline since 2002. This decrease in short-term disability payments has occurred for the same reasons as the lower medical expenses. Accordingly, we have decreased our assumption to 3% of pay; we will monitor these payments in future years to determine if a further modification in the assumption is appropriate.

Other actuarial assumptions have been updated to reflect changes in projected active workforce growth, Member Base Pay, and the levels of Real Market Value and Assessed Value. Full details of all actuarial assumptions can be found in Section V below.

Benefit Projections

The Fund is currently financed on a pay-as-you-go basis. Accordingly, a projection of future pension, benefit, and expense payments is necessary to determine the future contributions required to maintain the solvency of the Fund. In addition, such a projection is needed to evaluate the adequacy of the Fund levy to supply those contributions. If the Fund levy were unable to generate sufficient contributions to maintain the solvency of the Fund, the City would be required to make up the difference from the General Fund or other revenue sources.

Chart 2 below shows a projection of pensions, benefits, and administrative expenditures from the Fund for the next 60 years. Five projections are shown in Chart 2: These are the projections of benefit payments produced by the July 1, 1998, 2000, 2002, 2004, and 2006 Reports.

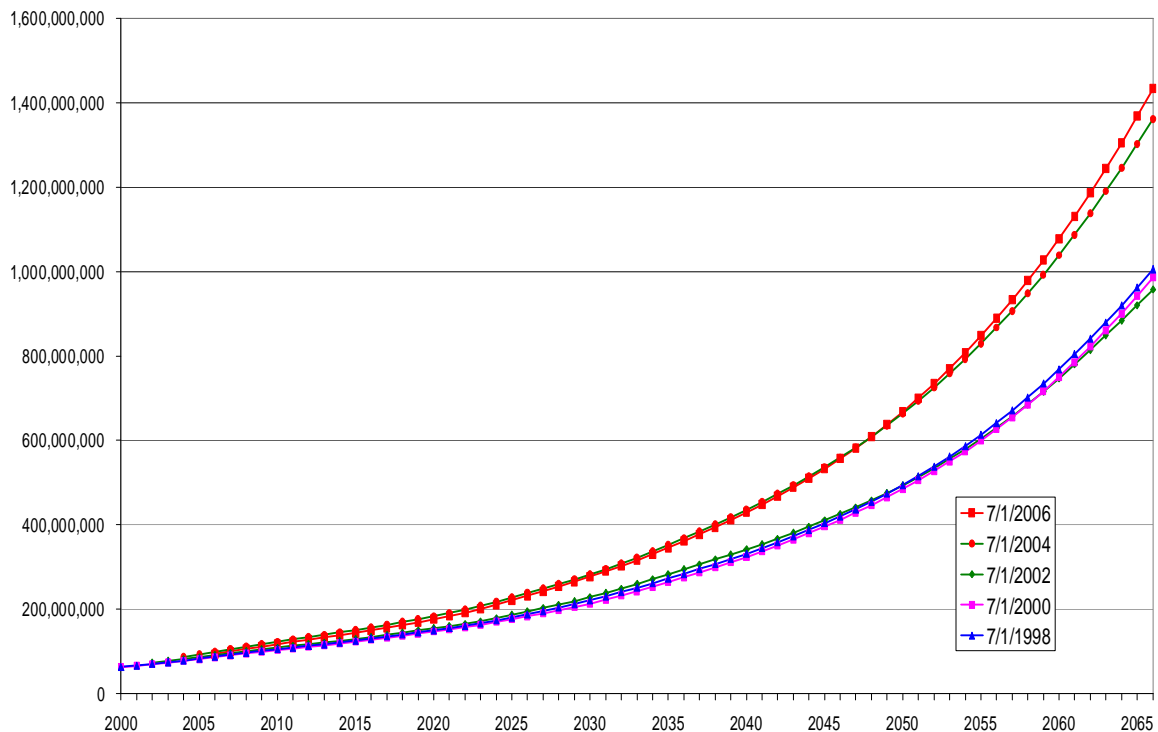


Chart 2: Projection of Pensions and Benefits in Dollars
Administrative expenses are included.

Fund expenditures are projected on an “open group” basis: Benefits paid to future new hires are projected along with benefits paid to current active and retired Fund members.

We note in Chart 2 that the projected benefits for the July 1, 2006 Report are very close to those from July 1, 2004 in dollar terms.

A similar pattern emerges when we project benefits and pensions as a percentage of Base Pay. (Base Pay is the pay in the Member’s position, including premium pay, but excluding overtime and excluding any payments for unused vacation or sick leave. Base Pay is the figure used to compute member benefits from the Fund.) Since Base Pay is affected by inflation as well, the relationship between benefit payments and Base Pay shows the *relative* value of the pensions paid from the Fund.

Chart 3 below shows a projection of benefits as a percentage of Base Pay for the next 60 years. Five projections are shown in Chart 3: These are the projections of benefit payments produced by the July 1, 1998, 2000, 2002, 2004, and 2006 Reports.

We note in Chart 3 that the projected benefits as a percentage of Base Pay has decreased slightly as of July 1, 2006 when compared with the projection two years ago. The projection was affected by two changes in actuarial assumptions. In the July 1, 2004 Report, we assumed a long-term growth rate of ½% per year in the Fire Bureau. This has been changed to no growth after three years, in accordance with the Fire Bureau’s active workforce projections. The slower assumed growth rate in the Fire Bureau decreases projected future Base Pay somewhat more than projected benefits; this causes the ratio of benefits to Base Pay to increase somewhat.

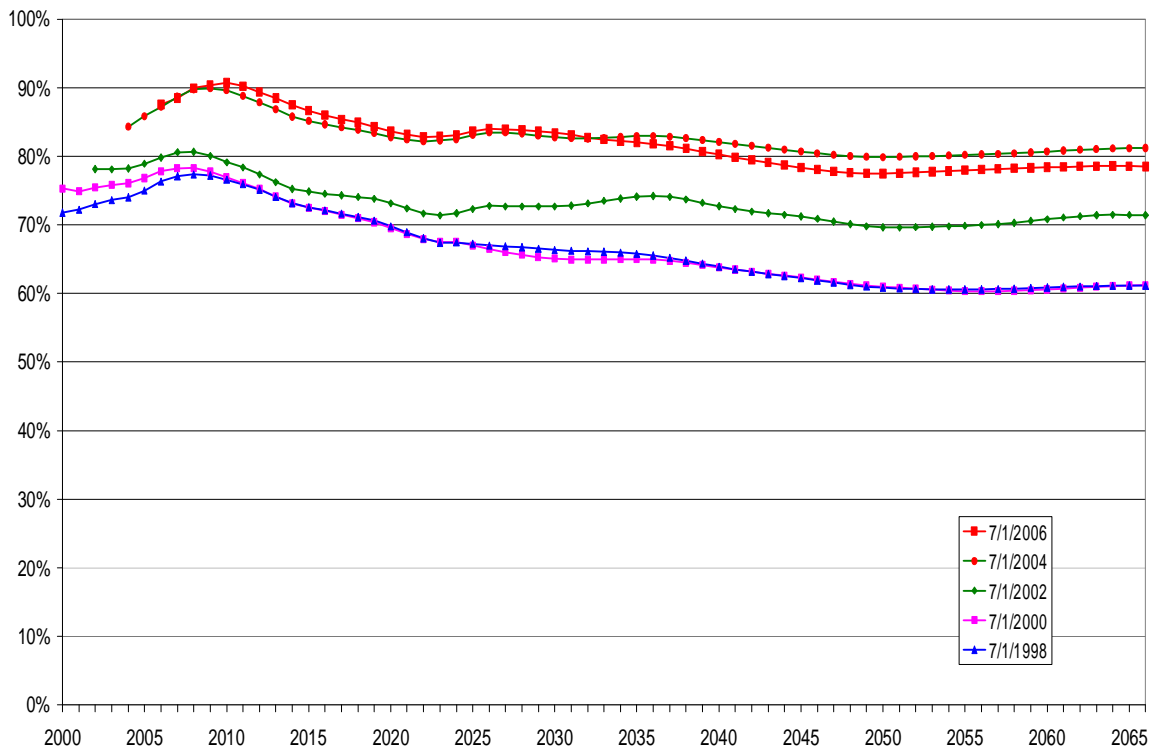


Chart 3: Projection of Pensions and Benefits as a Percentage of the Base Pay of Active Fund Members
 Administrative expenses are included.



In addition, the assumed increase in Base Pay relative to inflation was changed to 1% for all future years, as noted above. This revision in the assumptions decreased the projected benefits as a percentage of Base Pay, more than offsetting the effect of the Fire Bureau workforce projection.

It should be noted that Charts 2 and 3 above are merely projections of Fund expenditures based on our actuarial assumptions. The actual experience of the Fund will certainly differ.

Accrued Liabilities

As mentioned above, the Fund is financed using the pay-as-you-go method: Each year's benefits and expenses are paid for by contributions to the Fund during that year. No significant assets are accumulated in the current year to pay for benefit payments in future years.

Under this financing method, no liabilities are computed: Benefits are simply paid when they come due. However, under GASB Statement No. 27, the City must include an annual cost for the Fund as an expense in its financial statements. The calculation of this cost – the Annual Required Contribution (ARC) – must be in accordance with GASB Statement No. 25. Therefore, a computation of actuarial liabilities and an actuarial cost is required for the Fund.

The actuarial method selected by the City to compute the ARC is the Attained Age Actuarial Cost Method. Under this Method, the actuarial accrued liability is computed under the Projected Unit Credit Actuarial Cost Method. This is the same method that was mandated by GASB Statement No. 5 for computing the Pension Benefit Obligation (PBO). Therefore, the actuarial accrued liabilities computed in this and future actuarial valuations will be consistent with the PBOs computed for disclosure purposes in prior valuations.

The table below shows the actuarial accrued liabilities computed as of July 1, 2004 and July 1, 2006. Note that the discount rate used to compute these liabilities was changed as of July 1, 2005 from 8% to 6.63%. Accordingly, the July 1, 2004 liability is shown at both rates for comparability. Similarly, the July 1, 2006 liability is computed at both 6.63% and 6.04%.

	July 1, 2004 (8%)	July 1, 2004 (6.63%)	July 1, 2006 (6.63%)	July 1, 2006 (6.04%)
Retirees and beneficiaries currently receiving benefits	\$832,797,907	\$955,557,199	\$1,045,255,128	\$1,115,000,971
Current Members:				
Accumulated member contributions	9,076,789	9,076,789	6,538,376	6,538,376
Employer-financed vested benefits	346,195,492	346,195,492	445,046,461	493,536,953
Employer-financed non-vested benefits	<u>100,633,987</u>	<u>242,427,972</u>	<u>170,184,461</u>	<u>202,585,014</u>
Total	\$1,288,704,175	\$1,553,257,452	\$1,667,024,426	\$1,817,661,314

Chart 4 below shows the history of the actuarial accrued liability since July 1, 1988.

Using the assumptions adopted by the City, the actuarial accrued liability is calculated using a 6.04% discount on future pension payments and inflation at an annual rate of 3.5%. The changes in assumptions noted in Chart 4 as of July 1, 2004 were those revisions stemming from the 1998-2003 actuarial experience study. The liability is shown at both 8% and 6.63% in 2004, and at 6.63% and 6.04% in 2006.

We note in Chart 4 that the actuarial accrued liability has been increasing. This is expected as benefit payments have increased due to salary increases, inflation, and the aging of the covered members. Since July 1, 1988 there have also been changes in the accrued liability as actuarial assumptions were modified to reflect the experience of the Fund.

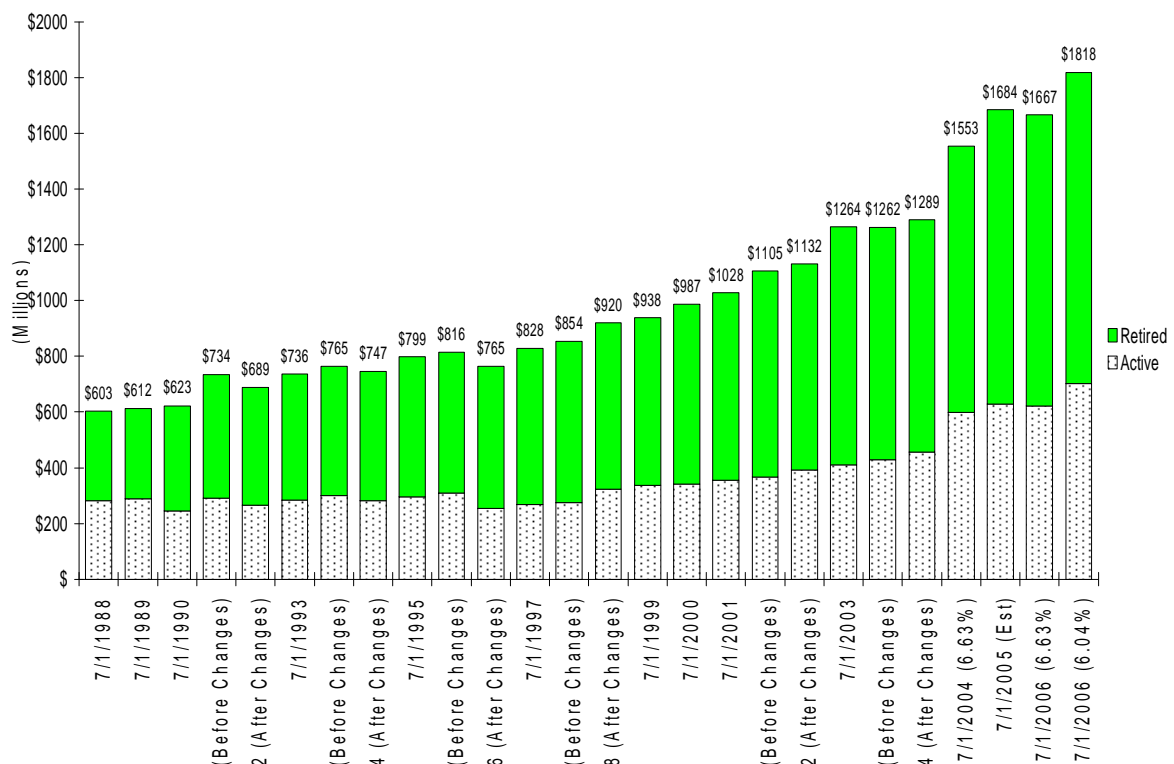


Chart 4: History of Actuarial Accrued Liability Since July 1, 1988

The actuarial accrued liabilities can also be used to determine whether or not the experience of the Fund since the last valuation was in accordance with actuarial assumptions. Specifically, we can compare our projection of the actuarial liabilities as of July 1, 2004 with the actual liabilities two years later. Such a comparison can reveal if any of the actuarial assumptions are in need of significant revision.

Chart 5 below shows, for each active and inactive benefit category, the actuarial accrued liability as of July 1, 2006 divided by the July 1, 2004 liability projected forward two years. All liabilities are



discounted at 6.63% and use last year’s assumptions regarding growth in Base Pay. A figure of 100% means that the actual July 1, 2006 liability is the same as the liability we projected based on our actuarial assumptions. It indicates that the assumptions are accurately reflecting the behavior of both current Fund Members and new Members joining the Fund over the past two years.

We note in Chart 5 that the ratios at the top of the Chart, for active members, all are very close to 100%, indicating that the actuarial assumptions are performing very well.

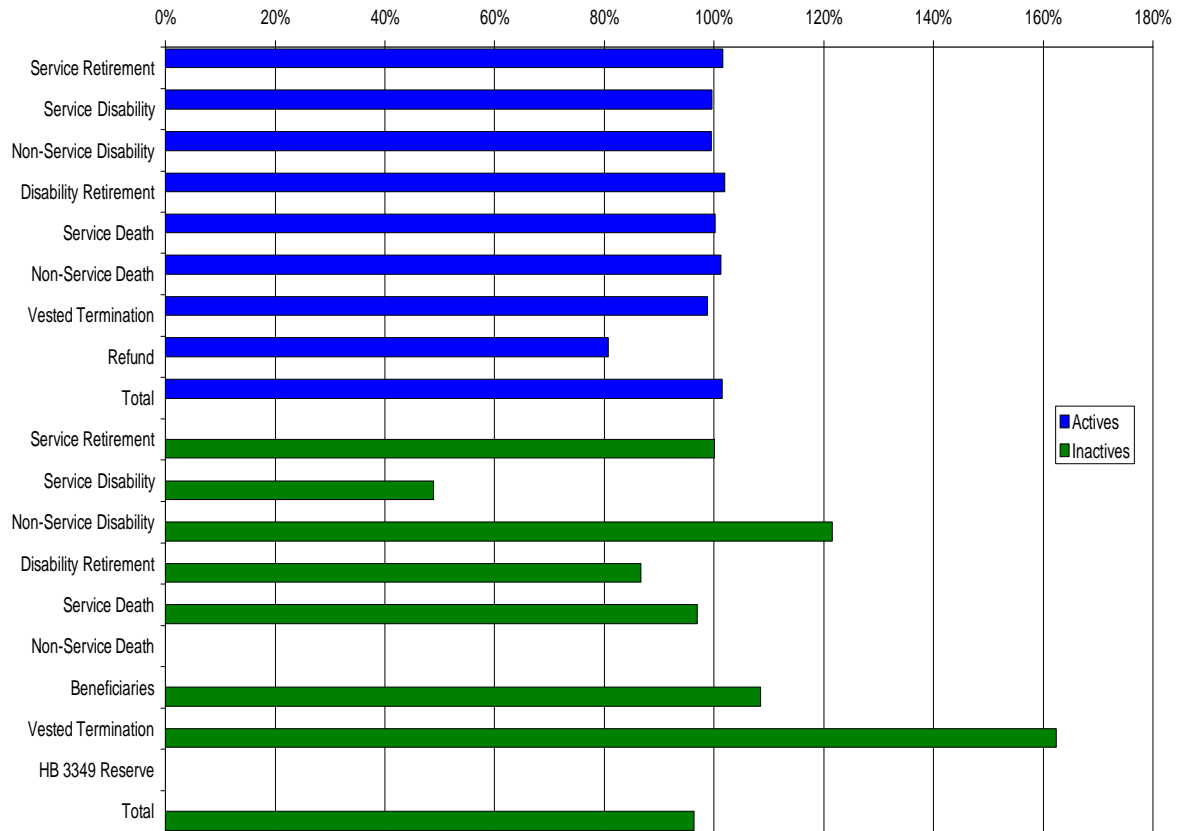


Chart 5: Ratio of Actual July 1, 2006 Accrued Liability to that Projected from July 1, 2004

Performance of the inactive assumptions is also very good. The total actual to expected ratio is about 96%, very close to 100%. The largest category – service retirement, representing about two-thirds of the inactive liability – is almost exactly 100%, an excellent match of actual to expected experience. There is a fair amount of variance in the inactive disability benefits – service and non-service disability and disability retirement. This resulted from the aggressive cost-saving and back-to-work programs instituted by the Board, the Bureaus, and City Administration to control disability costs.

The liability for vested terminated members is higher than expected. This is a small liability, representing about 1% of the total inactive liability, so variability is not a surprise. In reviewing the data for vested terminated members, we discovered that members who had not yet started to receive payments were omitted from the liabilities as of July 1, 2004. Adding these members into the computations in this Report accounts for the bulk of the difference between the actual and projected liabilities. This is not a material issue, because the liability is so small.

Actuarial Cost

The computation of the Fund's actuarial cost is presented in Section II of this Report. Chart 6 below shows the history of the Fund's cost since July 1, 1990.

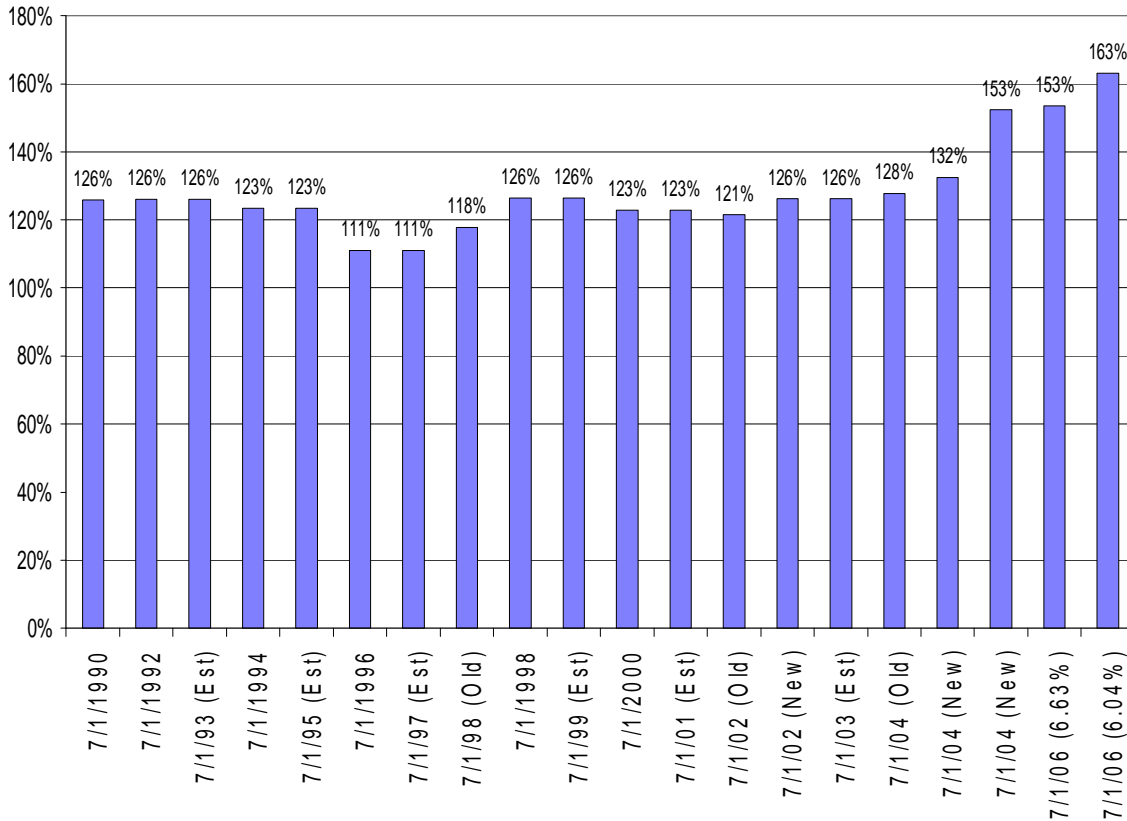


Chart 6: History of Actuarial Cost Since July 1, 1990

We note in Chart 6 that the actuarial cost of Fund pensions and benefits has been around 120% to 130% of Base Pay since the New Plan was introduced in 1990. The slight increase in cost, from 111% in the July 1, 1996 valuation to 118% two years later, was caused by actuarial losses from mortality (members living longer than expected) and retirement (members retiring earlier than expected). Introduction of new actuarial assumptions on July 1, 1998 increased the actuarial cost of the Fund to 126%, a 6.8% relative increase.

Experience in the four years since July 1, 1998 was neutral to slightly favorable, resulting in a small decrease in the cost of the Fund from 126% of Base Pay on July 1, 1998 to 123% two years later to 121% as of July 1, 2002, before changes in actuarial assumptions. Changes in the actuarial assumptions in the 2002 Report caused the cost to increase slightly to 126% of payroll.

As discussed above, assumptions were revised in the July 1, 2004 Report, increasing the Fund cost from 128% to over 130% of Base Pay. The actuarial cost further increased to 153% of Base Pay due to the change in the discount rate from 8% to 6.63%, and then to 163% when the discount rate was decreased further from 6.63% to 6.04% and the wage increase assumption was changed as of July 1, 2006.

The actuarial cost computed in Section II and discussed above is computed using traditional actuarial methodology. In particular, it is assumed that no new members enter the Fund after the valuation date of July 1, 2006. This type of calculation is required by the Employee Retirement Income Security Act (ERISA) in the private sector, and it is mandated for disclosure under GASB Statements No. 25 and 27 in the public sector.

Adequacy of the Levy – Current Fund Provisions

Once Fund expenditures are projected, we can estimate future levels of the property tax rate levied by the Fund to finance its operations.

Chart 7 below shows such a projection of the Fund levy resulting from the July 1, 1998, 2000, 2002, 2004, and 2006 Reports. The projections from the 2004 and 2006 Reports show the tax levy excluding the urban renewal (UR) property tax base and levy. We note in Chart 7 that Fund expenditures are projected to remain comfortably below the \$2.80 maximum levy in the future. It should also be noted that the expected levy has decreased somewhat in the near and mid-term since the projection in 2004.

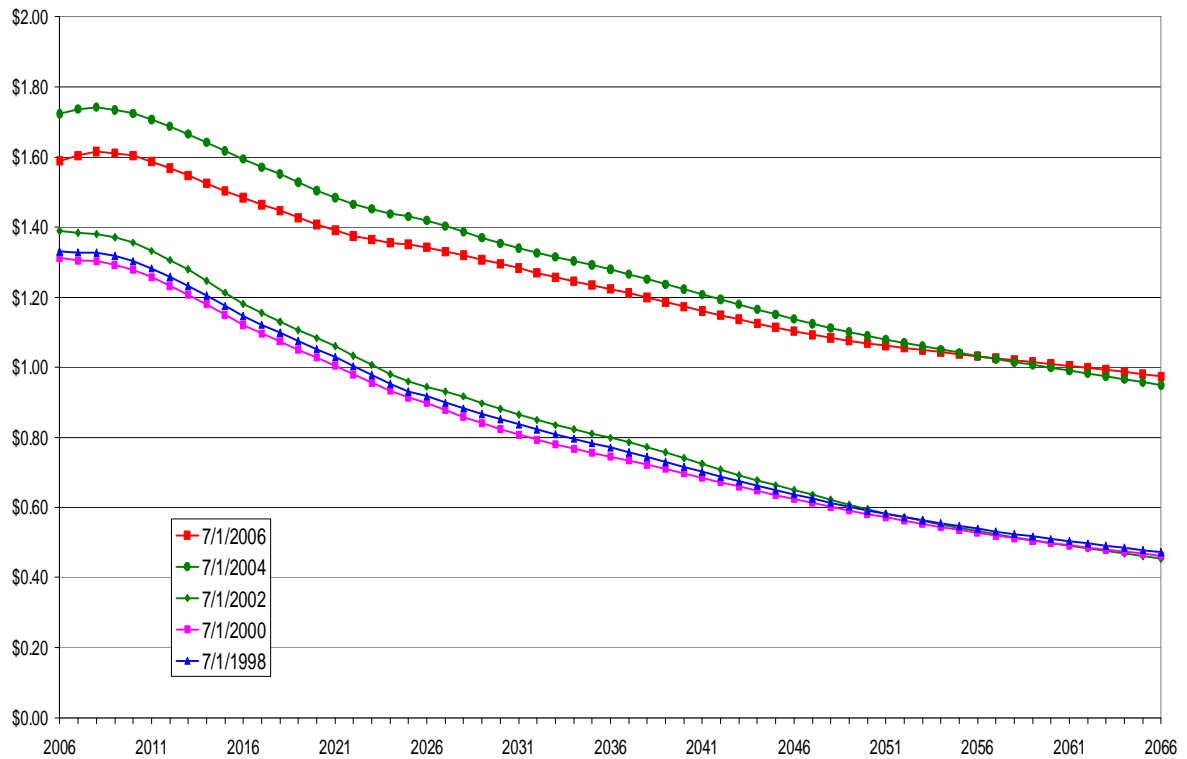


Chart 7: Projection of Pensions and Benefits as a Dollars per \$1,000 Tax Rate Based on Real Market Value
 The urban renewal tax base is excluded.

As noted above, Fund liabilities and cash flows are in reasonable accord with those projected two years ago. Three factors resulted in revisions in future projected cash flows, and hence taxes. First, we have assumed a level firefighter workforce, consistent with Fire Bureau projections. Second, as

noted above, the administration and payment of disability benefits from the Fund has changed, affecting both current and projected cash flows and taxes. Third, the rate of expected increase in Base Pay has been changed, as noted above.

Changes have taken place in the property tax levy as well. While assessed value under Measure 50 has increased by just 2.8% annually (excluding urban renewal) for the past two years, real market value has increased by 6.9% per year. This rate of increase is higher than the 5.5% annual increase assumed in our projections, causing our tax rate projections to decrease.

In addition, property tax levies are being compressed by a smaller amount than we assumed in the July 1, 2004 Report. In 2004, we assumed that compression would amount to 4% when total Fund and non-Fund taxes reached \$14.00/\$1,000 of assessed value. The total levy now is about \$15.00, while compression is now 3.2%. We have modified our compression model accordingly, so compression has less of an effect on our projected levies than it did two years ago.

Our projections of the Fund levy are based on our actuarial assumptions. The actual experience of the Fund – and therefore the actual Fund levy – will surely differ from our assumptions.

An estimate of the extent of possible variation from assumptions can be obtained from Chart 8 below. Here we have *simulated* the future Fund levy for the next 60 years. Inflation and increases in Real Market Value are randomly derived from probability distributions. The urban renewal tax base and levy is excluded.

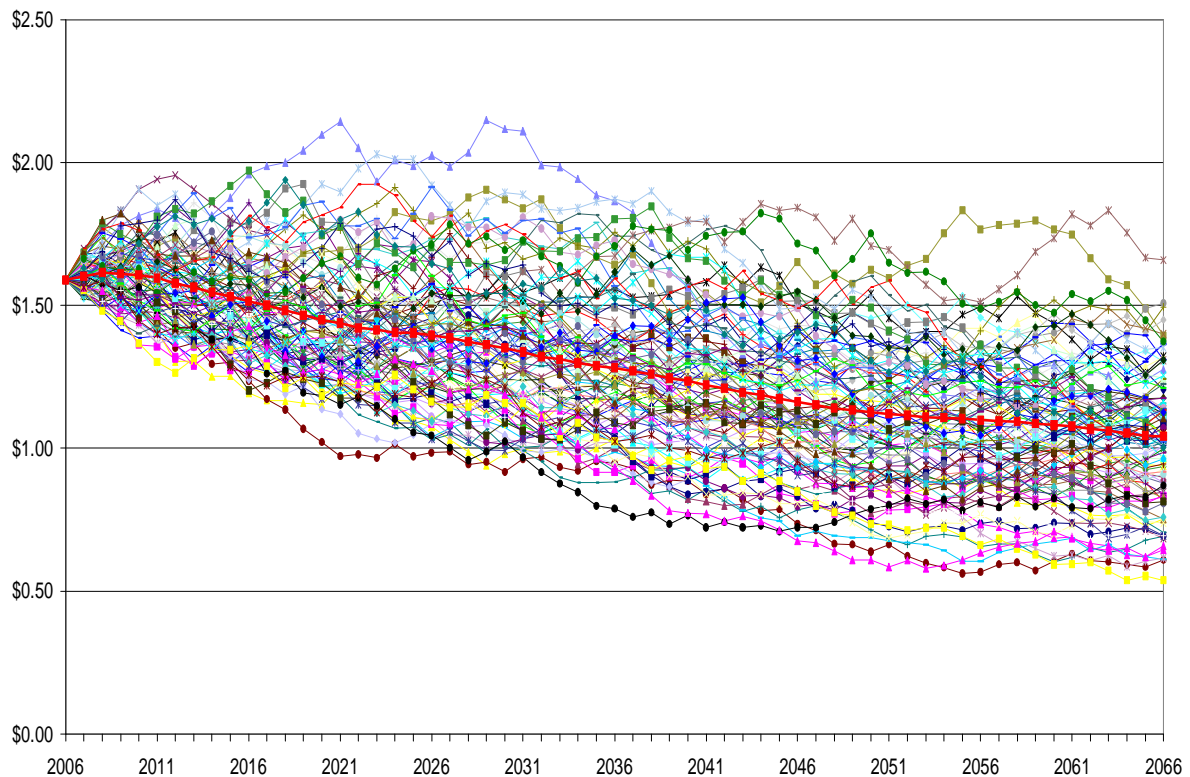


Chart 8: Simulation of the Fund Tax Rate
100 of 500 simulation trials are shown. The urban renewal tax base is excluded.

In the 500 simulation trials we performed, there was not one instance of the Fund tax rate exceeding \$2.80. While this does not mean that the Fund tax rate will never exceed \$2.80, it does indicate that such an event is unlikely with the Fund structured as it is. Therefore, other than an economic trend that would reduce growth in property values, the principal threat to the solvency of the Fund will probably not come from the unpredictability of inflation and Real Market Value. The chief threat to the Fund is more likely to come from changes in the *structure* of the Fund's tax levy, most likely through future voter initiative petitions or judicial interpretations of current law.

Under the City Charter as amended, if revenues from the special property tax levy are insufficient to meet the obligations of the Fund, the City's General Fund may be responsible for the deficiency. The future sufficiency of the property tax levy will depend not only on future payments from the Fund, but also on growth in Real Market Value and on the operation of current and future property tax limitations.

Adequacy of the Levy – Proposed Fund Provisions

Changes to the Fund are being considered. A proposal is now before the voters that would change the benefits payable from the Fund. Current members would continue to accrue and receive all benefits from the Fund, while all new hires would receive their retirement benefits from the Oregon Public Service Retirement Plan (OPSRP). Short and long-term disability benefits, death benefits, and medical payments will continue to be paid by the Fund for both current and new members, but would be offset by any payments from OPSRP.

Contributions to the new retirement plan, including OPSRP, would be as shown in Table 1 below. Note in Table 1 that contributions are shown in relation to gross pay, which includes overtime and special compensation not included in the Base Pay used to compute Fund benefits. Based on figures for 2005, gross pay is 119.6% of Base Pay for firefighters, 117.2% for police officers.

Table 1: Projected City Contributions to OPSRP

<u>Benefit</u>	<u>Amount</u>	<u>Fixed or Variable</u>
OPSRP Normal Cost	11.65% of gross pay	Varies based on actuarial assumptions
OPSRP Amortization of Unfunded Actuarial Accrued Liabilities	0% of gross pay initially	Varies based on actual experience, especially return on assets
<u>OPSRP Individual Account Plan</u>	<u>9% of gross pay</u>	<u>Fixed</u>
Total	Initially 20.65% of gross pay	Will vary with actuarial assumptions and experience

Chart 9 below shows two projections from the July 1, 2006 Report: One is the projection of the Fund tax rate described above for the current Fund. The other projection assumes that all future new members join OPSRP. Both projections show the tax levy excluding the urban renewal (UR) property tax base and levy.



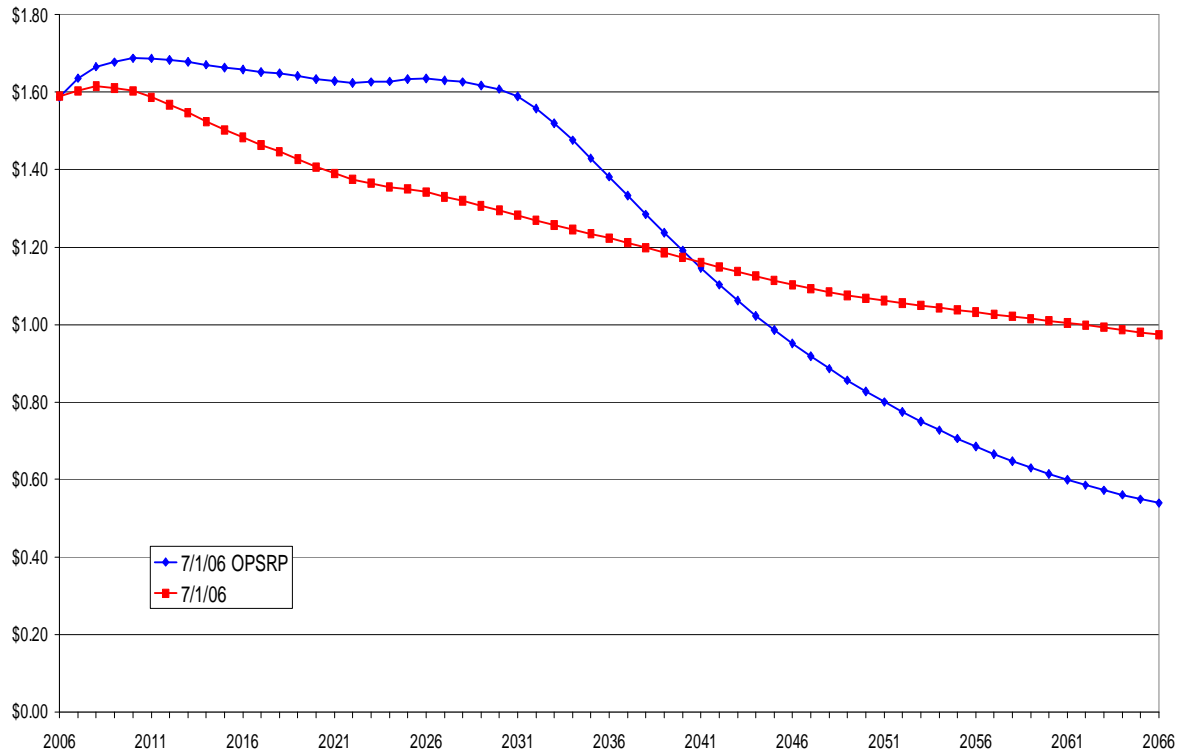


Chart 9: Projection of Pensions and Benefits as a Dollars per \$1,000 Tax Rate Based on Real Market Value
 The urban renewal tax base is excluded.

We note in Chart 9 that putting new members into OPSRP initially raises the Fund levy. This is expected, because the Fund levy must support pensions and benefits to current Fund members as they retire while simultaneously pre-funding for future OPSRP benefits for new members. The current tax base is asked to do double duty for over 35 years, paying for the retirement of current Fund members while setting aside funds for OPSRP members who will retire in the future.

As a result, the levy gradually increases by about \$0.30/\$1,000 of real market value to handle the pre-funding of new firefighters and police officers. After about 35 years, earnings on the assets accumulated will cause the new levy tax to be lower than under current Fund provisions.

The projections of the Fund levy in Chart 9 are based on our actuarial assumptions. The actual experience of the Fund – and therefore the actual Fund levy – will surely differ from our assumptions.

An estimate of the extent of possible variation from assumptions can be obtained from Chart 10 below. Here we have *simulated* the future Fund levy for the next 60 years. Inflation and increases in Real Market Value are randomly derived from probability distributions. The urban renewal tax base and levy is excluded.

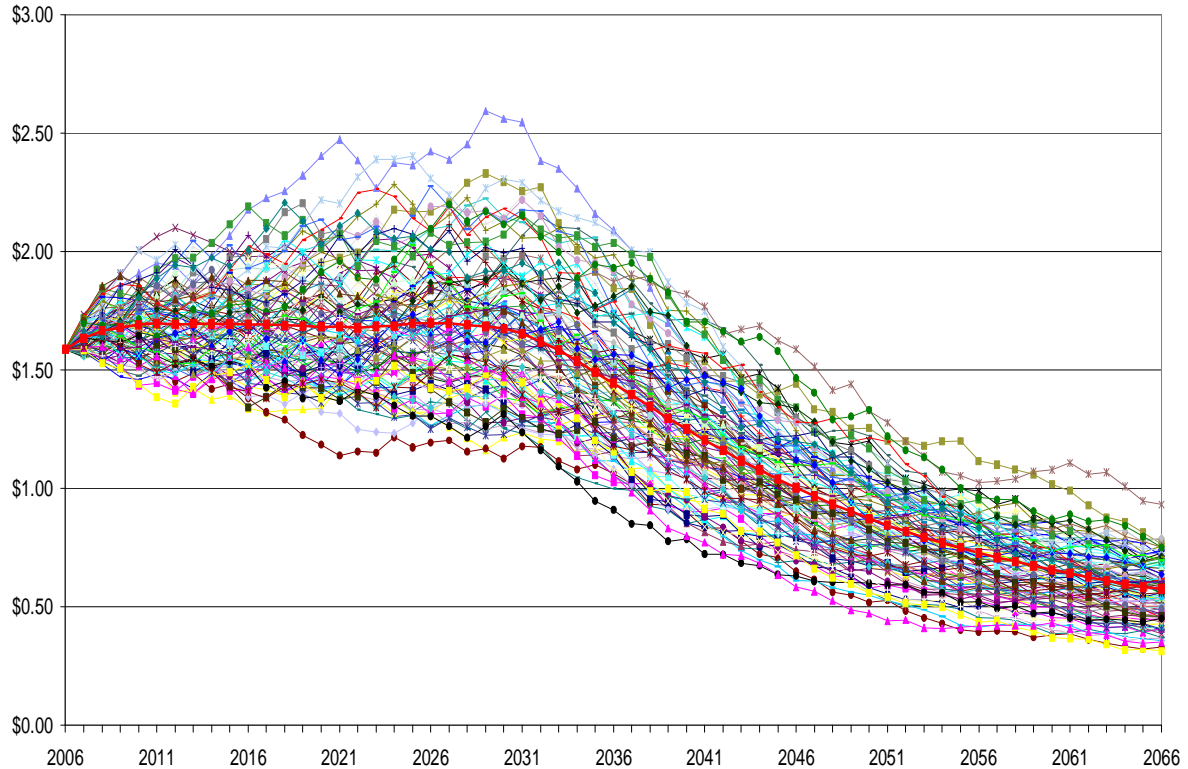


Chart 10: Simulation of the Fund Tax Rate if New Members Join OPSRP
100 of 500 simulation trials are shown. The urban renewal tax base is excluded.

In comparing Chart 10 above with Chart 8, we note that under current Fund provisions the highest simulated tax is about \$2.00 (Chart 8), while some trials exceed \$2.50 if new members join OPSRP (Chart 10).

In the 500 simulation trials we performed in Chart 10, there was not one instance of the Fund tax rate exceeding \$2.80. However, the tax rate does approach this maximum more closely than under the current Fund structure in Chart 8.

Furthermore, an important source of variability has been left out of the simulations in Chart 10. Our model assumes that the cost of OPSRP benefits for new hires will remain at 20.65% in all our simulation trials. This will not occur. In fact, the assets that will be accumulated to support OPSRP benefits will undoubtedly earn either more or less than the Oregon PERS actuaries assume in future years. These actuarial gains or losses will cause actuarial shortfalls or surpluses that will be added to the OPSRP cost, either raising or lowering it on a yearly basis.

This variability will be particularly pronounced after 20 years or so, when a nearly complete generation of firefighters and police officers has joined OPSRP. At this point, the OPSRP assets will be significant, and investment market fluctuations will have a material impact on OPSRP costs. Accordingly, the simulation in Graph 10 should not be regarded as definitive. Instead, it should be considered a starting point for a more careful review of the risks associated with the OPSRP option.

As an example of the sort of risk that the Fund faces, we simulated the Fund tax rate assuming that real market value does not increase for the next 10 years. There have been 10 year periods of no increase in market value in Portland, so while this assumption is pessimistic, it is not impossible.

The results of the simulation are shown below in Charts 11 and 12. Chart 11 shows the simulation for the current Fund, while Chart 12 shows the results if new hires join OPSRP.

In comparing Charts 11 and 12 with Chart 10, we note that the Fund tax rate is level for all or many trials from nine to 30 or 40 years in the future. These are trials in which the \$2.80 levy maximum is exceeded after compression. In this bleak scenario, the required Fund levy – excluding urban renewal – is almost certain to be above the maximum.

Conclusion

The above calculations are based on the benefit provisions contained in the City Charter on July 1, 2006. An outline of these benefit provisions is included in Section III below. In addition, the actuarial assumptions employed are summarized in Section V of this Report.

This report has been prepared using generally accepted actuarial methods and assumptions. If there are any questions about this report, please feel free to contact us.

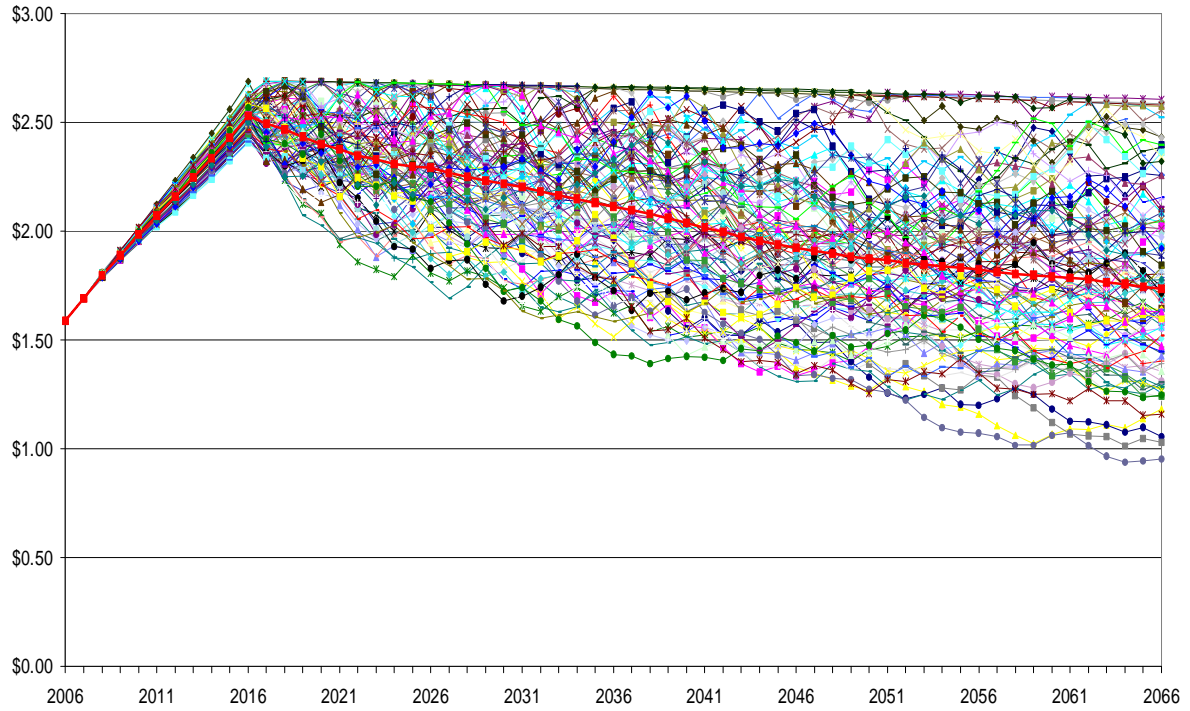


Chart 11: Simulation of the Current Fund Tax Rate assuming 10 Years of No Growth in Real Market Value
100 of 500 simulation trials are shown. The urban renewal tax base is excluded.

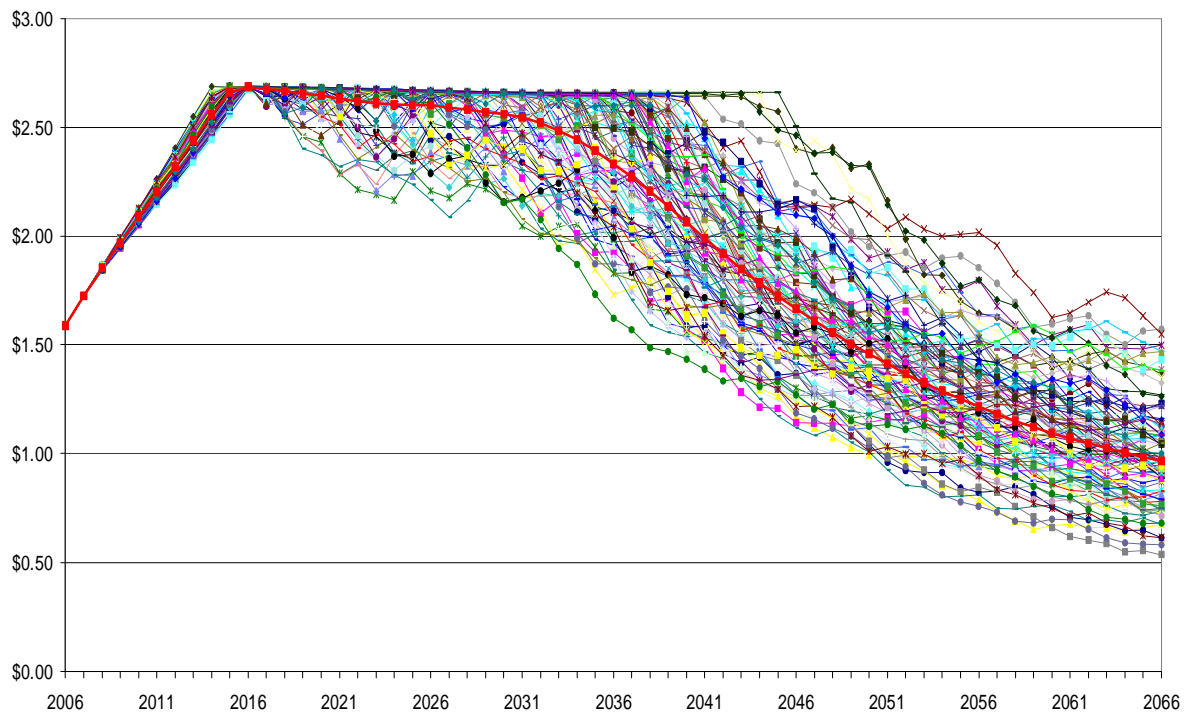


Chart 12: Simulation of the Fund Tax Rate if New Hires Join OPSRP and 10 Years of No Growth in Real Market Value
100 of 500 simulation trials are shown. The urban renewal tax base is excluded.

II. Computation of Actuarial Cost

	July 1, 2004 (8%)	July 1, 2004 (6.63%)	July 1, 2006 (6.63%)	July 1, 2006 (6.04%)
(1) Active Accrued Liabilities				
Service Retirement	343,015,053	448,034,444	461,393,758	520,972,438
Service Disability	29,092,534	35,571,657	37,851,329	41,103,563
Non-Service Disability	809,226	984,143	1,061,829	1,151,259
Disability Retirement	74,312,838	101,269,244	108,652,645	124,723,330
Service Death	4,072,118	5,263,265	5,655,119	6,348,822
Non-Service Death	1,041,235	1,468,627	1,574,947	1,833,860
Vested Termination	3,529,135	5,074,807	5,548,944	6,496,140
Refund of Contributions	<u>34,129</u>	<u>34,066</u>	<u>30,727</u>	<u>30,931</u>
Total	455,906,268	597,700,253	621,769,298	702,660,343
(2) Active Projected Liabilities				
Service Retirement	543,030,202	766,103,223	797,604,188	935,924,637
Service Disability	50,640,556	64,783,985	68,471,873	75,996,614
Non-Service Disability	1,437,249	1,848,663	1,978,204	2,202,428
Disability Retirement	125,514,597	183,247,804	199,282,446	236,061,109
Service Death	7,053,492	9,694,690	10,417,865	12,018,800
Non-Service Death	1,758,600	2,668,290	2,881,339	3,472,796
Vested Termination	6,261,378	9,502,526	10,076,320	12,040,554
Refund of Contributions	<u>52,761</u>	<u>53,335</u>	<u>52,269</u>	<u>52,817</u>
Total	735,748,835	1,037,902,516	1,090,764,504	1,277,769,755
(3) Inactive Accrued Liabilities				
Service Retirement	516,727,923	590,824,975	679,452,671	721,556,502
Service Disability	21,417,880	24,060,803	16,822,531	17,574,724
Non-Service Disability	1,478,161	1,610,533	1,886,369	1,953,854
Disability Retirement	205,081,359	237,293,793	233,962,139	253,425,250
Service Death	2,752,641	3,233,559	4,597,404	4,964,778
Non-Service Death	0	0	0	0
Beneficiaries	77,950,789	89,858,740	91,476,316	96,929,012
Vested Termination	7,389,154	8,674,796	17,057,698	18,596,851
HB 3349 Reserves	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	832,797,907	955,557,199	1,045,255,128	1,115,000,971
(4) Total Projected Liability ((2)+(3))	1,568,546,742	1,993,459,715	2,136,019,632	2,392,770,726
(5) Total Accrued Liability ((1)+(3))	1,288,704,175	1,553,257,452	1,667,024,426	1,817,661,314
(6) Market Value of Assets	750,000	750,000	750,000	750,000
(7) Unfunded Accrued Liability ((5)-(6))	1,287,954,175	1,552,507,452	1,666,274,426	1,816,911,314
(8) Present Value of Future Normal Costs ((4)-(5))	279,842,567	440,202,263	468,995,206	575,109,412
(9) Present Value of Future Base Pay	984,594,125	1,127,133,849	1,208,872,315	1,277,848,222
(10) Normal Cost As Percentage of Base Pay ((8) ÷ (9))	28.42%	39.06%	38.80%	45.01%

	July 1, 2004 <u>(8%)</u>	July 1, 2004 <u>(6.63%)</u>	July 1, 2006 <u>(6.63%)</u>	July 1, 2006 <u>(6.04%)</u>
(11) Projected Next Year's Base Pay	101,789,376	99,598,208	105,767,120	105,767,120
(12) Normal Cost in Dollars ((10) × (11))	28,928,541	38,903,060	41,037,643	47,605,781
(13) Amortization of Unfunded Accrued Liability (30-Year Level Dollar)	105,931,170	113,001,547	121,282,244	125,011,391
(14) Total Cost ((12) + (13))	134,859,711	151,904,607	162,319,887	172,617,172
(15) Total Cost as a Percentage of Base Pay ((14)÷(11))	132.49%	152.52%	153.47%	163.20%

III. Brief Outline of Benefit Provisions

Definitions

Base Pay

A Member's Base Pay is the base pay in the Member's position, including premium pay, but excluding overtime and excluding any payments for unused vacation or sick leave.

Disability Retirement Age

A Member's Disability Retirement Age is the earlier of Social Security normal retirement age and the age at which the Member has earned 30 Years of Service.

Final Pay

A Member's Final Pay is the Member's highest Base Pay during any one of the three consecutive twelve-month periods preceding the month in which the Member retires, dies, becomes disabled, or terminates employment.

If the Member's benefit is deferred due to disability or employment covered by the Oregon Public Employees' Retirement System (PERS), the Member's Final Pay will be increased during the deferral period with increases in the Base Pay of the Member's position at termination.

Medically Stationary

A disabled Member is judged to be Medically Stationary when the Member's prognosis is clear and the Member's medical condition has stabilized and is unlikely to change.

Spouse

A Member's spouse may be designated by marriage or by a registered same-sex domestic partnership.

Substantial Gainful Activity

A disabled Member is capable of Substantial Gainful Activity if the Board determines that the Member is capable of being employed with earnings of at least one-third of the Member's Base Pay.

Year of Service

A Member will be credited with one twelfth of a year of service for each completed month of active employment as a City firefighter or police officer.

In addition, a disabled Member will earn a portion of a Year of Service for each year during which the Member receives disability benefits. The portion of a Year of Service earned will equal the Member's disability benefit during the year divided by 75% of the Member's Base Pay (the maximum disability benefit).

Membership

A City firefighter or police officer will become a Member of the Fund at the time of permanent appointment.

Contributions

Member

No Member contributions are required after July 1, 1990. Prior to that date, Member contributions of 7% of First Class Pay were required.

City

The City's contribution will equal the amount required, in addition to any Member contributions and other sources of revenue, to pay the pensions and benefits coming due during the Fund's fiscal year.

Other than a reserve fund of \$750,000, no advance funding for future benefits takes place.

Retirement Benefit

Eligibility

A Member is eligible for service retirement upon attaining the age of 50 and earning 25 or more Years of Service, or upon reaching age 55 with no service requirement.

Benefit Amount

The annual service retirement benefit is a percentage of the Member's Final Pay for each Year of Service up to 30 years. The percentage is based on the Member's choice of a survivor benefit when the Member applies for a retirement benefit, according to the table below:

<u>Percentage of Benefit Continuing to Surviving Spouse or Minor Children</u>	<u>Percentage of Final Pay per Year of Service</u>
100%	2.2%
75%	2.4%
50%	2.6%
25% (or no survivors)	2.8%

Form of Benefit

The benefit begins at retirement and continues for the Member's life, with the selected percentage continuing to the Member's surviving spouse or minor children after the Member's death.

Benefits will be increased in step with the statutory and ad hoc cost of living increases granted to PERS retired members.

The total of all payments to the Member and the Member's survivors will at least equal the Member's contributions accumulated to July 1, 1990.

Service-Connected or Occupational Disability Benefit

Eligibility

A Member is eligible for a service disability benefit upon sustaining an injury or illness in the performance of duty that prevents the Member from engaging in the duties of a firefighter or police officer.

A Member is eligible for an occupational disability benefit if the Member is unable to perform the duties of a firefighter or police officer due to heart disease, hernia of the abdominal cavity or diaphragm, AIDS, ARC, tuberculosis, hepatitis B, or pneumonia. Five Years of Service is required to qualify for occupational disability due to heart disease.

Benefit Amount

During the first year of disability, the benefit is 75% of the Member's Base Pay, reduced by 50% of any wages earned in other employment while disabled.

If the Member is capable of Substantial Gainful Employment, then after one year of disability and after the Member becomes Medically Stationary, but before four years of disability have elapsed, the Member's benefit will change to 50% of Base Pay minus 25% of wages earned in other employment.

Under any circumstances, a minimum benefit of 25% of Base Pay will continue as long as the disability continues.

At Disability Retirement Age the above benefits stop; the Member is then entitled to a service retirement benefit computed using his Base Pay and Years of Service at his Disability Retirement Age.

Hospital and medical expenses related to the disability are reimbursed by the Fund.

Form of Benefit

The disability benefit begins at disability and continues until the Member's recovery, death, or Disability Retirement Age, whichever occurs first.

Disability benefits will be increased in step with the Base Pay of the position held by the Member at disability.

The disability retirement benefit begins at Disability Retirement Age and continues for the Member's life, with the selected percentage continuing to the Member's surviving spouse or minor children after the Member's death.

Disability retirement benefits will be increased in step with the statutory and ad hoc cost of living increases granted to PERS retired members.

The total of all payments to the Member and the Member's survivors will at least equal the Member's contributions accumulated to July 1, 1990.

Nonservice-Connected Disability Benefit

Eligibility

A Member is eligible for a nonservice disability benefit if the Member has ten Years of Service and sustains an injury or illness other than in the performance of duty that prevents the Member from engaging in duties as a firefighter or police officer.

Benefit Amount

The benefit is 50% of the Member's Base Pay, reduced by 50% of any wages earned in other employment while disabled.

At Disability Retirement Age the above benefits stop; the Member is then entitled to a service retirement benefit computed using his Base Pay and Years of Service at his Disability Retirement Age.

Form of Benefit

The disability benefit begins at disability and continues until the Member's recovery, death, or Disability Retirement Age, whichever occurs first.

Disability benefits will be increased in step with the Base Pay of the position held by the Member at disability.

The disability retirement benefit begins at Disability Retirement Age and continues for the Member's life, with the selected percentage continuing to the Member's surviving spouse or minor children after the Member's death.

Disability retirement benefits will be increased in step with the statutory and ad hoc cost of living increases granted to PERS retired members.

The total of all payments to the Member and the Member's survivors will at least equal the Member's contributions accumulated to July 1, 1990.

Pre-Retirement Service-Connected or Occupational Death Benefit

Eligibility

A Member's surviving spouse or dependent minor children are eligible for a service death benefit if the Member dies as a result of an injury or illness sustained in the performance of duty.

A Member's surviving spouse or dependent minor children are eligible for an occupational death benefit if the Member dies as a result of heart disease, hernia of the abdominal cavity or diaphragm, AIDS, ARC, tuberculosis, hepatitis B, or pneumonia (other than terminal

pneumonia). Five Years of Service is required to qualify for occupational death benefits due to heart disease.

Benefit Amount

Prior to the date the Member would have reached the earliest retirement age, the surviving spouse or dependent minor children will receive an annual benefit equal to 75% of the Member's Base Pay.

After the date the Member would have reached the Member's earliest retirement age, the surviving spouse or dependent minor children will receive an annual benefit equal to 50% of the Member's Final Pay.

A lump sum funeral benefit equal to 50% of one month of First Class Pay will be paid to the beneficiaries of Members who die while active, disabled, or retired.

Form of Benefit

The death benefit begins when the Member dies and continues until the Member's beneficiaries cease to be eligible, which occurs at the death of the surviving spouse or the majority of the dependent minor children.

Death benefits will be increased in step with the statutory and ad hoc cost of living increases granted to PERS retired members.

The total of all payments to the Member and the Member's survivors will at least equal the Member's contributions accumulated to July 1, 1990.

Pre-Retirement Non-Service Death Benefit

Eligibility

A Member's surviving spouse or dependent minor children are eligible for a non-service death benefit if a Member has earned one or more Years of Service and dies as a result of an injury or illness not sustained in the performance of duty.

Benefit Amount

If the Member has earned fewer than ten Years of Service, the Member's beneficiaries will receive a refund of the Member's contributions accumulated to July 1, 1990.

If the Member has earned ten or more Years of Service, the surviving spouse or dependent minor children will receive a benefit equal to 50% of the Member's service retirement pension earned to the date of death, assuming an accrual rate of 2.6% of Final Pay for each Year of Service.

A lump sum funeral benefit equal to 50% of one month of First Class Pay will be paid to the beneficiaries of Members who die while active, disabled, or retired.

Form of Benefit

If the Member had ten or more Years of Service, the death benefit to the surviving spouse begins when the spouse reaches age 55 and continues until the death of the surviving spouse.

If the Member had ten or more Years of Service, a death benefit is payable to the dependent minor children if there is no surviving spouse or if the spouse is under age 55; the benefit to the dependent minor children begins when the Member dies and continues until the majority of the minor children.

Death benefits will be increased in step with the statutory and ad hoc cost of living increases granted to PERS retired members.

The total of all payments to the Member and the Member's survivors will at least equal the Member's contributions accumulated to July 1, 1990.

Termination Benefit

Eligibility

A Member is eligible for a termination benefit after earning six months of service.

Benefit Amount

If the Member terminates before earning five or more Years of Service, the Member's contributions accumulated to July 1, 1990 will be paid. In addition, an amount equal to 7% of the Member's cumulative Base Pay from the later of July 1, 1990 and six months after the Member's hire is payable.

If the Member terminates after earning five or more Years of Service, the termination benefit is the Member's service retirement pension earned to the date of termination.

Form of Benefit

If the Member had earned five or more Years of Service at termination, the benefit begins when the Member would first have been eligible for retirement and continues for the Member's life, with the selected percentage continuing to the Member's surviving spouse or minor children after the Member's death.

Benefits will be increased in step with the statutory and ad hoc cost of living increases granted to PERS retired members.

The total of all payments to the Member and the Member's survivors will at least equal the Member's contributions accumulated to July 1, 1990.

Oregon State Income Tax Adjustment

For all Members hired prior to July 14, 1995, all benefits subject to Oregon State Income Tax will be eligible for an adjustment to compensate the Member for the taxes paid. There are two adjustments, and the Member or beneficiary will receive the greater of the two.

SB 656

The amount of the adjustment is determined by the Member's Years of Service at termination, in accordance with the table below.

<u>Years of Service</u>	<u>Adjustment</u>
10 - 19	1.0%
20 - 24	2.5%
25 and over	4.0%

HB 3349

For benefits attributable to service prior to October 1, 1991, the adjustment is 9.89%, based on the maximum Oregon Income Tax rate as of the date of this Valuation. Benefits attributable to service after October 1, 1991 will receive the adjustment under SB 656 above; the amount of the percentage adjustment under SB 656 is based on the Member's total Years of Service but is applied only to the benefit earned after October 1, 1991.

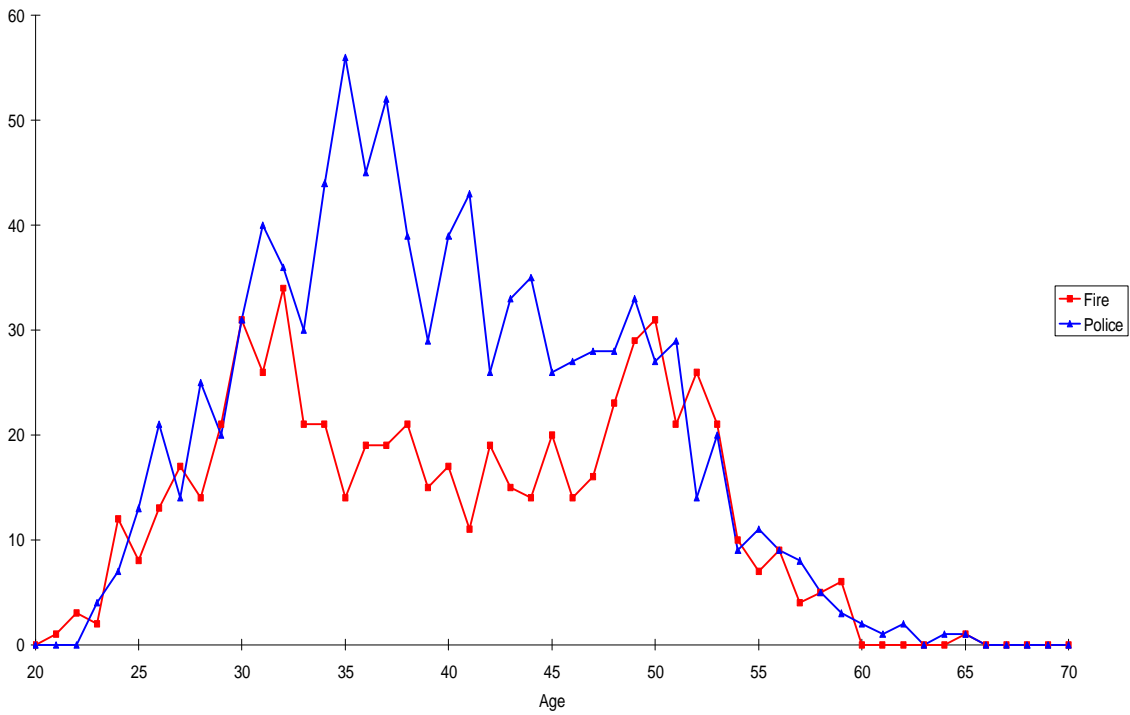
IV. Summary of Member Data

Active Member Statistics	<u>July 1, 2004</u>			<u>July 1, 2006</u>		
	<u>Fire</u>	<u>Police</u>	<u>Total</u>	<u>Fire</u>	<u>Police</u>	<u>Total</u>
Number	615	963	1,578	631	966	1,597
Average Age	40.68	39.50	39.96	40.21	39.70	39.90
Average Service	14.14	11.27	12.39	13.26	11.45	12.17
Average Pay	\$66,964	\$65,320	\$65,961	\$69,124	\$67,390	\$68,075
Average Accrued Benefit (At 2.8%)	\$26,515	\$20,612	\$22,881	\$25,658	\$21,610	\$23,188
Inactive Member Statistics (Old Plan)						
	<u>Fire</u>	<u>Police</u>	<u>Total</u>	<u>Fire</u>	<u>Police</u>	<u>Total</u>
<u>Old Plan Service Retired</u>						
Number	186	161	347	160	140	300
Average Age	80.31	80.17	80.24	81.43	81.29	81.36
Average Annual Benefit	\$40,374	\$39,815	\$40,115	\$42,626	\$41,870	\$42,273
<u>Old Plan Beneficiaries</u>						
Number	179	179	358	177	179	356
Average Age	79.09	77.77	78.43	79.73	78.46	79.09
Average Annual Benefit	\$20,998	\$20,739	\$20,869	\$21,993	\$21,778	\$21,885
<u>Old Plan Disabled</u>						
Number	28	48	76	23	42	65
Average Age	56.54	57.67	57.25	57.35	58.98	58.40
Average Annual Benefit	\$41,368	\$37,730	\$39,070	\$41,700	\$37,799	\$39,179
<u>Old Plan Disabled Retired</u>						
Number	93	81	174	90	76	166
Average Age	75.55	74.58	75.10	76.70	75.50	76.15
Average Annual Benefit	\$41,234	\$40,681	\$40,977	\$43,475	\$43,167	\$43,334
<u>Old Plan Vested Terminated</u>						
Number	0	0	0	0	0	0
Average Age	0.00	0.00	0.00	0.00	0.00	0.00
Average Annual Benefit	\$0	\$0	\$0	\$0	\$0	\$0

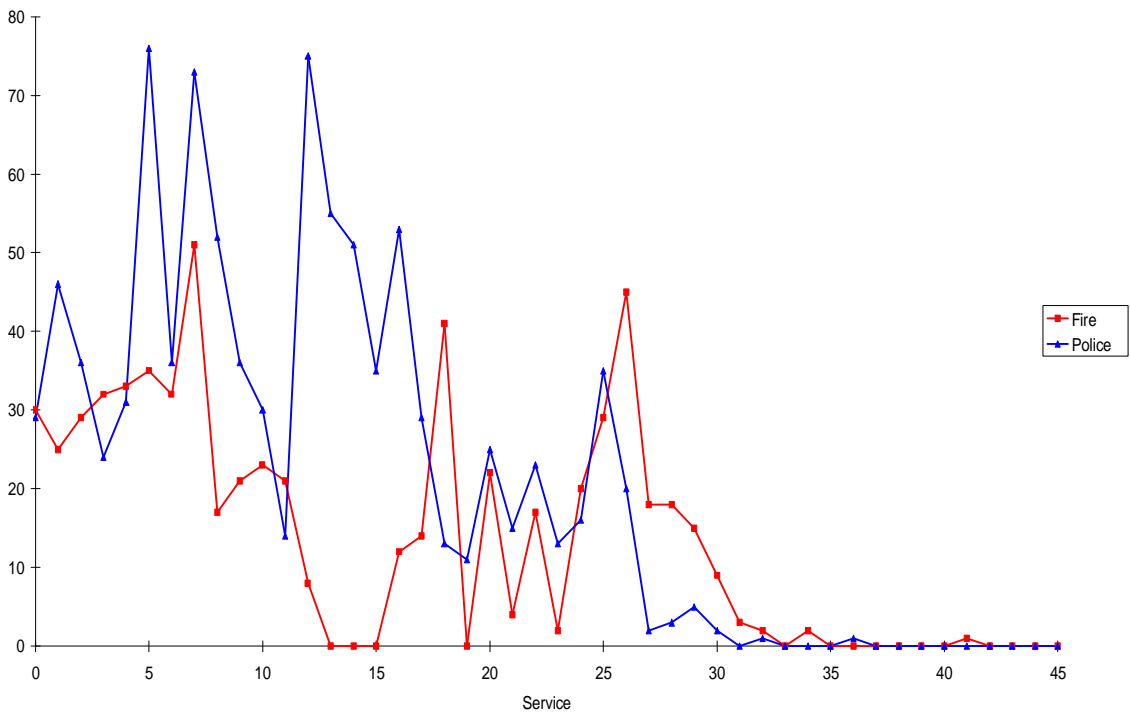
Inactive Member Statistics (New Plan)	<u>July 1, 2004</u>			<u>July 1, 2006</u>		
	<u>Fire</u>	<u>Police</u>	<u>Total</u>	<u>Fire</u>	<u>Police</u>	<u>Total</u>
<u>New Plan Service Retired</u>						
Number	209	385	594	254	446	700
Average Age	60.81	59.08	59.69	61.05	60.21	60.51
Average Annual Benefit	\$55,308	\$52,366	\$53,401	\$59,105	\$55,741	\$56,962
<u>New Plan Beneficiaries</u>						
Number	15	6	21	17	8	25
Average Age	60.67	57.83	59.86	59.82	61.75	60.44
Average Annual Benefit	\$21,912	\$15,418	\$20,057	\$22,592	\$20,228	\$21,835
<u>New Plan Disabled Members</u>						
Number	31	56	87	31	50	81
Average Age	48.00	46.30	46.91	49.23	49.08	49.14
Average Annual Benefit	\$43,517	\$47,000	\$45,759	\$46,605	\$47,141	\$46,936
<u>New Plan Disabled Retired</u>						
Number	22	10	32	29	13	42
Average Age	59.14	58.90	59.06	59.83	59.85	59.83
Average Annual Benefit	\$61,997	\$56,676	\$60,334	\$66,236	\$61,070	\$64,637
<u>New Plan Vested Terminated</u>						
Number	4	11	15	7	50	57
Average Age	54.75	55.00	54.93	54.71	45.88	46.96
Average Annual Benefit	\$50,538	\$33,427	\$37,990	\$42,477	\$21,352	\$23,946
<u>Alternate Payees</u>						
Number	18	17	35	25	22	47
Average Age	60.06	55.06	57.63	59.76	56.14	58.06
Average Annual Benefit	\$12,244	\$16,693	\$14,405	\$14,261	\$16,402	\$15,263

Inactive Member Statistics (Supplementary Plan)	<u>July 1, 2004</u>			<u>July 1, 2006</u>		
	<u>Fire</u>	<u>Police</u>	<u>Total</u>	<u>Fire</u>	<u>Police</u>	<u>Total</u>
<u>Supplementary Plan Retired</u>						
Number	18	11	29	13	9	22
Average Age	82.22	79.36	81.14	82.23	80.11	81.36
Average Annual Benefit	\$24,767	\$22,757	\$24,005	\$26,054	\$23,264	\$24,913
<u>Supplementary Plan Disabled</u>						
Number	5	0	5	5	0	5
Average Age	75.20	0.00	75.20	77.20	0.00	77.20
Average Annual Benefit	\$26,542	\$0	\$26,542	\$26,542	\$0	\$26,542

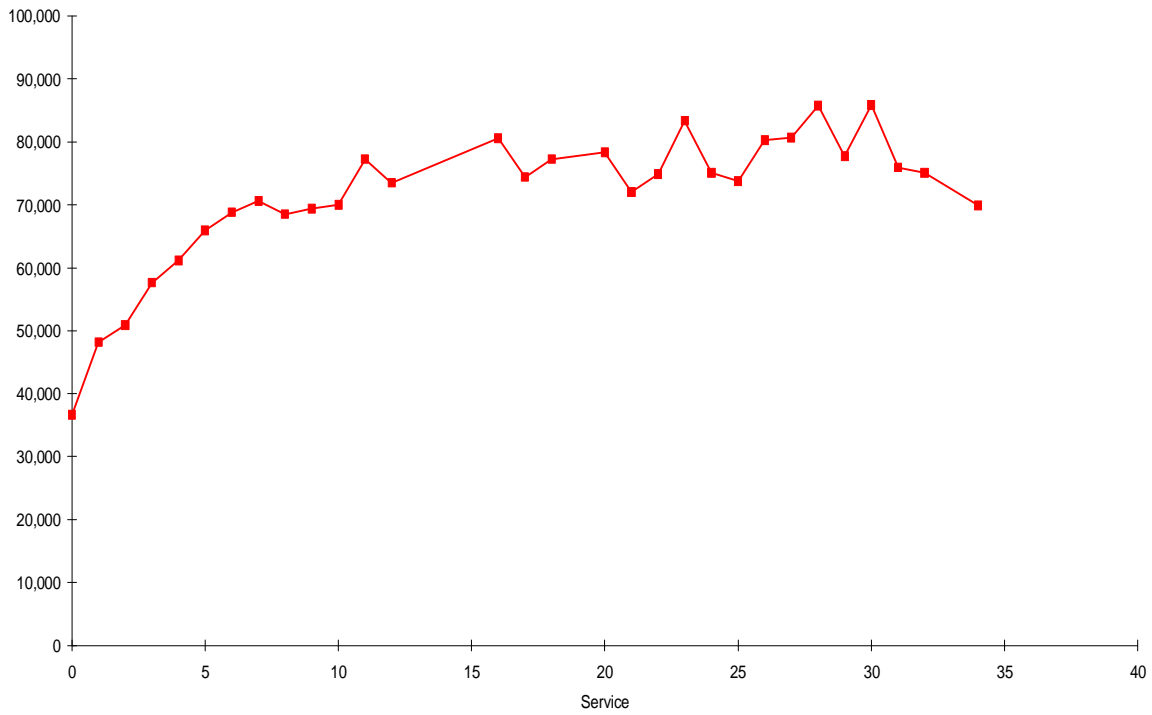
Age Distribution of Active Members



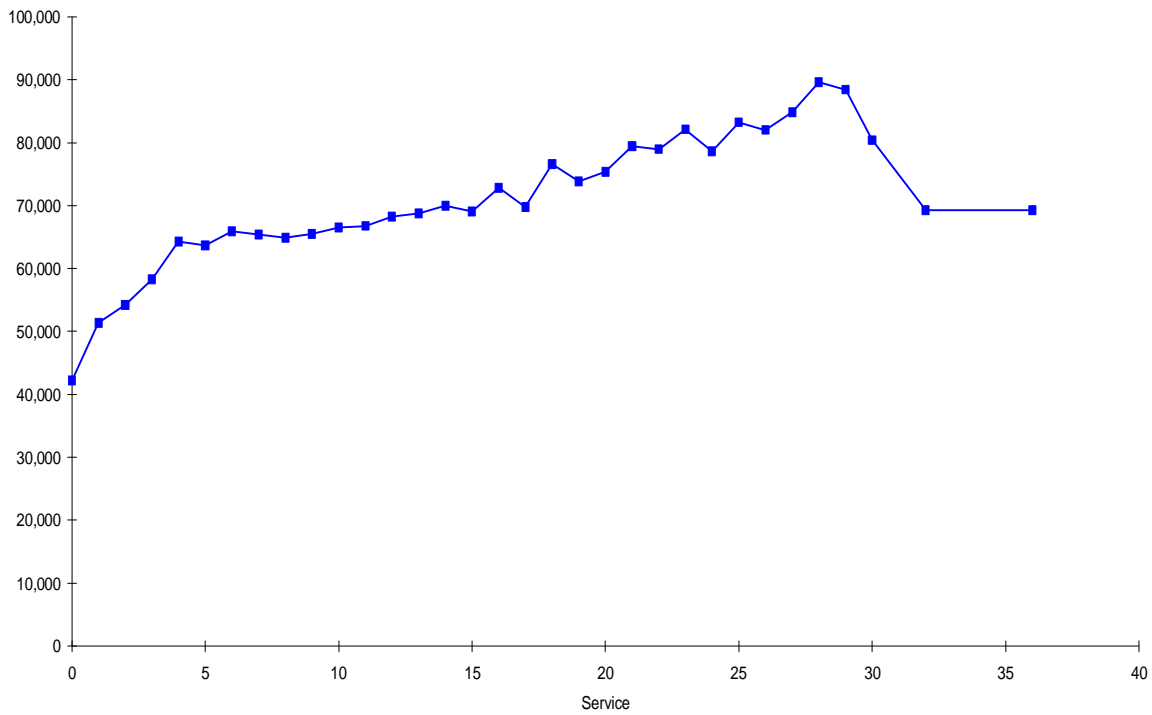
Service Distribution of Active Members



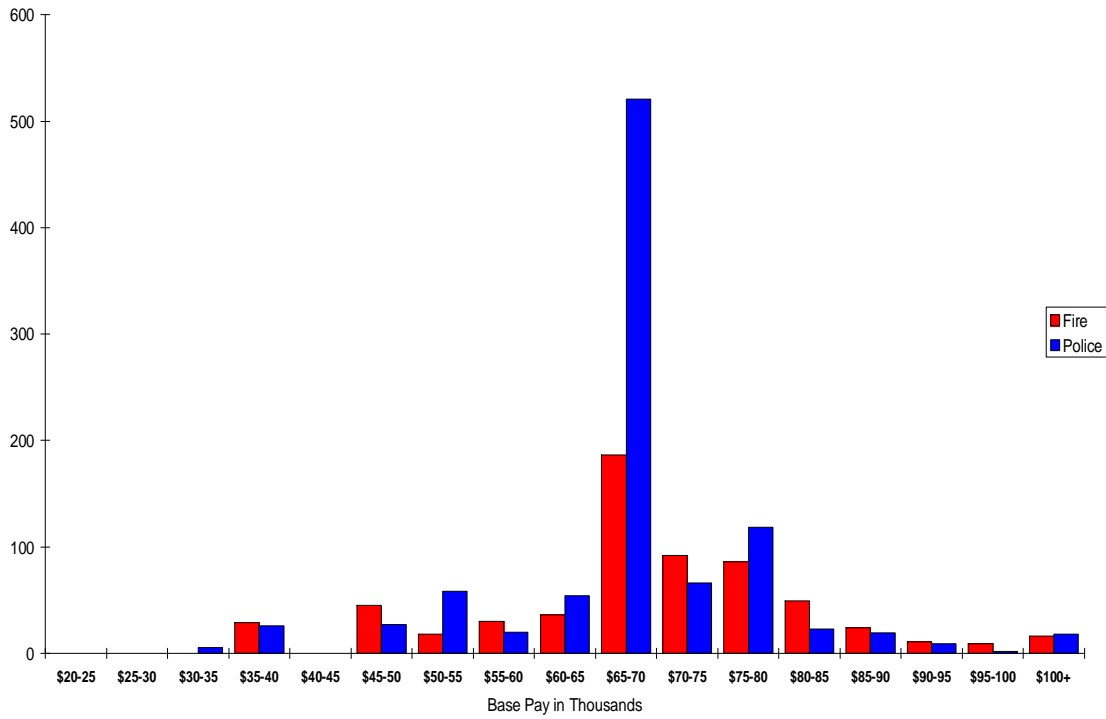
Average Pay by Service - Fire Bureau



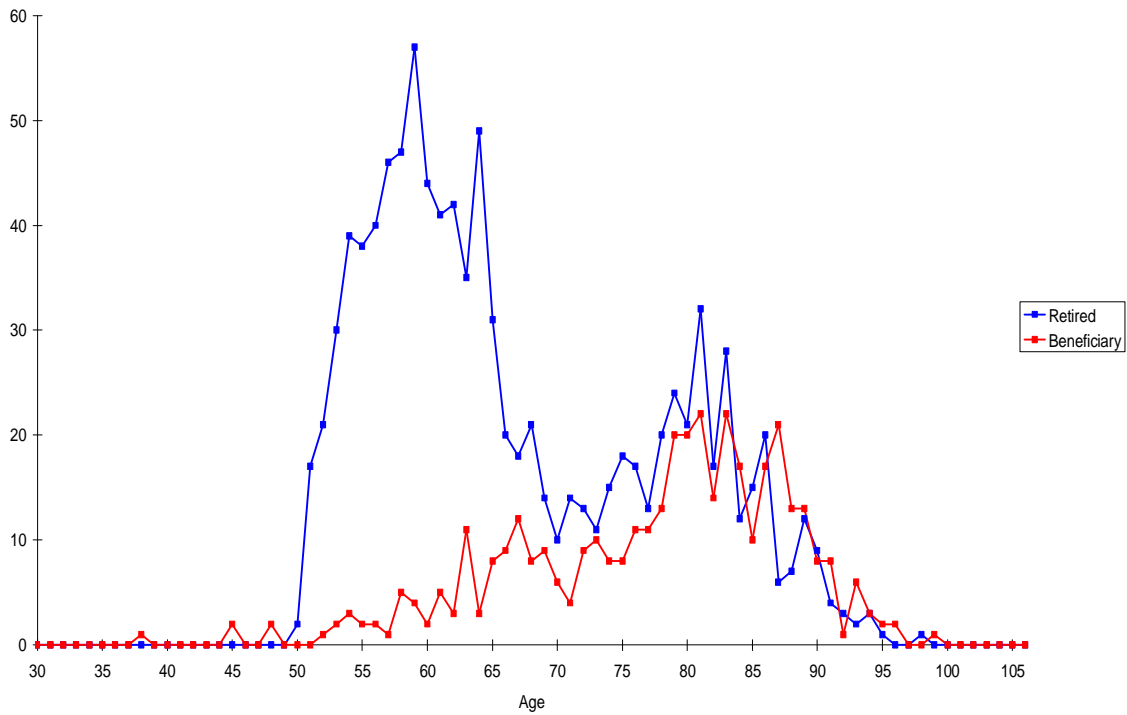
Average Pay by Service - Police Bureau



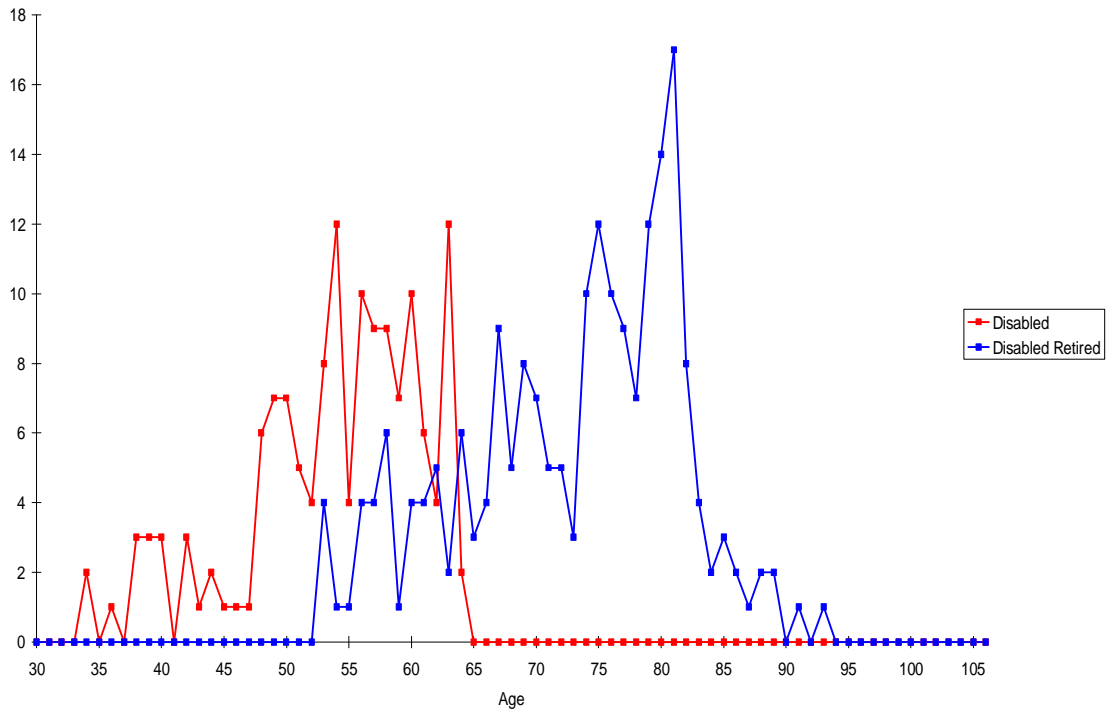
Pay Distribution of Active Members



Age Distribution of Retired Members and Beneficiaries



Age Distribution of Disabled and Disabled Retired Members



V. Actuarial Methods and Assumptions

Actuarial Method

Annual contributions to the City of Portland Fire and Police Disability and Retirement Fund are currently equal to the amount necessary to pay pension and benefit payments and Fund expenses that will become due during the year. Other than a \$750,000 Reserve Fund, there is no prefunding for future Fund payments. Accordingly, the Fund is financed on a "pay-as-you-go" basis.

In this actuarial valuation, the Annual Required Contribution under GASB Statement No. 25 has been computed using the Attained Age Actuarial Cost Method. Under this Method, as applied to the Fund, the actuarial accrued liability is computed using the Projected Unit Credit Funding Method. The present value of future normal costs is computed in the aggregate as the excess of the liability for fully projected benefits over the actuarial accrued liability. The present value of future normal costs is spread over future payroll to produce the normal cost. The unfunded actuarial accrued liability is amortized in level dollar payments over a 30-year period from the date of the valuation.

Actuarial Assumptions

Valuation Date	All assets and liabilities are computed as of July 1, 2006.
Rate of Return	The annual rate of return on any Fund assets will be 6.04%.
Time Value of Money	<p>For purposes of discounting future payments to determine a current liability, the time value of money is assumed to be 6.04% per annum.</p> <p>For purposes of computing benefits to alternate payees under domestic relations orders, the time value of money is assumed to be 8% per annum.</p>
Cost of Living	The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 3.5% per year.
Increases in Pay	<p>Assumed pay increases for active Members consist of increases due to cost of living adjustments and those due to longevity, promotion, and growth in real wages.</p> <p>Based on an analysis of pay levels and service in the Fire and Police Bureaus, we assume that pay for fire fighters increases due to longevity and promotion by 8.5% per year for the first five years of service and 0.75% per year thereafter.</p> <p>For police officers, longevity and promotion increases are assumed to be 5.5% annually for the first five years of service, 1% per year for the next 22 years, and 0.0% per year thereafter.</p>

In addition, annual adjustments in pay due to the cost of living will equal the sum of CPI increases and real wage growth.

Real Wage Growth

Member pay is assumed to increase 1% per year faster than the CPI.

Increases in PERS Benefits

Increases in retiree benefits under the Oregon Public Employees' Retirement System (PERS) will be 2% per year. No ad hoc increases in benefits are assumed.

Oregon Income Tax Rate

For purposes of estimating the income tax adjustments due under HB 3349, the highest Oregon Income Tax rate is assumed to remain at 9%.

Medical Benefits

No allowance for medical benefits paid to Fund Members has been included in the liabilities and the Annual Required Contribution calculated in accordance with GASB 25. Such payments are assumed to be in the nature of workers' compensation benefits and hence are not properly included in GASB 25 or 27 disclosures.

However, for purposes of projecting benefit and pension payments from the Fund relative to the Fund property tax levy, we assume based on past experience that medical benefits will average 3.5% of covered payroll annually.

Short-Term Disability Benefits

No allowance for short-term disability benefits paid to Fund Members has been included in the liabilities and the Annual Required Contribution calculated in accordance with GASB 25. Such payments are assumed to be in the nature of workers' compensation benefits and hence are not properly included in GASB 25 or 27 disclosures.

However, for purposes of projecting benefit and pension payments from the Fund relative to the Fund property tax levy, we assume based on past experience that short-term disability benefits will average 3.0% of covered payroll annually.

Growth in Membership

The number of active police officers will increase by 0.5% per year after the valuation date.

The number of active fire fighters will increase by 1% per year for the three years following the valuation date, and will remain level thereafter.

Plan Expenses

No allowance for Fund expenses has been included in the liabilities and the Annual Required Contribution calculated in accordance with GASB 25.

However, for purposes of projecting benefit and pension payments from the Fund relative to the Fund property tax levy, we assume based on past experience that administrative expenses will average 2.75% of annual pensions and benefits.

New Entrant Ages

Based on an analysis of new members hired during the five years prior to the Valuation Date, the distribution of new hires by age is given by the following table:

<u>Attained Age</u>	<u>Firefighters</u>	<u>Police Officers</u>
20	3.07%	0.00%
21	4.09%	3.35%
22	4.74%	5.51%
23	5.95%	6.26%
24	6.77%	7.93%
25	7.43%	8.13%
26	7.68%	8.13%
27	7.57%	6.93%
28	8.57%	6.15%
29	7.18%	5.53%
30	6.66%	5.65%
31	5.58%	4.96%
32	5.30%	4.60%
33	3.74%	4.12%
34	3.74%	3.67%
35	2.76%	2.98%
36	2.74%	2.61%
37	2.10%	2.13%
38	1.53%	1.90%
39	1.10%	1.43%
40	1.10%	1.43%
41	0.51%	1.20%
42	0.09%	0.96%
43	0.00%	0.60%
44	0.00%	0.72%
45+	<1%	<5%

New Entrant Pay

Newly hired fire fighters will earn \$44,941 annually.
 Yearly pay for new police officers will be \$49,202.



Service Retirement

Based on an analysis of retirements between July 1, 1998 and June 30, 2002 under the New Plan, rates of service retirement among Members eligible to retire are given by the following table:

Attained <u>Age</u>	<u>Firefighters</u>	Police <u><24 Years</u>	Police <u>24+ Years</u>
50	21.12%	0.00%	60.00%
51	18.48%	0.00%	58.00%
52	15.00%	0.00%	35.00%
53	16.00%	0.00%	35.00%
54	41.25%	0.00%	35.00%
55	50%	33.00%	65.00%
56	40%	7.50%	30.00%
57	40%	7.50%	30.00%
58	40%	7.50%	30.00%
59	40%	7.50%	30.00%
60	40%	67.00%	30.00%
61	40%	7.50%	30.00%
62	40%	7.50%	30.00%
63	40%	7.50%	30.00%
64	40%	7.50%	30.00%
65	100%	7.50%	100.00%
66	100%	7.50%	100.00%
67	100%	7.50%	100.00%
68	100%	7.50%	100.00%
69	100%	7.50%	100.00%
70	100%	100.00%	100.00%

To anticipate members who are age 49 or who have 24 years of service on a valuation date, but who retire within the next year because they turn 50 or earn their 25th year of service, a portion of the above rates will be applied to these members. Specifically,

- § An assumed retirement rate of 18.75% will be applied to active fire fighters age 49 with 25 or more years of service. A rate of 4% will be applied to similarly situated police officers.
- § 30% of the rate for service of 25 or more years will be applied to firefighters age 49 or over with 24 years of service.

Active Member Mortality

Based on an analysis of active and retired mortality from July 1, 1998 through June 30, 2003, rates of mortality for all active Members are assumed to be given by the 1994 Group Annuity Mortality Table for Males published by the Society of Actuaries.

50% of deaths among active Members are assumed to be caused by service-related and occupational injuries and illnesses, and 50% are assumed to be non-service related.

Retired Member Mortality

Based on an analysis of active and retired mortality from July 1, 1998 through June 30, 2003, rates of mortality for all retired Members are assumed to be given by the 1994 Group Annuity Mortality Table for Males published by the Society of Actuaries.

Based on an analysis of beneficiary mortality from July 1, 1998 through June 30, 2003, rates of mortality for spouses of all retired Members are given by the 1994 Group Annuity Mortality Table for Females published by the Society of Actuaries.

Disability

Based on an analysis of disabilities between July 1, 1998 and June 30, 2003 under the New Plan, rates of disability are given by the following table:

<u>Attained Age</u>	<u>Firefighters</u>	<u>Police Officers</u>
20-24	0.75%	0.50%
25-29	0.75%	0.50%
30-34	0.75%	1.00%
35-39	0.75%	1.00%
40-44	0.75%	1.00%
45-49	1.50%	1.00%
50-54	4.00%	1.50%
55-59	10.00%	1.50%
60-64	10.00%	1.50%
65+	10.00%	1.50%

95% of disabilities are assumed to be service-related and occupational in nature, while the other 5% are assumed to be non-service disabilities.

Disability (Continued)

Disabled Members are assumed not to return to active service; one-third of those disabled will become gainfully employed, and their earnings will average 9% of their Base Pay prior to disability.

Disabled Members will begin drawing service retirement benefits at age 55.

Disabled Member Mortality

Based on an analysis of disabled and disabled retired mortality from July 1, 1998 through June 30, 2003, rates of mortality for all disabled Members are given by the 1994 Group Annuity Mortality Table for Males published by the Society of Actuaries with a three year age set forward.

Based on an analysis of beneficiary mortality from July 1, 1998 through June 30, 2003, rates of mortality for spouses of all disabled Members are given by the 1994 Group Annuity Mortality Table for Females published by the Society of Actuaries.

Termination

Based on an analysis of terminations between July 1, 1998 and June 30, 2003 under the New Plan, rates of termination among firefighters from causes other than death, disability, and service retirement are given by the following select and ultimate table:

<u>Attained Age</u>	<u>0 Years</u>	<u>1+ Years</u>
20-24	0.30	0.0
25-29	0.35	0.0
30-34	0.40	0.0
35-39	0.45	0.0
40+	0.50	0.0

Based on the 1998-2003 Experience Study, none of the terminating Members will be hired by government entities participating in PERS.

Terminated Members will begin drawing service retirement benefits at age 55.

Termination (Continued)

Based on an analysis of terminations between July 1, 1998 and June 30, 2003 under the New Plan, rates of termination among police officers from causes other than death, disability, and service retirement are given by the following select and ultimate table:

<u>Attained Age</u>	<u>0 Years</u>	<u>1 Year</u>	<u>2-9Years</u>	<u>10+Years</u>
20-24	0.10	0.035	0.01	0.004
25-29	0.10	0.035	0.01	0.004
30-34	0.10	0.035	0.01	0.004
35-39	0.10	0.035	0.01	0.004
40-44	0.10	0.035	0.01	0.004
45+	0.10	0.035	0.01	0.004

Based on the 1998-2003 Experience Study, none of the terminating Members will be hired by government entities participating in PERS.

Terminated Members will begin drawing service retirement benefits at age 55.

Family Composition

88% of all Members are assumed to have an eligible spouse or domestic partner. Spouses are assumed to be four years younger than Members.

Real Market Value

2006-07 Real Market Value is \$62,610,035,000, excluding Urban Renewal. Real Market Value will increase 2% faster than the CPI annually.

Assessed Value

2006-07 Assessed Value is \$38,171,273,000, excluding Urban Renewal. Assessed Value will increase at the same rate as the CPI.

Other Levies

2005-06 property tax levies from jurisdictions other than the Fund (e.g., the City and the County) total \$449,293,989, excluding Urban Renewal. These levies are assumed to increase 0.5% faster than the CPI annually.

Compression

Tax compression is assumed to be a linear function of the total Fund, City, and County levy, with a value of 0% at \$10/\$1,000 of Assessed Value, and 3.4% at 2006-07 tax levels.

Delinquencies and Other Income

Delinquencies will reduce property tax income by 7.5% each year; other income will increase tax receipts by 2.25% annually.

Actuarial Value of Plan Assets

The actuarial value of Plan assets is equal to their market value. Only the permanent reserve of \$750,000 is included in Fund assets for valuation purposes. Operating reserves for contingencies, matching of revenues and expenditures, or tax appreciation notes are excluded.

Member Data

Data on active and inactive Members and their beneficiaries as of the valuation date was supplied by the Fund Administrator on magnetic media and paper listings. As is usual in studies of this type, Member data was neither verified nor audited.