

## **2007 Replacement Ratio Study (Based on 2006 Retirements)**

### **Summary of findings**

**Average age at retirement:** 59 years old

**Average years of service at retirement:** 21.5 years of service

#### **Average monthly retirement benefit**

- For all retirees from 1990-2006, the average monthly retirement benefit at time of retirement was \$2,041 per month, or about \$24,496 annually
- For those retirees in the most recent year (2006), the average monthly retirement benefit was \$2,336 per month, or about \$28,037 annually

#### **Average public employee salaries at retirement**

- For all retirees from 1990-2006, the final average salary at retirement was \$41,427 annually
- For 2006 retirees, the final average salary at retirement was \$53,513 annually

#### **Average salary replacement ratio (see chart on following page)**

- For all retirees from 1990-2006, the average annual retirement benefit equaled 55% of final average salary at the time of retirement
- For 2006 retirees, the average annual retirement benefit equaled 50% of final average salary
- For all retirees from 1990-2006, there were 8.4% who received annual benefits more than 100% of final average salary. The average years of service for this group was 31 years
- For 2006 retirees, there were 4.3% who received annual benefits more than 100% of final average salary. The average years of service for this group was 31 years

#### **For members who retire with 30 years of service (see chart on following page)**

- From 1990-2006, the average retirement benefit for 30-year members equaled 80% of final average salary and the average monthly benefit was \$3,308 per month
- The average retirement benefit for 30-year members peaked at 100% of final average salary in 2000 and their average monthly benefit was \$4,200 per month
- For 2006 only, the average retirement benefit for 30-year members equaled 83% of final average salary and the average monthly benefit was \$4,104 per month
- 11.55% of retirees from 1990-2006 had 30 years of service
- 11.75% of retirees in 2006 had 30 years of service

**Summary of findings (*continued*)**

**Average salary replacement ratio based on final average salary (FAS)**

<b>Calendar Year</b>	<b>Retirees with 30 Years of Service</b>		<b>All Retirees in Study</b>		
	<b># of Retirees in Study</b>	<b>Average Replacement Ratio Based on FAS</b>	<b># of Retirees in Study</b>	<b>Average Replacement Ratio Based on FAS</b>	<b>% of Retirees Receiving &gt;100% of FAS</b>
1990	146	61%	1,866	44%	.0%
1991	217	61%	2,377	45%	.1%
1992	205	67%	2,432	48%	.5%
1993	289	66%	2,744	48%	.5%
1994	302	67%	3,298	49%	.3%
1995	304	66%	2,827	47%	1.0%
1996	281	70%	2,477	49%	1.4%
1997	295	83%	3,107	57%	7.5%
1998	465	89%	4,567	65%	12.0%
1999	548	93%	4,644	65%	14.0%
2000	273	100%	2,112	63%	15.8%
2001	391	99%	3,146	66%	16.5%
2002	670	96%	4,605	68%	17.4%
2003	942	93%	7,631	66%	14.4%
2004	471	84%	3,259	55%	5.5%
2005	393	84%	2,548	51%	4.4%
2006	347	83%	2,952	50%	4.3%
<b>Total/Avg</b>	<b>6,539</b>	<b>80%</b>	<b>56,592</b>	<b>55%</b>	<b>8.4%</b>

## 2007 Replacement Ratio Study

### Exclusions and Assumptions

9/14/07

The Replacement Ratio Study population of 56,592 retirements was drawn from 80,703 retirements from January 1990 through December 2006, and covers retired members who selected comparable monthly benefit options. The techniques used in the 2007 PERS Replacement Ratio Study are consistent with the techniques used in previous studies.

The calculations do not include any federal Social Security benefits that a retiree may be eligible for based on the retiree's work history. The calculations also do not include the effects of the ongoing *Strunk/Eugene* benefit adjustments, which will generally impact retirements occurring in 2000-2004 and reduce the reported replacement ratios for those periods by several percentage points.

#### **EXCLUSIONS:**

##### **Job Class Exclusions**

The study is limited to retirees in the General Service and Police & Fire job classes from January 1990 through December 2006.

Job class 1 (General Service) includes 52,200 members; job class 2 (Police & Fire) includes 4,392 members. Excluded job classes are:

- Job class 3, Police/Fire Unit (able to buy service units)
- Job class 4, TIAA/CREF
- Job class 5, Judge Member
- Job class 6, Legislators
- Job class 7, TRFA
- Job class 8, Elected/Appointed Officials
- Job class A, A-Election

Beneficiaries and alternate payees were also excluded, as the inclusion of these populations would skew the results due to the wide range of payout scenarios related to death and divorce benefits.

##### **Retirement Option Exclusions**

Within job classes 1 and 2, additional records were excluded based upon retirement option. All lump sum benefit types were excluded due to the distorting effect of significant payouts at one time on replacement ratio results. These excluded retirement option codes are:

- L1 – Lump Sum Option 1: Refund of Account plus life annuity
- L2 – Lump Sum Option 2: Refund of Account Balance plus 100% J/S
- L3 – Lump Sum Option 3: Refund of Account Balance plus 50% J/S
- L7 – Total Lump Sum: Refund of employee and employer dollars
- L2A – Lump Sum Option 2A: Refund of Account Balance plus Pop-up or 100% J/S
- L3A – Lump Sum Option 3A: Refund of Account Balance plus Pop-up or 50% J/S

##### **Other Exclusions**

- Any record which fell outside the range January 1990 - December 2006 range
- Any record that had a greater than one-year gap between end contribution date and retirement date

## **2007 Replacement Ratio Study**

### **Exclusions and Assumptions**

9/14/07

#### **ASSUMPTIONS:**

For the purposes of this study the following assumptions were used:

- Any account with a variable balance during the three years prior to retirement was considered a variable account member.
- For final average salary (FAS), we use the average salary of the three calendar years prior to the year in which the member retired. This definition of FAS may not match the definition on which the actual member's benefit was calculated.
- Monthly gross benefit includes HB3349 benefits for qualifying retirees.

#### **SPECIAL NOTE:**

The averages and percentages displayed on the Replacement Ratio sheets are based upon the respective actual source data. The calculations on each Replacement Ratio sheet are not directly derived from one another. For instance, if the Average Monthly Gross benefit column is divided by the Average Monthly Salary column, it will not equal the Average Replacement Ratio column because the Average Replacement Ratio is derived from the average of replacement ratios in the source data. This method avoids distortions resulting from averaging averages. This is also the case with all of the median calculations. This method of analyzing the data provides a more accurate picture of the actual dataset being used.

**All Yr Service Stats by Year of Retirement  
Average and Median**

**2007 Replacement  
Ratio Study**

AVERAGE	Year	Number of Retirements	Average Retirement Age	Average Years of Service	Average Monthly Salary	Average Annual Salary	Average Monthly Gross Benefit	Average Annual Gross Benefit	Average Replacement Ratio
	1990	1,866	59	21	\$2,457	\$29,488	\$1,186	\$14,230	44%
1991	2,377	60	22	\$2,578	\$30,937	\$1,242	\$14,900	45%	
1992	2,432	60	21	\$2,737	\$32,838	\$1,430	\$17,161	48%	
1993	2,744	60	22	\$2,851	\$34,206	\$1,464	\$17,565	48%	
1994	3,298	59	22	\$3,018	\$36,222	\$1,582	\$18,989	49%	
1995	2,827	59	21	\$3,067	\$36,801	\$1,553	\$18,640	47%	
1996	2,477	59	21	\$3,144	\$37,728	\$1,650	\$19,797	49%	
1997	3,107	59	21	\$3,244	\$38,928	\$2,008	\$24,096	57%	
1998	4,567	59	22	\$3,393	\$40,715	\$2,347	\$28,169	65%	
1999	4,644	58	22	\$3,555	\$42,660	\$2,452	\$29,418	65%	
2000	2,112	57	20	\$3,504	\$42,052	\$2,369	\$28,428	63%	
2001	3,146	58	21	\$3,811	\$45,735	\$2,633	\$31,599	66%	
2002	4,605	58	23	\$4,083	\$48,997	\$2,882	\$34,583	68%	
2003	7,631	58	23	\$4,146	\$49,747	\$2,835	\$34,022	66%	
2004	3,259	58	22	\$4,273	\$51,281	\$2,440	\$29,278	55%	
2005	2,548	58	21	\$4,368	\$52,418	\$2,293	\$27,514	51%	
2006	2,952	58	21	\$4,459	\$53,513	\$2,336	\$28,037	50%	
<b>Average Totals:</b>	<b>56,592</b>	<b>59</b>	<b>21</b>	<b>\$3,452</b>	<b>\$41,427</b>	<b>\$2,041</b>	<b>\$24,496</b>	<b>55%</b>	

  

MEDIAN	Year	Number of Retirements	Median Retirement Age	Median Years of Service	Median Monthly Salary	Median Annual Salary	Median Monthly Gross Benefit	Median Annual Gross Benefit	Median Replacement Ratio
	1990	1,866	60	21	\$2,480	\$29,757	\$1,057	\$12,680	45%
1991	2,377	60	22	\$2,569	\$30,823	\$1,087	\$13,048	45%	
1992	2,432	60	22	\$2,774	\$33,283	\$1,256	\$15,071	49%	
1993	2,744	60	22	\$2,868	\$34,413	\$1,294	\$15,528	48%	
1994	3,298	59	23	\$3,035	\$36,426	\$1,406	\$16,866	50%	
1995	2,827	59	22	\$3,067	\$36,810	\$1,368	\$16,422	48%	
1996	2,477	59	21	\$3,094	\$37,127	\$1,378	\$16,536	49%	
1997	3,107	59	22	\$3,205	\$38,462	\$1,676	\$20,108	57%	
1998	4,567	58	23	\$3,451	\$41,410	\$2,130	\$25,560	66%	
1999	4,644	58	22	\$3,604	\$43,245	\$2,175	\$26,097	65%	
2000	2,112	57	21	\$3,570	\$42,836	\$1,941	\$23,288	61%	
2001	3,146	58	22	\$3,826	\$45,913	\$2,271	\$27,257	65%	
2002	4,605	58	24	\$4,107	\$49,289	\$2,636	\$31,632	69%	
2003	7,631	58	24	\$4,184	\$50,204	\$2,642	\$31,707	66%	
2004	3,259	57	23	\$4,290	\$51,480	\$2,160	\$25,916	54%	
2005	2,548	58	22	\$4,361	\$52,336	\$1,931	\$23,177	47%	
2006	2,952	58	21	\$4,424	\$53,084	\$1,966	\$23,589	46%	
<b>Median Totals:</b>	<b>56,592</b>	<b>58</b>	<b>22</b>	<b>\$3,451</b>	<b>\$41,410</b>	<b>\$1,931</b>	<b>\$23,177</b>	<b>50%</b>	

**30 Year Stats by Year of Retirement  
Average and Median  
Police/Fire and General Service**

**2007 Replacement  
Ratio Study**

<b>AVERAGE</b>	<b>Year</b>	<b>Number of Retirements</b>	<b>Average Retirement Age</b>	<b>Average Monthly Salary</b>	<b>Average Annual Salary</b>	<b>Average Monthly Gross Benefit</b>	<b>Average Annual Gross Benefit</b>	<b>Average Replacement Ratio</b>
	1990	146	57	\$3,199	\$38,386	\$1,954	\$23,445	61%
	1991	217	56	\$3,253	\$39,031	\$1,989	\$23,871	61%
	1992	205	56	\$3,312	\$39,744	\$2,211	\$26,531	67%
	1993	289	56	\$3,532	\$42,382	\$2,347	\$28,169	66%
	1994	302	56	\$3,725	\$44,703	\$2,473	\$29,679	67%
	1995	304	55	\$3,781	\$45,376	\$2,471	\$29,656	66%
	1996	281	56	\$4,002	\$48,025	\$2,793	\$33,515	70%
	1997	295	56	\$4,014	\$48,162	\$3,281	\$39,377	83%
	1998	465	55	\$4,121	\$49,447	\$3,640	\$43,685	89%
	1999	548	54	\$4,252	\$51,020	\$3,914	\$46,968	93%
	2000	273	54	\$4,227	\$50,729	\$4,200	\$50,399	100%
	2001	391	54	\$4,554	\$54,644	\$4,433	\$53,196	99%
	2002	670	55	\$4,570	\$54,842	\$4,287	\$51,450	96%
	2003	942	54	\$4,682	\$56,190	\$4,247	\$50,961	93%
	2004	471	55	\$4,808	\$57,691	\$3,946	\$47,356	84%
	2005	393	54	\$4,809	\$57,703	\$3,944	\$47,328	84%
	2006	347	54	\$5,120	\$61,435	\$4,104	\$49,246	83%
	<b>Average Totals:</b>	<b>6,539</b>	<b>55</b>	<b>\$4,115</b>	<b>\$49,383</b>	<b>\$3,308</b>	<b>\$39,696</b>	<b>80%</b>

  

<b>MEDIAN</b>	<b>Year</b>	<b>Number of Retirements</b>	<b>Median Retirement Age</b>	<b>Median Monthly Salary</b>	<b>Median Annual Salary</b>	<b>Median Monthly Gross Benefit</b>	<b>Median Annual Gross Benefit</b>	<b>Median Replacement Ratio</b>
	1990	146	56	\$3,075	\$36,902	\$1,912	\$22,947	61%
	1991	217	56	\$3,174	\$38,092	\$1,942	\$23,301	62%
	1992	205	56	\$3,212	\$38,540	\$2,141	\$25,689	66%
	1993	289	56	\$3,443	\$41,317	\$2,254	\$27,051	66%
	1994	302	55	\$3,642	\$43,701	\$2,403	\$28,835	66%
	1995	304	55	\$3,713	\$44,551	\$2,456	\$29,466	65%
	1996	281	55	\$3,889	\$46,663	\$2,616	\$31,387	67%
	1997	295	55	\$3,945	\$47,337	\$3,220	\$38,641	80%
	1998	465	55	\$4,075	\$48,898	\$3,499	\$41,985	87%
	1999	548	54	\$4,191	\$50,296	\$3,760	\$45,124	91%
	2000	273	54	\$4,234	\$50,804	\$4,130	\$49,561	98%
	2001	391	54	\$4,467	\$53,603	\$4,355	\$52,266	98%
	2002	670	54	\$4,488	\$53,861	\$4,225	\$50,701	96%
	2003	942	54	\$4,615	\$55,384	\$4,184	\$50,212	93%
	2004	471	54	\$4,775	\$57,301	\$3,889	\$46,667	83%
	2005	393	54	\$4,692	\$56,310	\$3,961	\$47,530	84%
	2006	347	54	\$4,956	\$59,476	\$4,100	\$49,194	83%
	<b>Median Totals:</b>	<b>6,539</b>	<b>55</b>	<b>\$4,075</b>	<b>\$48,898</b>	<b>\$3,499</b>	<b>\$41,985</b>	<b>83%</b>