

PERS: By The Numbers

April 2016

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Public Employees Retirement System

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<http://oregon.gov/PERS>

1. System Demographics (as of December 31, 2014)

PERS employers: Approximately 925, including all state agencies, universities, and community colleges; all school districts; and almost all cities, counties, and other local government units.

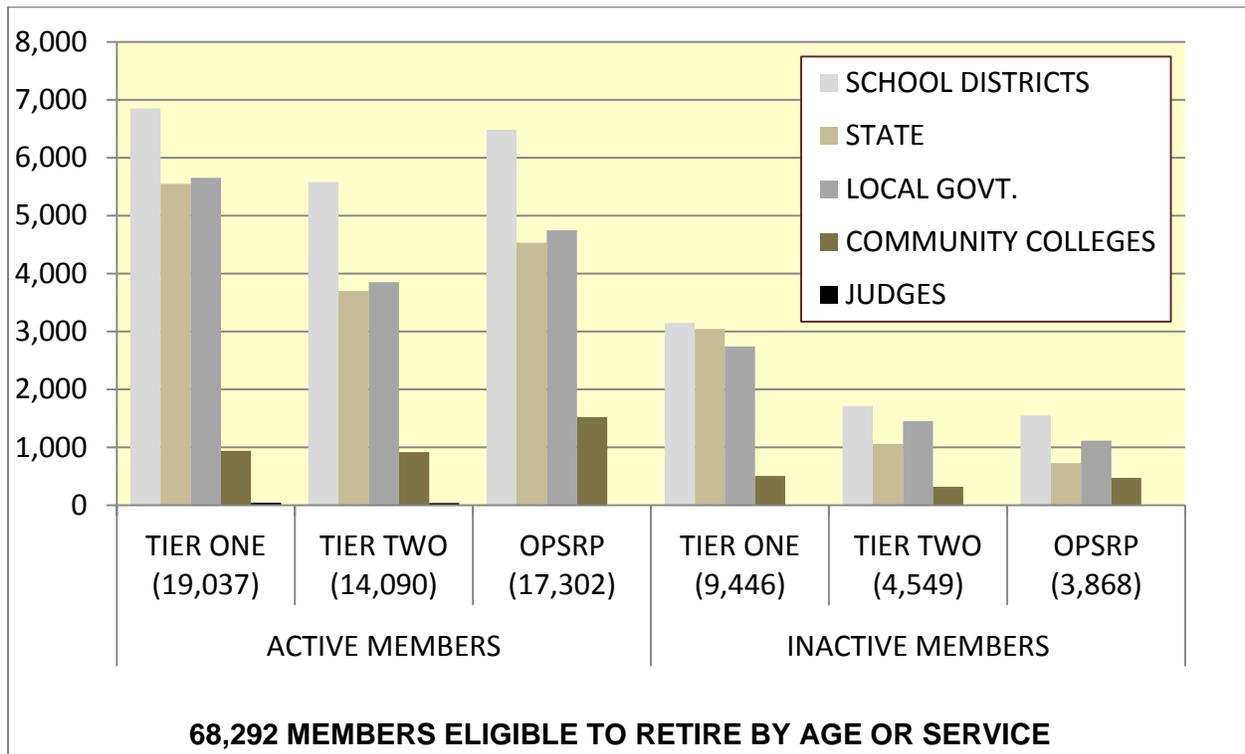
PERS members: approximately 95% of all public employees in Oregon.

Membership by category

		State Govt.	Local Govt.	School Districts	Total
Tier One	Active	9,643	11,304	13,227	34,174
	Inactive	4,138	5,679	6,704	16,521
Tier Two	Active	10,983	14,104	17,093	42,180
	Inactive	3,048	5,910	6,966	15,924
OPSRP	Active	25,776	28,848	33,881	88,505
	Inactive	2,679	3,650	3,789	10,118
Sub-total	Active	46,402	54,256	64,201	164,859
	Inactive	9,965	15,239	17,459	42,563
Retirees*		30,912	36,816	63,877	131,505
TOTAL					338,927

* Includes beneficiaries but not members who received total lump-sum retirement or account withdrawal payouts.

Members eligible to retire (as of December 31, 2015)



Retirements by year (Tier One, Tier Two, and OPSRP)

2007	2008	2009	2010	2011	2012	2013	2014	2015
5,749	5,574	5,933	5,561	8,202	6,590	9,546	7,621	7,529

2. System Benefits

PERS benefit component comparisons

The primary components and differences among the PERS Tier One and Tier Two programs, the Oregon Public Service Retirement Plan (OPSRP) Pension Program, and the Individual Account Program (IAP) are shown below. Tier One covers members hired before January 1, 1996; Tier Two covers members hired between January 1, 1996 and August 28, 2003; and OPSRP covers members hired on or after August 29, 2003. The IAP contains all member contributions (6% of covered salary) made on and after January 1, 2004.

	Tier One	Tier Two	OPSRP Pension	IAP
Normal retirement age	58 (or 30 yrs) P&F: age 55 or 50 w/25 yrs	60 (or 30 yrs) P&F: age 55 or 50 w/25 yrs	65 (58 w/30 yrs) P&F: age 60 or 53 w/25 yrs	Members retire from IAP when they retire from Tier One, Tier Two, or OPSRP
Early retirement	55 (50 for P&F)	55 (50 for P&F)	55, if vested (50 w/ 5 years of continuous service in a P&F position immediately preceding effective retirement date)	Members retire from IAP when they retire from Tier One, Tier Two, or OPSRP
Regular account earnings	Guaranteed assumed rate annually (currently 7.5%)	No guarantee; market returns	N/A; no member account	No guarantee; market returns
Variable account earnings	Market returns on 100% global equity portfolio	Market returns on 100% global equity portfolio	N/A; no member account	N/A
Retirement calculation methods	Money Match, Full Formula, or Formula + Annuity (if eligible)	Money Match or Full Formula	Formula	Various account pay-outs or rollover
Full Formula benefit factor	1.67% general; 2.00% P&F	1.67% general; 2.00% P&F	1.50% general; 1.80% P&F	N/A
Formula + Annuity benefit factor	1.00% general; 1.35% P&F	N/A	N/A	N/A
Oregon state income tax remedy	If eligible, higher of 9.89% on service time before Oct. 1, 1991 or 4% or less based on total service time. Not payable to benefit recipients that do not pay Oregon state income tax because they do not reside in Oregon	No tax remedy provided	No tax remedy provided	No tax remedy provided
Lump-sum vacation payout				
Included in covered salary (6%)	Yes	Yes	No	Yes for Tier One and Tier Two; no for OPSRP
Included in FAS	Yes	No	No	N/A
Unused sick leave included in FAS	Yes, if employer participates in the sick leave program	Yes, if employer participates in the sick leave program	No	N/A
6% "pickup" included in FAS	Yes	Yes	No	N/A
Vesting	Active member in each of 5 calendar years	Active member in each of 5 calendar years	5 calendar years w/ at least 600 hours qualifying service or normal retirement age	Immediate
COLA (after retirement)	Up to 2% annually for service on or before October 1, 2013 and a blended COLA for subsequent service			N/A; no COLA provided

P&F = police and firefighters; FAS = final average salary; COLA = cost-of-living adjustment; N/A = not applicable

Note: PERS uses three methods to calculate Tier One and Tier Two retirement benefits: Full Formula, Formula + Annuity (for members who made contributions before August 21, 1981), and Money Match. PERS uses the method (for which a member is eligible) that produces the highest benefit amount. OPSRP Pension Program benefits are based only on a formula method.

2. System Benefits (continued)

Summary of findings from PERS' Tier One/Tier Two Replacement Ratio Study for 2014

The Replacement Ratio Study population of 82,298 retirements was drawn from 112,548 retirements from January 1990 through December 2014, and covers retired members who selected comparable monthly benefit options. The techniques used in the 2014 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 do include the effects of the 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.

Average age at retirement: 62 years old

Average years of service at retirement: 22 years of service

Average monthly retirement benefit

- For all retirees from 1990-2014, the average monthly retirement benefit at time of retirement was \$2,323 per month, or about \$27,881 annually
- For those retirees in the most recent year (2014), the average monthly retirement benefit was \$2,347 per month, or about \$28,168 annually

Average public employee salaries at retirement

- For all retirees from 1990-2014, the final average salary at retirement was \$49,441 annually
- For 2014 retirees, the final average salary at retirement was \$62,781 annually

Average salary replacement ratio (see chart on following page)

- For all retirees from 1990-2014, the average annual retirement benefit equaled 54% of final average salary at the time of retirement
- For 2014 retirees, the average annual retirement benefit equaled 44% of final average salary
- For all retirees from 1990-2014, there were 7.1% who received annual benefits more than 100% of final average salary. The average years of service for this group was 31 years
- For 2014 retirees, there were 2.8% who received annual benefits more than 100% of final average salary. The average years of service for this group was 35 years

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

- From 1990-2014, the average retirement benefit for 30-year members equaled 81% of final average salary and the average monthly benefit was \$3,715 per month
- The average replacement ratio for 30-year members peaked at 100% of final average salary in 2000 and their average monthly benefit was \$4,200 per month
- For 2014 only, the average retirement benefit for 30-year members equaled 66% of final average salary and the average monthly benefit was \$3,747 per month
- 10.7% of retirees from 1990-2014 had 30 years of service
- 6.6% of retirees in 2014 had 30 years of service

2. System Benefits (continued)

Summary of findings from PERS' Tier One/Tier Two Replacement Ratio Study for 2014 (continued)

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

Calendar Year	Retirees with 30 Years of Service (does not include those w/ more than 30 years)		All Retirees in Study			# of Retirees with 31 or More Years of Service
	# of Retirees in Study*	Average Replacement Ratio Based on FAS	# of Retirees in Study*	Average Replacement Ratio Based on FAS	% of Retirees Receiving >100% of FAS	# of Retirees in Study*
1990	146	61%	1,866	44%	.0%	236
1991	217	61%	2,377	45%	.1%	261
1992	205	67%	2,432	48%	.5%	289
1993	289	66%	2,744	48%	.5%	319
1994	302	67%	3,298	49%	.3%	452
1995	304	66%	2,827	47%	1.0%	307
1996	281	70%	2,477	49%	1.4%	223
1997	295	83%	3,107	57%	7.5%	284
1998	465	89%	4,567	65%	12.0%	472
1999	548	93%	4,644	65%	14.0%	452
2000	273	100%	2,112	63%	15.8%	148
2001	391	99%	3,146	66%	16.5%	304
2002	670	96%	4,605	68%	17.4%	583
2003	942	93%	7,631	66%	14.4%	937
2004	471	84%	3,259	55%	5.5%	155
2005	393	84%	2,548	51%	4.4%	155
2006	347	83%	2,952	50%	4.3%	254
2007	372	84%	3,226	51%	4.9%	337
2008	417	80%	3,480	52%	5.0%	445
2009	432	77%	3,881	53%	6.2%	586
2010	414	75%	3,516	48%	4.3%	440
2011	464	74%	4,484	50%	5.3%	937
2012	272	70%	4,098	46%	4.3%	585
2013	389	69%	5,800	50%	5.6%	1,108
2014	262	66%	4,000	44%	2.8%	441
Total/Avg	9,561	81%	89,077	54%	7.2%	10,710

* Includes monthly benefit payments for members retiring from active service within the preceding 12 months.

Benefits related to inactive, lump sum, judge and legislator retirements are excluded.

Retirement calculation method and average replacement ratio based on final salary at retirement for 2014 Tier One/Tier Two retirees with 30 years of service credit**

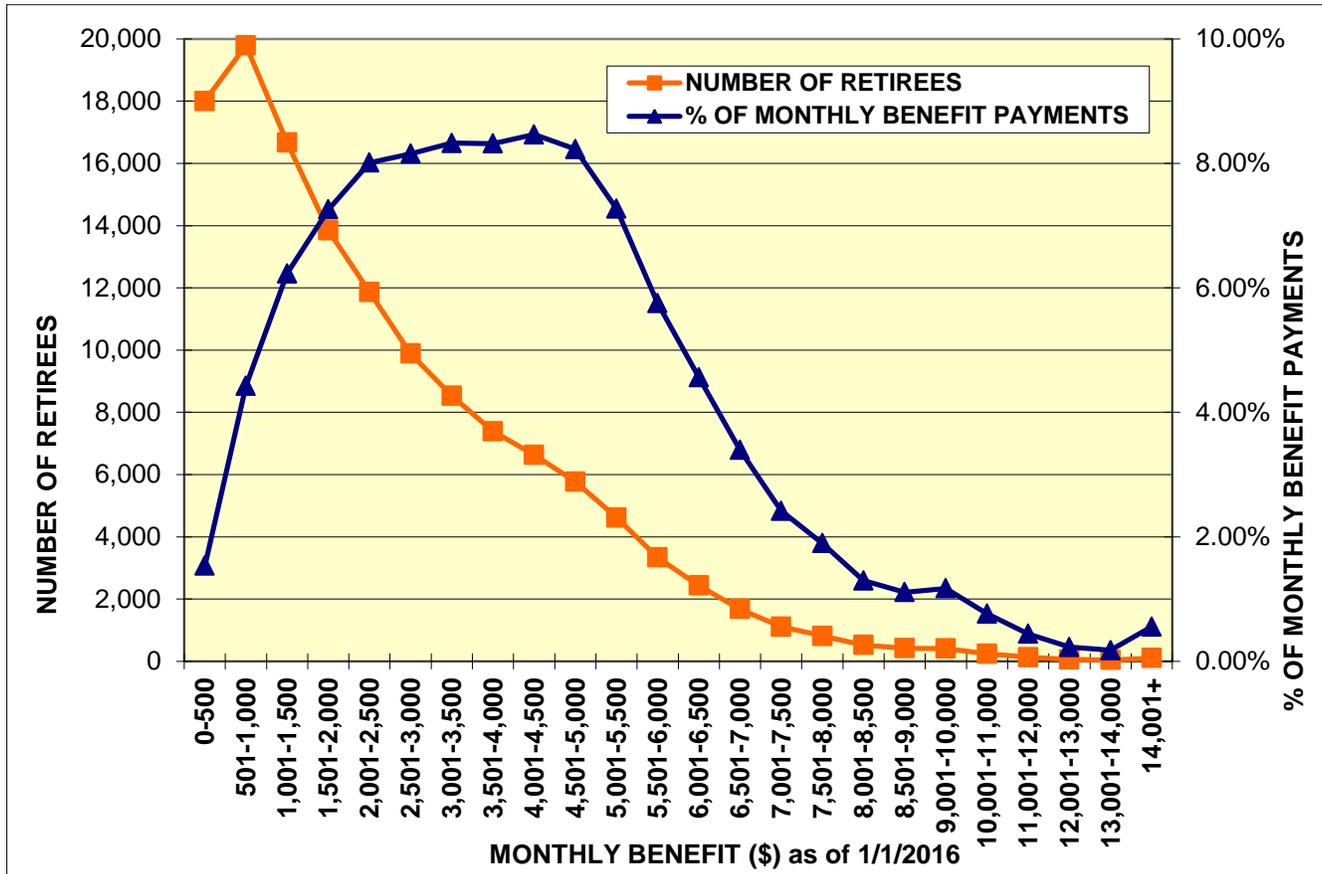
Calculation Method	Number of Retirees	Average Replacement Ratio
Full Formula	70	56%
Formula Plus Annuity	16	58%
Money Match	176	71%
TOTAL	262	66%

** Includes Tier One/Tier Two retirees with between 30 years, 0 months and 30 years, 11 months of service credit who retired in 2014. Retirees who took a lump-sum option, retirees with greater than 365 days from their termination date to their retirement date, or retirees other than General Service or Police & Fire are not included.

2. System Benefits (continued)

Monthly benefit payment amounts as of January 1, 2016

Based on 134,323 monthly benefit payments totaling \$332.7 million for the month (includes alternate payees and survivors; excludes lump sum and unit payments). Benefit payment amounts include compounded annual cost-of-living adjustments (COLAs) and other post-retirement benefit adjustments.



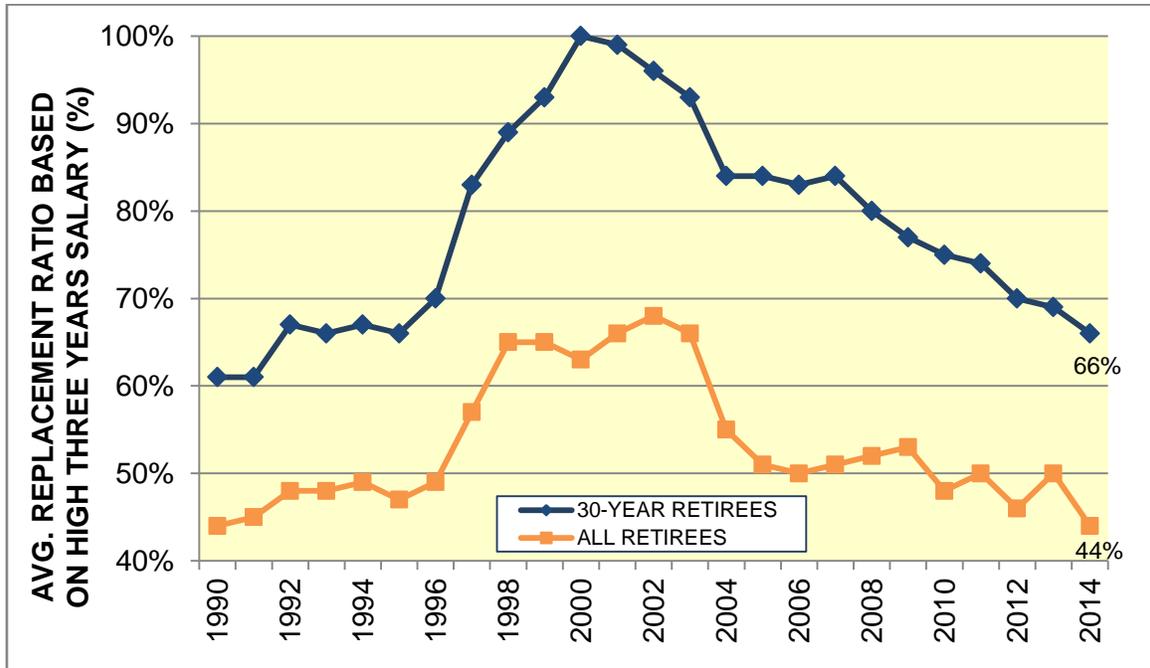
Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid	Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid
0 - 500	18,003	1.53%	3,001 - 3,500	8,535	8.33%
501 - 1,000	19,790	4.43%	3,501 - 4,000	7,387	8.32%
1,001 - 1,500	16,670	6.23%	4,001 - 4,500	6,633	8.46%
1,501 - 2,000	13,843	7.26%	4,501 - 5,000	5,772	8.23%
2,001 - 2,500	11,866	8.01%	5,001 - 5,500	4,616	7.27%
2,501 - 3,000	9,890	8.15%	5,501 - 6,000	3,335	5.75%
Subtotal	90,062		Subtotal	36,278	
% of total	67.05%	35.61%	% of total	27.01%	46.36%

Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid	Monthly Benefit (\$)	Number of Retirees	Percent of Benefits Paid
6,001 - 6,500	2,435	4.56%	9,001 - 10,000	413	1.17%
6,501 - 7,000	1,680	3.40%	10,001 - 11,000	245	0.77%
7,001 - 7,500	1,111	2.42%	11,001 - 12,000	128	0.44%
7,501 - 8,000	816	1.90%	12,001 - 13,000	61	0.23%
8,001 - 8,500	524	1.30%	13,001 - 14,000	44	0.18%
8,501 - 9,000	423	1.11%	14,001 and up	103	0.55%
Subtotal	6,989		Subtotal	994	
% of total	5.20%	14.69%	% of total	0.74%	3.34%

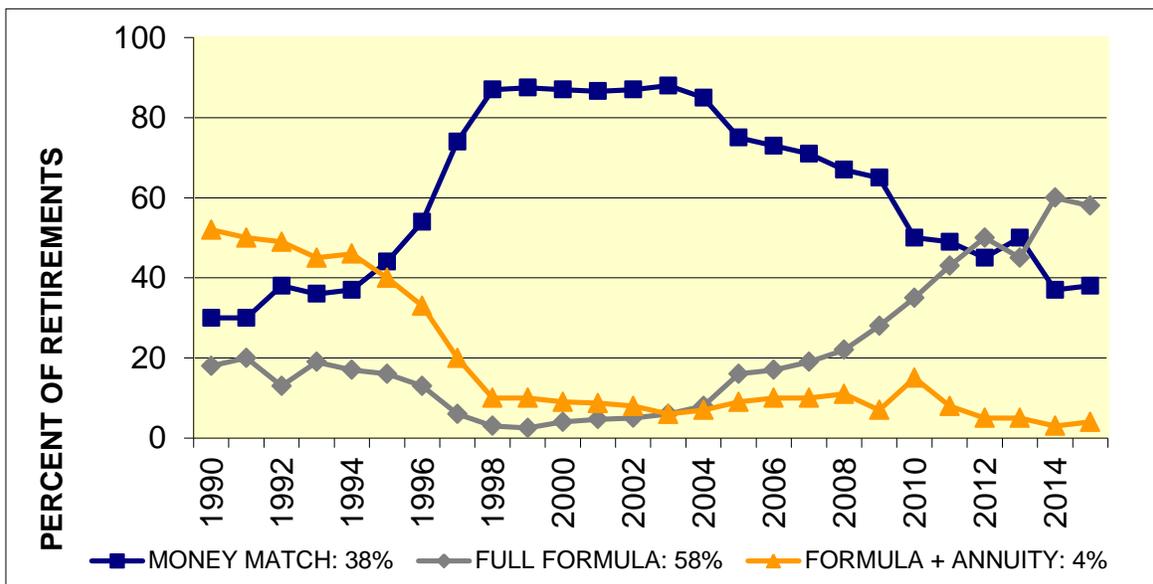
- Average annual benefit: \$29,720
- Median annual benefit: \$23,493

2. System Benefits (continued)

Tier One/Tier Two replacement ratio trends (data from PERS' Replacement Ratio Study)



Tier One/Tier Two retirement calculation method trends



Retirees with Hours Reported Working in a PERS-Covered Position in 2015

Hours	Retirees Working by Employer Group			Total
	State	Local Govt	K-12	
< 200	417	1,195	2,627	4,239
200 - 400	281	581	1,320	2,182
401 - 600	272	455	963	1,690
601 - 800	175	320	700	1,195
801 - 1039	294	387	722	1,403
> 1039	145	291	232	668
Total	1,584	3,229	6,564	11,377

2. System Benefits (continued)

Tier One/Tier Two benefit payment options selected in calendar year 2015

Option (definitions below)	Quantity	Percent
1	1,478	25.26
Refund Annuity	399	6.82
15-Year Certain	261	4.46
2	1,135	19.40
2A	1,362	23.28
3	163	2.79
3A	338	5.78
Lump Sum 1	76	1.30
Lump Sum 2	44	0.75
Lump Sum 2A	84	1.44
Lump Sum 3	5	0.09
Lump Sum 3A	13	0.22
Total Lump Sum	395	6.75
AS refund	98	1.68
Total	5,854	100%

Option 1 (non-refund): This option is paid for the member's lifetime. No benefit of any kind is paid to anyone after the member dies.

Refund Annuity Option: This option is paid for the member's lifetime. When the member dies, the designated beneficiary receives a lump-sum refund of any amount remaining in the member's account, if any.

15-Year Certain Option: This option is paid for the member's lifetime. If the member dies before receiving 180 monthly payments (15 years), the beneficiary is entitled to receive the remainder of the 180 monthly payments. Once the member has received at least 180 payments, no benefit is payable to the beneficiary.

Survivorship Options (Option 2, Option 2A, Option 3, and Option 3A): Under any of the survivorship options, the member may name only one beneficiary who must be a living person. The monthly benefit payment is paid to the member until his/her death, and then paid to the beneficiary if then living (under Options 2 and 2A, at the same base amount as the member; under Option 3 and 3A, at ½ the base amount of the member).

Lump-Sum Options (Lump-Sum Option 1, Lump-Sum Option 2, Lump-Sum Option 2A, Lump-Sum Option 3, and Lump-Sum Option 3A): These options provide a lump-sum payment of the member's account balance plus a lifetime monthly pension from the employer's contributions. The lifetime monthly pension options are the same as those for the non-refund and survivorship options described above.

Total Lump-Sum: The balance of the member's account and a matching amount funded by employers' contributions are paid out in total; there is no ongoing monthly benefit.

AS refund: a one-time payment based on an actuarial calculation if the Option 1 benefit is less than \$200 per month.

Average IAP account balances and distributions to retirees, withdrawals, and deceased

Year	Total IAP Account Balance After Earnings Crediting (\$M)	# of Members	Average IAP Account Balance (\$)	# of Distributions to Retirees, Withdrawals, and Deceased
2004	423.4	162,119	2,611	2
2005	928.9	181,055	5,130	4,131
2006	1,396.8	197,491	7,072	6,557
2007	2,120.5	210,133	10,091	6,705
2008	1,851.2	218,192	8,484	8,624
2009	2,742.8	231,256	11,847	7,727
2010	3,536.9	236,265	14,970	8,695
2011	3,939.7	238,062	16,549	11,479
2012	4,855.1	240,637	20,176	14,728
2013	5,127.3	242,516	21,142	14,994
2014	6,001.1	245,768	24,821	15,118
2015	6,906.1	255,896	26,988	15,644

2. System Benefits (continued)

History of Key PERS Benefit Enhancements, Caps, and Reductions by Year

Year	Category	Action	Affected Members
1945	Administrative	The Public Employees Retirement System is signed into law and begins business July 1, 1946, as a money match retirement plan	All
1947	Retirement Age/Vesting	Requirement for employees to serve a six-month waiting period before becoming PERS members begins	All
1953	Administrative	By law, the PERS plan is terminated and immediately reopened the next day, allowing public employers to provide Social Security coverage	All
1967	Investment Risk Allocation	Legislature passes a bill that allows PERS to invest up to 10% of the retirement fund in common stock, creates the Oregon Investment Council, and establishes a defined benefit formula for employer-funded retirement benefits (formula plus annuity)	All
1969	Investment Risk Allocation	Participation in variable account program begins	All
1972	Cost-of-Living Adjustment	Implemented ad hoc COLA increase (12% to 25% benefit increase)	Existing retirees
1972	Cost-of-Living Adjustment	Initiated an annual COLA with a 1.5% cap	All retirees
1973	Benefit Calculation/Formula	Increased Formula Plus Annuity pension factors (General Service: .67 to 1.00; Police & Fire: 0.92 to 1.35)	Tier One
1973	Cost-of-Living Adjustment	Annual COLA cap raised from 1.5% to 2%	All retirees
1973	Cost-of-Living Adjustment	Capped COLA at actual inflation rate or 2%, whichever is less	All retirees
1973	Final Average Salary	Added accrued sick leave to retirement benefit calculation for participating employers	Tier One/Two
1974	Cost of Living Adjustment	Implemented ad hoc increase (0% to 25% benefit increase)	Existing retirees
1975	Investment Risk Allocation	Initiated member account assumed rate guarantee	Tier One
1975	Investment Risk Allocation	Increased assumed earnings rate from 5.5% to 7%	Tier One
1975	Investment Risk Allocation	Credited member regular accounts with more than the assumed earnings rate*	Tier One
1976	Investment Risk Allocation	Gain Loss Reserve established to "self-fund" assumed earnings rate crediting	Tier One
1979	Administrative	Employers allowed to "pick up" member 6% contribution	All
1979	Investment Risk Allocation	Increased assumed earnings rate from 7% to 7.5%	Tier One
1981	Benefit Calculation/Formula	Added Full Formula benefit calculation method	All
1981	Benefit Calculation/Formula	Consolidated member contributions from 1% to 7% salary based sliding scale to universal 6%	All
1981	Benefit Calculation/Formula	Eliminated Formula Plus Annuity benefit calculation method	Tier One
1981	Cost-of-Living Adjustment	Implemented ad hoc COLA increase (4% to 11.4% benefit increase)	Existing retirees
1985	Cost-of-Living Adjustment	Implemented ad hoc COLA increase (3% to 7.28% benefit increase)	Existing retirees
1985	Benefit Calculation/Formula	Added benefit option to allow lump-sum payment of member account	All
1987	Benefit Calculation/Formula	Members allowed to purchase six-month waiting period	All
1987	Benefit Calculation/Formula	New retirement benefit payout options added	All
1989	Cost-of-Living Adjustment	Implemented ad hoc COLA increase (0% to 25% benefit increase)	Existing retirees
1989	Investment Risk Allocation	Increased assumed earnings rate from 7.5% to 8%	Tier One
1989	Retiree Health Benefits	Established Medicare and state employee pre-Medicare insurance premium subsidies	Tier One/Two
1989	Retiree Health Benefits	Capped Medicare premium subsidy at \$60 per month	Tier One/Two
1989	Retirement Age/Vesting	Added "30 years of service" retirement regardless of age	Tier One/Two
1991	Benefit Calculation/Formula	Imposed state income tax on PERS benefits	All
1991	Benefit Calculation/Formula	Established service time based state income tax offset benefit of between 1% to 4% (SB 656)	Tier One
1993	Administrative	Divorced spouses entitled to separate account from member's	All

CONTINUED ON FOLLOWING PAGE

*Tier One regular accounts were credited with earnings in excess of the assumed rate in the following years: 1975, 1976, 1979, 1980, 1982, 1983, 1985, 1986, 1988, 1989, 1991, 1993, 1995, 1996, 1997, 1998, and 1999. In all other years subsequent to 1975, these accounts were credited at the effective assumed rate.

Key:	Benefit enhancement	Benefit cap or reduction
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2. System Benefits (continued)

History of Key PERS Benefit Enhancements, Caps, and Reductions by Year (continued)

Year	Category	Action	Affected
1995	Benefit Calculation/Formula	Established state income tax offset benefit for pre-1991 service time (HB 3349)	Tier One
1995	Benefit Calculation/Formula	Eliminated tax remedy for anyone hired after July 14, 1995	All new hires
1996	Final Average Salary	Excluded lump-sum vacation payouts from final average salary	Tier Two
1996	Investment Risk Allocation	Eliminated guaranteed return on regular accounts for new members	Tier Two
1996	Retirement Age/Vesting	Increased normal retirement age for new members from 58 to 60 (General Service)	Tier Two
1997	Administrative	Married members must provide proof of spousal consent for retirement option choice	All
1997	Administrative	Reemployed retirees can work up to 1,040 hours for a PERS-covered employer without loss of benefits (up from 600 hours)	All
1997	Benefit Calculation/Formula	Out-of-state teaching service and some military purchases allowed	All
1999	Benefit Calculation/Formula	Locked in existing actuarial equivalency factor tables	Tier One
2000	Investment Risk Allocation	Eliminated 'Last Known Rate' member account crediting guarantee	Tier One
2003	Benefit Calculation/Formula	Decreased Full Formula benefit pension factor (General Service: 1.67 to 1.50; Police & Fire 2.00 to 1.80)	OPSRP
2003	Benefit Calculation/Formula	Eliminated Money Match benefit calculation method	OPSRP
2003	Benefit Calculation/Formula	Redirected member contributions to freeze Money Match benefit levels	Prospective MM retirees
2003	Benefit Calculation/Formula	Required regularly updated mortality assumptions and actuarial factors	All
2003	Cost-of-Living Adjustment	Pro-rated first year COLA	OPSRP
2003	Cost-of-Living Adjustment	Eliminated COLA 'bank' carryover	OPSRP
2003	Final Average Salary	Eliminated lump-sum vacation payouts from subject salary	OPSRP
2003	Final Average Salary	Eliminated accumulated sick leave from final average salary	OPSRP
2003	Investment Risk Allocation	Required members to self-fund guaranteed return on member accounts	Tier One
2003	Investment Risk Allocation	Subjected all future member contributions made on or after January 1, 2004 to actual earnings and losses with no guarantee	All
2003	Retiree Health Benefits	Eliminated post-retirement health insurance premium subsidies	OPSRP
2003	Retirement Age/Vesting	Increased normal retirement age from 60 to 65 (General Service) 55 to 60 (Police & Fire)	OPSRP
2003	Retirement Age/Vesting	Increased vesting from 5 years or age 50 to 5 years or age 65 (General Service) or age 60 (Police & Fire)	OPSRP
2005	Benefit Calculation/Formula	Adjusted member accounts and benefit payments to recapture 1999 earnings overcrediting	Tier One
2009	Retiree Health Benefits	Allowed OPSRP members to participate in PERS retiree health insurance pools without premium subsidy	OPSRP
2011	Benefit Calculation/Formula	Eliminated HB 3349 tax remedy for prospective retirees who move out of state on or after January 1, 2012	Tier One
2013	Cost-of-Living Adjustment	1.5% in 2013; COLA in 2014 and beyond is 1.25% on the first \$60,000 of an annual benefit; 0.15% on amounts above \$60,000	All
2013	Supplementary Payments	Annual supplementary payments of 0.25% to all benefit recipients (up to \$150) through 2019. Second annual supplementary payment of 0.25% through 2019 if benefit is \$20,000 or less annually	Retirees
2013	Benefit Calculation/Formula	Eliminated any tax remedy for retirees who do not pay income taxes in Oregon because they are not residents of Oregon	Tier One
2015	Supplementary Payments	Supplementary Payments invalidated by Oregon Supreme Court	
2015	Cost-of-Living Adjustment	Annual COLA of up to 2% restored for service time accrued before October 1, 2013. COLA for service time after that date uses a lower rate. Service time accrued in both periods is "blended."	

Key:	Benefit enhancement	Benefit cap or reduction
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2. System Benefits (continued)

PERS Retiree Health Insurance Program information

The Oregon PERS Health Insurance Program offers optional medical, dental, and long-term care insurance plans to eligible Tier One/Tier Two retirees, their spouses, and dependents. Upon retirement, these insurance options become a choice available to all PERS retirees. While primarily serving our Medicare-eligible (age 65 and over) population, the PERS Health Insurance Program also offers insurance coverage options for those not yet Medicare eligible.

There are two statutory trust funds administered by PERS as part of the Health Insurance Program that provide premium subsidies for eligible Tier One and Tier Two retirees or surviving spouses. These trusts are known as the Retirement Health Insurance Account (RHIA), serving all qualifying PERS Medicare eligible retirees, and the Retiree Health Insurance Premium Account (RHIPA), serving qualifying state government pre-Medicare retirees. Both trusts are funded from employer contributions on an actuarial basis.

Program Enrollment (as of December 2015)

Medical Plans (four plans offered)	Totals	Medicare	Non-Medicare
Covered lives	59,803	57,192	2,611
Retirees (or surviving spouses)	48,452	46,843	1,609
Spouses/Dependents		10,349	1,002
Average age of enrolled retirees	74	75	57
Dental Plans (two plans offered)	36,990		
Long-Term Care Plan	2,094		

Statutory Health Insurance Premium Subsidies

Retirees receiving RHIA (trust fund held by PERS*)	44,880
Retirees receiving RHIPA (trust fund held by PERS**)	1,274
RHIA monthly payment total	\$2,692,800
RHIPA monthly payment total	\$ 376,793

Employer rates (effective July 1, 2015):

RHIA: 0.53%; RHIPA (state government only): 0.44%

Unfunded actuarial liabilities (as of December 31, 2014): \$72.5 million (RHIA); \$63.3 million (RHIPA)

* The RHIA subsidy is \$60 per month for Medicare eligible retirees.

** The RHIPA subsidy is for state government pre-Medicare retirees only and varies depending on the employee's years of state service, from \$163.70 (8 years) to \$323.40 (30+ years) per month for Plan Year 2015.

3. System Funding Level and Status

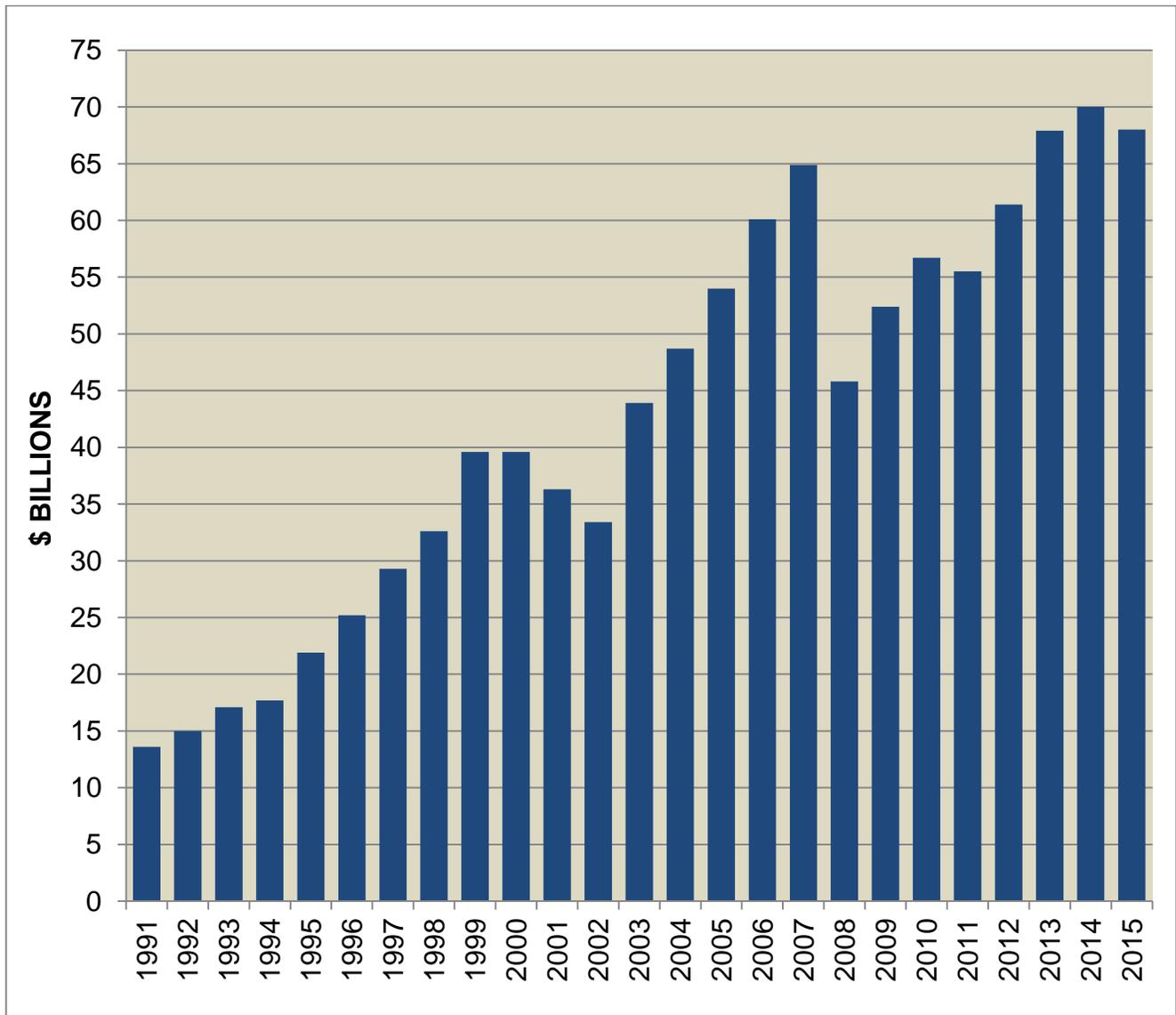
Funded status as of December 31, 2015

The Oregon Public Employees Retirement Fund (OPERF) is invested under oversight and direction of the Oregon Investment Council with staff support from the Investment Division of Oregon State Treasury.

As of December 31, 2015, PERS was estimated to be 71-72% funded (not including employer side accounts). Side accounts hold deposits of pension obligation bond proceeds and other advance lump-sum payments.

As of December 31, 2015, the unfunded actuarial liability (UAL) (not including side accounts) was estimated to be \$21-22 billion. The UAL fluctuates based on various factors including investment returns, Board reserving policies, statutory plan design changes, and litigation outcomes.

PERS fund value (calendar years ending December 31)



3. System Funding Level and Status (continued)

Unfunded actuarial liability history and funded ratio*

Valuation** Date	With Side Accounts*** (starting in 2002)		Without Side Accounts	
	UAL (\$M)	Funded Ratio (%)	UAL (\$M)	Funded Ratio (%)
2000	1,545	96.4	1,545	96.4
2001	-2,031	105.4	-2,031	105.4
2002	3,204	92.0	3,983	89.9
2003	1,751	96.1	6,227	86.0
2004	2,122	95.6	7,678	84.0
2005	-1,751	104.0	4,919	91.0
2006	-5,019	109.7	2,229	95.7
2007	-6,120	111.5	1,538	97.1
2008	10,998	80.0	16,133	70.4
2009	8,108	86.0	13,598	76.0
2010****	7,700	87.0	13,300	78.0
2011	11,030	82.0	16,255	73.0
2012*****	5,600	91.0	11,100	82.0
2013	2,600	96.0	8,500	86.0
2014*****	12,100	84.0	18,000	76.0
2015 (estimated)	-----	-----	21-22	71.0-72.0

* Includes RHIA/RHIPA.

** 2000-2003 UALs were calculated using actuarial value of assets (AVA) based on year-to-year changes in asset values smoothed over four-year periods. All other UALs since 1997 were calculated using an AVA based on fair market value.

*** The official PERS valuation UAL and funded ratio are based on accepted actuarial standards and methodologies. These methodologies are subject to review and revision every two years. A negative UAL amount represents a surplus.

**** 2010 and after includes the OPSRP Pension Program, 2000-2009 reflects only Tier One/Tier Two.

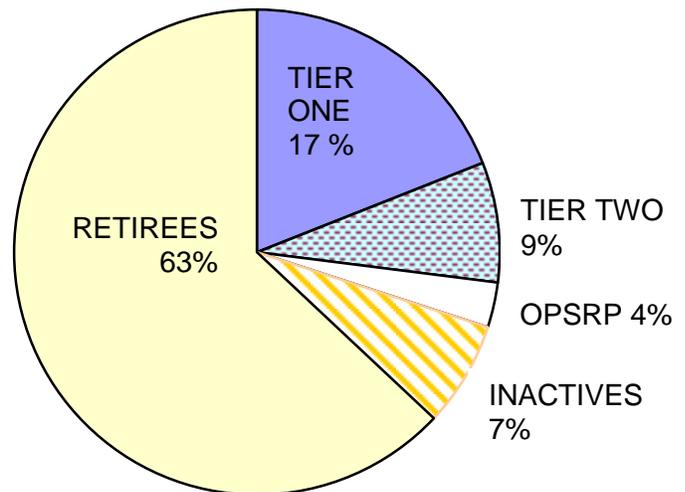
***** Includes liability reductions from Senate Bills 822 & 861 and new Board-adopted actuarial assumptions and methods from the 2012 Experience Study.

***** Includes the *Moro* decision and new Board-adopted actuarial assumptions and methods from the 2014 Experience Study.

Actuarial accrued liabilities

Before PERS reform in 2003, PERS' liabilities were growing by about 12% annually. Reform reduced liability growth to an expected average of 3 to 4% annually over the long-term, which is close to the system's annual inflation rate assumption of 2.5% (for the December 31, 2014 and December 31, 2015 valuations).

Approximately 70% of PERS' total accrued liability is for members who are no longer working in PERS-covered employment (retirees and inactives). As a result, more than 40% of an employer's total contribution rate is associated with these groups.



4. System Revenue

Member and employer contributions and investment income for calendar years

Year	Member Contributions (\$M)	Employer Contributions (\$M)	Amortization of Employer Side Accounts (\$M)*	Total Employer (\$M)	Net Investment & Other Income (\$M)
1995	287	427	N/A	427	4,110
1996	296	463	N/A	463	4,358
1997	291	473	N/A	473	4,582
1998	318	488	N/A	488	3,978
1999	347	577	N/A	577	7,463
2000	359	654	N/A	654	143
2001	385	689	N/A	689	-2,708
2002	398	725	8	733	-3,460
2003	405	582	97	679	8,866
2004	371**	408	278	686	5,933
2005	434	504	357	861	6,179
2006	456	637	474	1,111	8,163
2007	468	633	466	1,099	5,808
2008	484	669	541	1,210	-17,235
2009	515	561	540	1,101	8,053
2010	502	435	558	993	6,444
2011	510	627	509	1,136	1,935
2012	513	915	443	1,358	7,859
2013	561	942	448	1,390	9,458
2014	524	994	472	1,466	4,819
2015	611	1,185	542	1,727	1,380

* PERS' methodology to track amortization of side accounts began in 2002. Side accounts hold deposits of pension obligation bond proceeds and other lump-sum payments.

** Since January 1, 2004, member contributions have been placed in the Individual Account Program (IAP), instead of the legacy Tier One/Tier Two member accounts.

- Member contributions equal 6% of covered salary and now go to the IAP. The member contribution is currently assumed and paid or “picked up” by 65% of all employers for more than 50% of their employees. This totals approximately 72% of all employees.
- PERS Reform legislation led to a reduction in employer rates beginning in 2003. Also, starting in 2002, employers were given the option to deposit lump-sum payments into side accounts, reducing subsequent “new dollar” annual contributions for the employers that make such deposits.
- Employer contribution amounts are from the calendar year-end records. Data for calendar year 2004 and beyond includes employer contributions for OPSRP Pension Program, Tier One/Tier Two, and post-retirement health care (RHIA, RHIPA).

4. System Revenue (continued)

Regular account earnings available for crediting and actual distributions to Tier One and Tier Two member regular, variable, and Individual Account Program (IAP) accounts

Year	Regular Account Earnings (%)	Distributions (%)			
		Tier One	Tier Two	Variable Account	IAP
1970	5.09	5.09		7.47	
1971	6.27	6.27		9.47	
1972	7.46	7.46		13.87	
1973	0.00	0.00		-16.39	
1974	0.00	5.50		-18.16	
1975	9.19	7.50		18.94	
1976	10.38	7.75		18.58	
1977	4.79	7.00		-2.62	
1978	7.37	7.00		7.03	
1979	12.32	11.09		20.40	
1980	16.92	13.00		29.94	
1981	4.37	7.50		-2.25	
1982	15.31	11.50		22.39	
1983	18.37	13.00		23.12	
1984	7.33	7.50		4.00	
1985	21.38	15.00		27.99	
1986	22.70	18.37		18.98	
1987	9.00	7.50		4.54	
1988	16.86	13.50		18.62	
1989	19.74	14.50		26.84	
1990	-1.53	8.00		-7.84	
1991	22.45	15.00		35.05	
1992	6.94	8.00		10.54	
1993	15.04	12.00		12.65	
1994	2.16	8.00		-1.76	
1995	20.78	12.50		29.92	
1996	24.42	21.00	24.42	21.06	
1997	20.42	18.70	20.42	28.87	
1998	15.43	14.10	13.63	21.45	
1999	24.89	11.33*	21.97	28.83	
2000	0.63	8.00	0.54	-3.24	
2001	-7.17	8.00	-6.66	-11.19	
2002	-8.93	8.00	-8.93	-21.51	
2003	23.79	8.00	22.00	34.68	
2004	13.80	8.00	13.27	13.00	12.77
2005	13.04	8.00	18.31*	8.29	12.80
2006	15.57	8.00	15.45	15.61	14.98
2007	10.22	7.97***	9.47	1.75	9.46
2008	-27.18	8.00	-27.18	-43.71	-26.75
2009	19.12	8.00	19.12	35.57	18.47
2010	12.44	8.00	12.44	15.17	12.13
2011	2.21	8.00	2.21	-7.80	2.15
2012	14.29	8.00	14.68	18.43	14.09
2013	15.76	8.00	15.62	25.74	15.59
2014	7.29	7.75	7.24	4.29	7.05
2015	2.21	7.75	1.87	-1.61	1.85

* The PERS Board originally credited these accounts at 20%. That allocation was later reduced to 11.33% to comply with subsequent court decisions and legislative findings.

** Tier Two regular account crediting, based solely on earnings, was 13.74%. However, the PERS Board deployed \$9 million from the Capital Preservation Reserve and \$17 million from the Contingency Reserve that was added to Tier Two earnings. As a result, Tier Two was credited with a total of 18.31%. The dollars allocated from the reserves were originally withheld from Tier Two regular account earnings.

*** After crediting Tier One accounts with the assumed rate of 8%, member attorney fees in the *Strunk* case were deducted by order of the Oregon Supreme Court resulting in an effective crediting rate of 7.97%.

■ In determining plan funding, the actuary must project future earnings of the PERS Fund. This is called the “assumed earnings rate.” Historical assumed earnings rates are:

- 5.0% for 1971 - 1974
- 7.0% for 1975 - 1978
- 7.5% for 1979 - 1988
- 8.0% for 1989 - 2013
- 7.75% beginning January 1, 2014
- 7.5% beginning January 1, 2016.

■ Average earnings credited to IAP accounts from 2004 - 2015: 7.9%

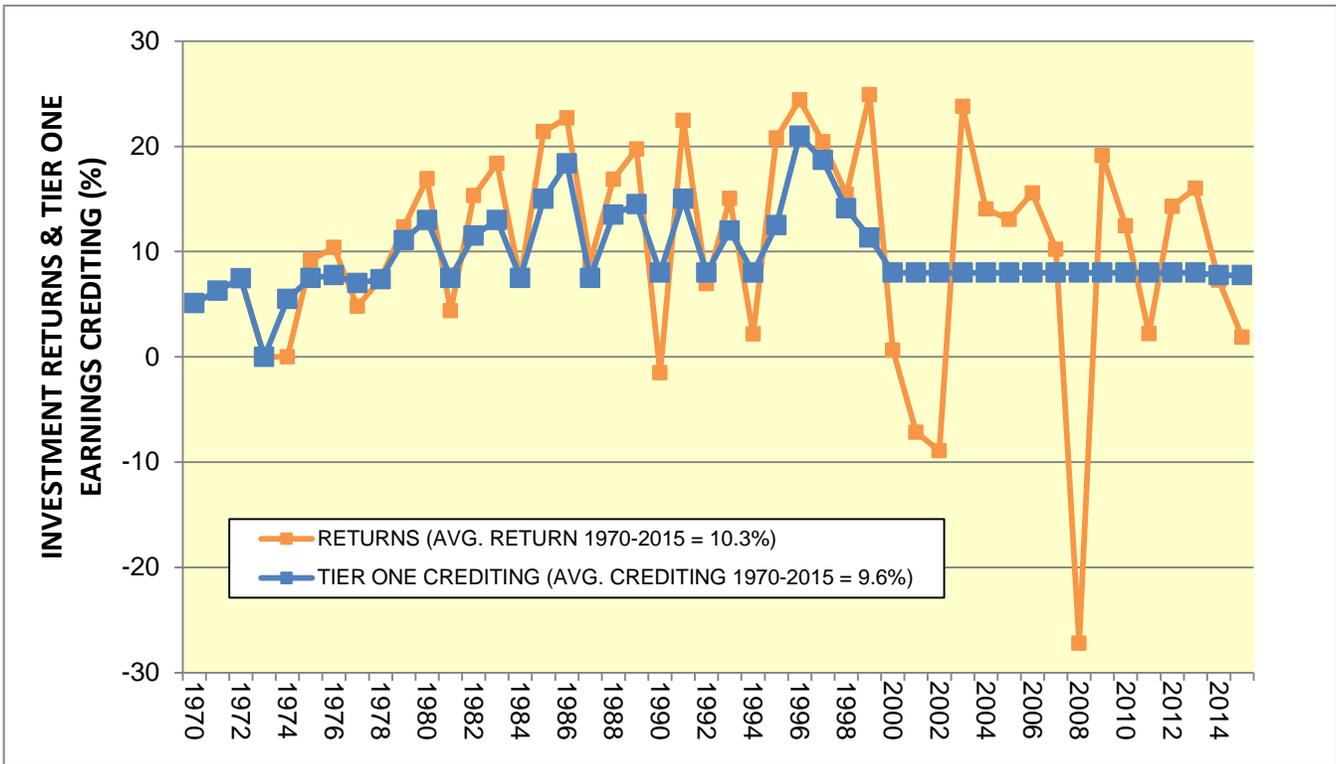
■ Average earnings credited to Tier Two accounts from 1996 – 205: 9.5%

46-year averages (1970-2015)

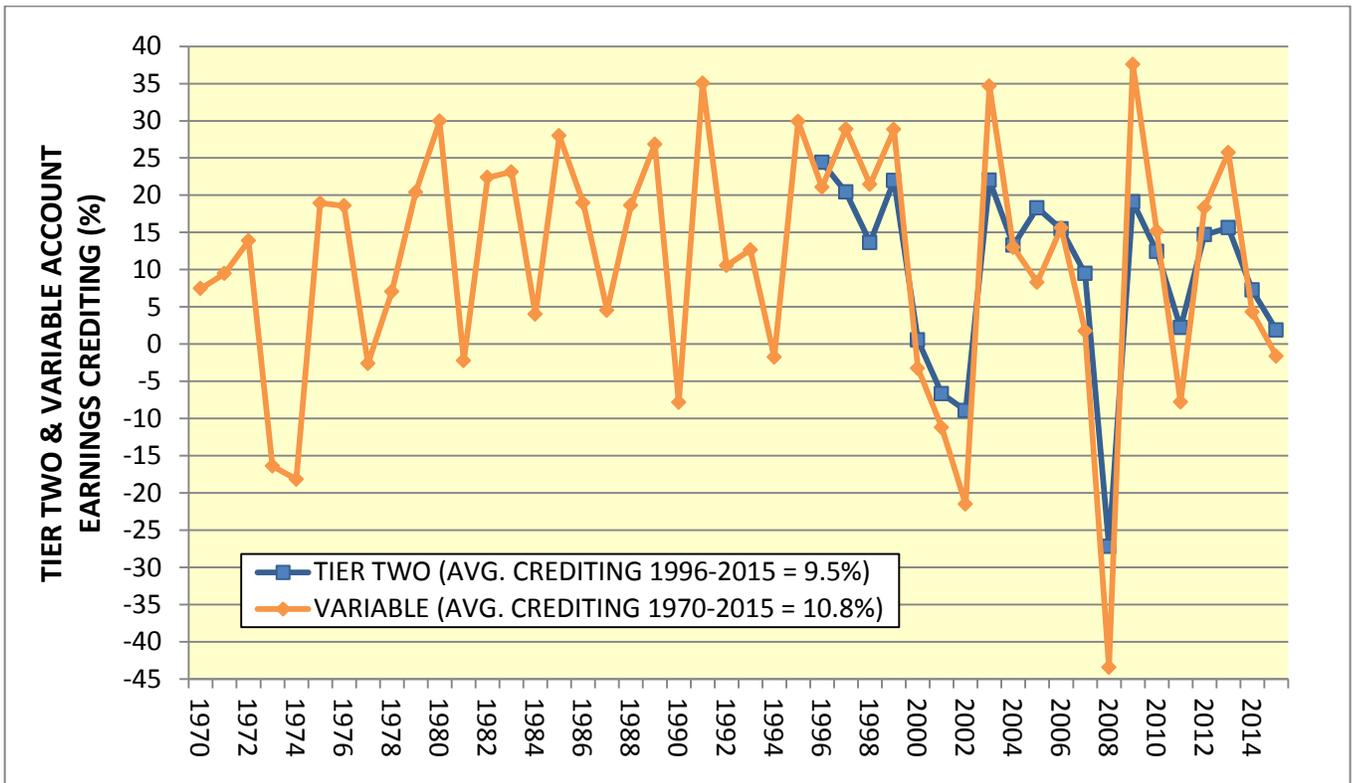
- Regular account earnings available for crediting: 10.3%.
- Earnings credited to Tier One regular accounts: 9.6%.
- Earnings credited to variable accounts: 10.8%.

4. System Revenue (continued)

Regular account earnings available for crediting and actual distributions to Tier One member regular accounts based on 2015 earnings



Actual distributions to Tier Two member regular accounts and to Tier One/Tier Two member variable accounts (invested in an equity-only portfolio) based on 2015 earnings



4. System Revenue (continued)

2015 earnings crediting (\$ millions)

Reserve/Account	Balance Before Crediting	2015 Crediting	Reserves After Crediting	2015 Rates
Contingency Reserve	\$588.6		\$588.6	N/A
Tier One Member Regular Accts	4,931.8	382.2	5,314.0	7.75%
Tier One Rate Guarantee Reserve	448.8	(281.4)	167.4	N/A
Benefits-In-Force (BIF) Reserve	21,917.8	410.8	22,328.6	1.87%
Tier Two Member Regular Accts	837.6	15.7	853.3	1.87%
Employer Reserves	23,075.3	432.2	23,507.5	1.87%
OPSRP Pension Program	2,344.9	42.8	2,387.7	1.87%
UAL Lump-Sum Payment Side Accts	5,510.3	122.5	5,632.8	1.82%
IAP Accounts	6,749.6	122.8	6,872.4	1.85%
Total	\$66,407.7	\$1,247.7	\$67,652.4	

* Side account earnings rates for lump sums on deposit vary depending on when the deposit was made within the calendar year and are not affected by Board reserving or crediting decisions.

** Informational only; not affected by Board reserving or crediting decisions.

Contingency Reserve: This reserve can be used for any purpose the Board determines is appropriate so long as the use of the funds furthers the trust's purpose. It is funded in years that investment income exceeds the assumed rate (currently 7.75 percent).

Tier One Rate Guarantee Reserve: This reserve is used to credit the assumed rate on Tier One member regular accounts in years when the fund earns below the assumed rate, and to hold excess earnings from the years when the fund earns more than the assumed rate (currently 7.75% percent).

Benefits-In-Force Reserve: This reserve is used to pay retired member's benefits and annuities. It is funded by earnings and fund transfers from member accounts and employer reserves associated with retirements processed during a calendar year.

System-wide average employer contribution rates excluding retiree health insurance (RHIA/RHIPA)

Valuation Year	Rate Effective Dates	Average Rate With Side Accounts (%)	Average Rate Without Side Accounts (%)	Annualized Salary (\$M)
1975	Various	11.21	11.21	1,014.5
1977	Various	11.87	11.87	1,226.8
1979	Various	10.97	10.97	1,488.0
1982	Various	10.13	10.13	2,062.1
1985	Various	10.87	10.87	2,428.3
1987	Various	11.30	11.30	2,764.7
1989	Various	9.74	9.74	3,199.4
1991	Various	9.19	9.19	3,887.5
1993	Various	9.15	9.15	4,466.8
1995	Various	9.42	9.42	4,848.1
1997	Various	11.40	11.40	5,161.6
1999	7/1/01 – 6/30/03	10.74	10.74	5,676.6
2001	7/1/03 – 6/30/05	10.64	10.64	6,256.5
2003*	7/1/05 – 6/30/07	14.47*	18.89*	6,248.5
2005**	7/1/07 – 6/30/09	8.22	15.01	6,792.0
2007	7/1/09 – 6/30/11	4.73	12.42	7,721.8
2009	7/1/11 – 6/30/13	10.8	16.3	8,512.0
2011***	7/1/13 – 6/30/15	10.8	16.5	8,600.0
2013	7/1/15 – 6/30/17	10.6	17.5	8,699.0

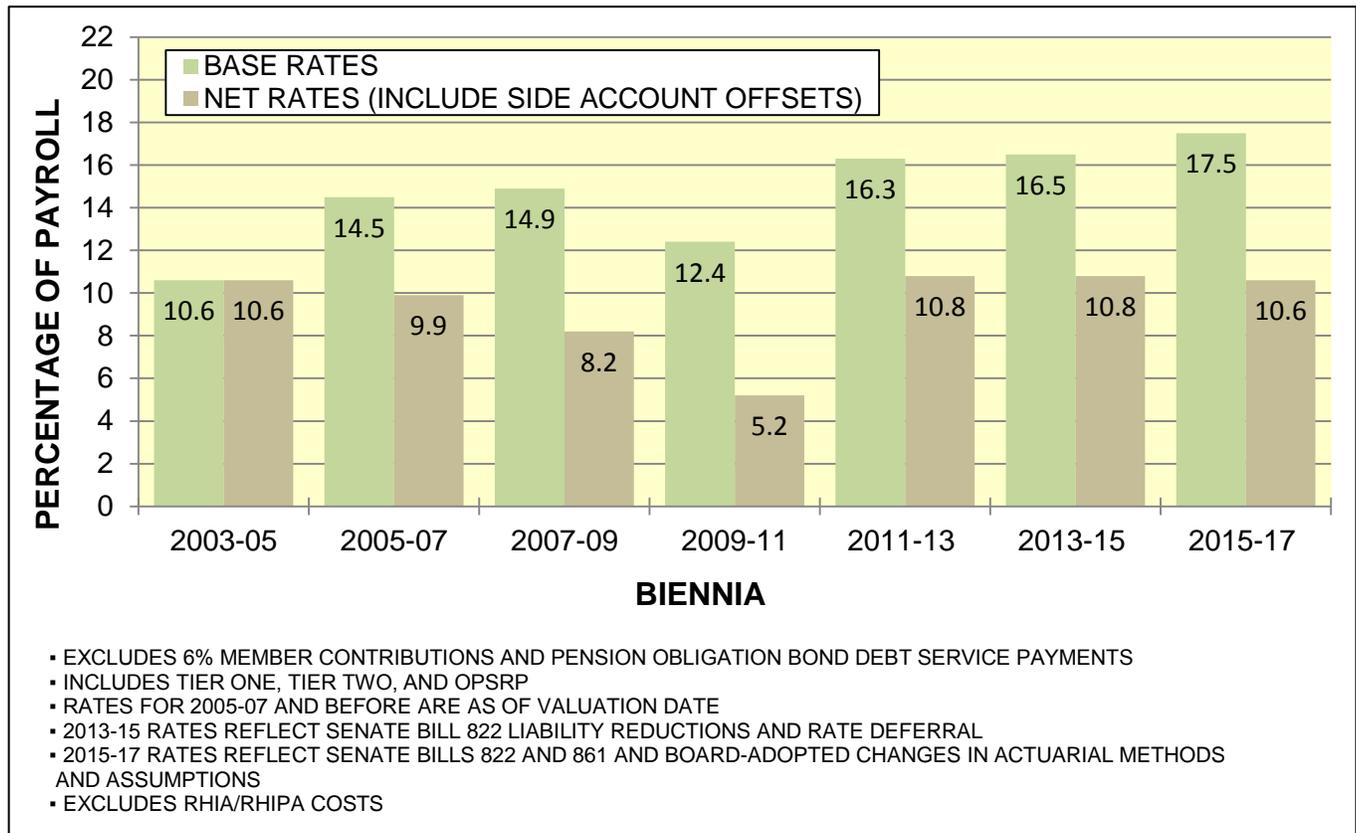
* December 31, 2003 rates were phased-in. Actual rate paid averaged 10.58% with employer side accounts and 15.10% without employer side accounts.

** Includes weighted average rate for Tier One/Tier Two and OPSRP beginning in 2005.

*** Includes liability reduction and rate deferral from Senate Bill 822.

4. System Revenue (continued)

System-wide average employer contribution rates as a percent of covered salary (net rates include side account offsets).



2017-2019 employer contribution rate increase projections

(\$ millions)	Projected 2015-17 Payroll*	(A) Projected 2015-17 Contribution	Projected 2017-19 Payroll*	(B) Projected 2017-19 Contribution	(B) - (A) Projected Contribution Increase
State Agencies	\$5,580	\$575	\$5,980	\$800	\$225
School Districts	\$5,950	\$560	\$6,370	\$850	\$290
All Others	<u>\$7,350</u>	<u>\$870</u>	<u>\$7,870</u>	<u>\$1,155</u>	<u>\$285</u>
Total	\$18,880	\$2,005	\$20,220	\$2,805	\$800

- Projected 2017-19 contributions are determined by applying collared net advisory rates calculated in the 12/31/2014 valuation
- Projections do not reflect the effects of actual 2015 investment returns

4. System Revenue (continued)

Employer side accounts

When an employer makes a lump-sum payment to prepay part or all of its pension unfunded actuarial liability (UAL), the money is placed in a special account called a “side account.” This account is attributed solely to the employer making the payment and is held separate from other employer reserves.

Most employers with side accounts issued pension obligation bonds (POBs) and provided the bond proceeds to PERS as a UAL lump-sum payment. A few employers funded their UAL lump-sum payments from other sources, such as savings from internal operations.

There are potential advantages to side accounts, but there are also potential risks. The primary advantage is that the employer can borrow at a low interest rate and offset a UAL obligation that is accruing at a higher rate. This strategy can benefit the employer when the rate relief from the employer’s side account exceeds the POB debt-service cost. However, if side account earnings are less than the interest rate being paid on the POBs, the employer may end up paying more in POB service costs than it receives in rate relief from its side account.

Administrative costs for side accounts are limited by statute. PERS assesses \$2,500 per side account in the first year and \$1,000 annually thereafter, regardless of the size of the side account.

As of December 31, 2014, 144 PERS employers had side accounts. Of these, 34 employers had multiple side accounts: one city, one special district, two community colleges, and 30 school districts.

Employer Type	Number with Side Accounts
Independent Locals (not a member of a pool)	5
State Agencies (all, including OUS)	1
Pooled Counties	8
Pooled Cities	9
Pooled Special Districts	8
Community Colleges	17
School Districts	96

As of December 31, 2014, side account assets totaled \$5.9 billion.

Side Accounts by Employer Type as of December 31, 2014	
Employer Type	Balance (\$ millions)
Independent Locals (not a member of a pool)	\$96.4
State Agencies	\$2,057.9
Pooled Counties	\$66.7
Pooled Cities	\$52.7
Pooled Special Districts	\$88.9
Community Colleges	\$430.7
School Districts	\$3,083.2

Side accounts are generally amortized over the same time period as the employer’s associated UAL, providing the employer with a reduction of its employer rate. The goal is for the side account to provide rate relief to the employer until the associated UAL is paid off. Side accounts are re-amortized every two years, taking into consideration how much of the side account has been used and what earnings have been credited. The rate offset is then adjusted based on the re-amortization.

4. System Revenue (continued)

Employer side accounts (continued)

Average Side Account Rate Offset 2005 -2015	
Rate Period	Average Rate Offset (% of Payroll)
2005 - 2007	-4.54%
2007 - 2009	-6.71%
2009 - 2011	-7.20%
2011 - 2013	-5.11%
2013 - 2015	-5.26%
2015 - 2017	-6.38%

The State of Oregon issued \$2.1 billion in POBs in 2003 to fund a side account. As of December 31, 2014, the State's side account balance was \$2.1 billion and the principal balance on the State's POBs was \$1,835 million.

Historical Side Account and POB Balances 2004 - 2014		
Calendar Year	Side Accts (\$ millions)	Outstanding POBs (\$ millions)
2004	\$5,556	\$5,516
2005	\$6,667	\$6,202
2006	\$7,248	\$6,164
2007	\$7,658	\$6,249
2008	\$5,135	\$6,187
2009	\$5,490	\$6,109
2010	\$5,579	\$5,999
2011	\$5,225	\$5,896
2012	\$5,518	\$5,814
2013	\$5,924	\$5,520
2014	\$5,876	\$5,519

Side account earnings

Side accounts are invested in the PERS Fund and receive the Fund's actual earnings or losses. These earnings or losses are posted to side accounts at the end of each year.

Average Side Account Earnings 2004 to 2014	
Calendar Year	Average Earnings/Loss
2004	13.68%
2005	12.80%
2006	14.98%
2007	9.46%
2008	-26.75%
2009	18.47%
2010	12.13%
2011	2.15%
2012	14.09%
2013	15.59%
2014	7.39%

5. Economic Impact of PERS Monthly Benefit Payments in 2014

Oregon PERS monthly benefits contribute to Oregon's economy

Oregon PERS paid approximately \$3.7 billion in total monthly benefits in 2014, with \$3.3 billion to PERS benefit recipients living in Oregon. Funding of these benefits came primarily from investment earnings on contributions previously paid by members and public employers. These benefit recipients spent a significant portion of this money on goods and services in Oregon, which helped support local businesses. These businesses then purchased goods, in part, from other local vendors, further supporting Oregon's workforce and economy.

Annual PERS monthly benefits generate \$3.9 billion in total economic value to Oregon

The \$3.3 billion in annual benefit payments multiply to \$3.9 billion in total economic value to Oregon when the full financial impact of these dollars spent in local communities is considered (based upon economic multipliers provided by the U.S. Department of Commerce's Bureau of Economic Analysis).

The economic activity generated by PERS monthly benefit payments sustain an estimated 35,999 Oregon jobs, and add approximately \$1.07 billion in wages to Oregon's economy.

Additionally, the state of Oregon collected an estimated \$171.7 million in income taxes on PERS retiree monthly benefits during 2014.

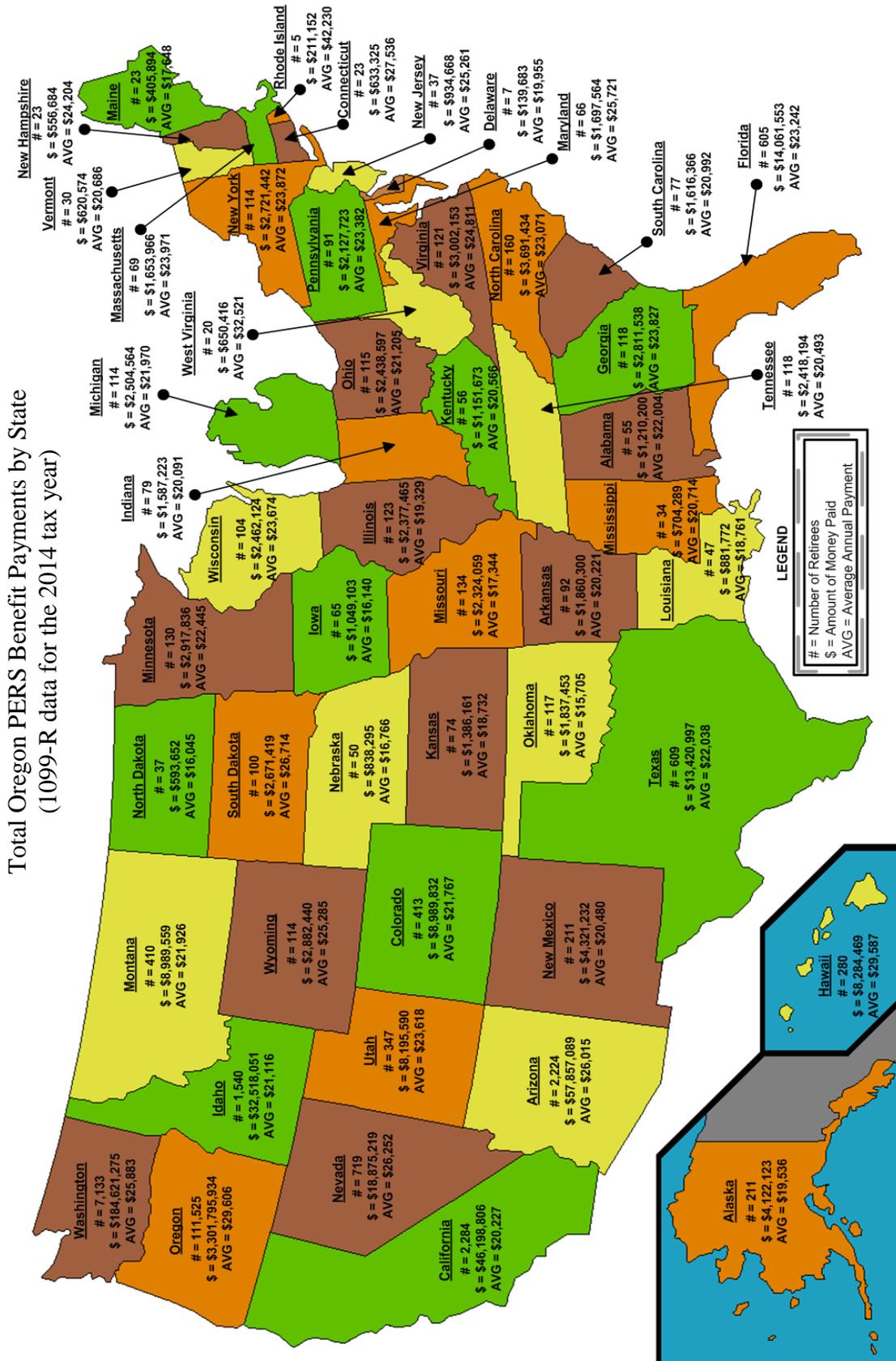
Investment income provided 73.8% of total PERS' revenues from 1970-2014, with member contributions providing 5.6% and employer contributions providing 20.6%.

Money for PERS benefit payments comes from three sources (1970-2014)



5. Economic Impact of PERS Benefit Payments in 2014 (continued)

Oregon PERS benefit payments by state (2014 calendar year)



Pension System Terms

Accrued liability: The net present value of projected future benefits allocated to service already completed in accordance with the actuarial cost method.

Actuarial asset value: The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with a smoothing method.

Actuarial assumptions: Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; rates of investment earnings and other relevant items. Actual experience will vary from assumption, and at times the variance will be substantial.

Actuarial cost method: A technique used by actuaries to allocate the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial liability (UAL). Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Base employer contribution rates: Consists of the normal cost rate plus the UAL rate. This is paid by a combination of employer contributions and side account transfers. Base rates do not reflect the effects of side account rate offsets.

Combined valuation payroll: Projected payroll for the calendar year following the valuation date for Tier One, Tier Two, and OPSRP active members. This payroll is used to calculate UAL rates.

Funded ratio or funded status: The actuarial value of assets expressed as a percentage of the accrued liability.

Individual Account Program (IAP): A defined contribution-like program that contains all member contributions (6% of covered payroll) made on or after January 1, 2004.

Net employer contribution rates: The rate funded by employer contributions, consisting of the base employer contribution rate minus the effect of side account rate offsets.

Normal cost: The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

Oregon Public Service Retirement Plan (OPSRP) Pension Program: The program covering members hired on or after August 29, 2003.

Rate collar: A methodology that limits the maximum allowable period-to-period change in employer contribution rates. The width of the rate collar is determined by the current contribution rate and funded status.

Side accounts: Side accounts are established for employers who make supplemental payments (a lump-sum payment in excess of the required employer contribution). For State and Local Government Rate Pool (SLGRP) employers, this supplemental payment is first applied toward the employer's transition liability, if any, with the remainder going into a side account. Side accounts are treated as pre-paid contributions. Employer contribution rates are first determined excluding side accounts (base employer contribution rate). Then, an amortized portion of the side account is used to offset the contribution otherwise required for each individual employer that has a side account (net employer contribution rate). While side accounts are excluded from valuation assets in determining contribution rates for pools and non-pooled employers, side accounts are included in valuation assets for financial reporting purposes such as the reporting of funded status.

Total liability: The net present value of all projected future benefits attributable to all anticipated service (past *and* future) for current active and inactive members.

Tier One: The pension program covering members hired before January 1, 1996.

Tier Two: The pension program covering members hired from January 1, 1996 through August 28, 2003.

Unfunded actuarial liability (UAL): The excess of the actuarial accrued liability over the actuarial value of assets. The UAL is amortized over a fixed period of time to determine the UAL rate component of employer contribution rates.

Resources

Customer Service (Monday-Friday, 8:30 a.m. to 5 p.m.): 888-320-7377

PERS website: www.Oregon.gov/pers

PERS Facts: http://www.oregon.gov/PERS/docs/general_information/pers_facts.pdf

Online Member Services (secure site for benefit estimates and more):

https://orion.pers.state.or.us/SelfService/viewPage?component=/mhome.jsp&dialog_id=DState_44&mode=MBR

Actuarial/Financial information:

http://www.oregon.gov/pers/Pages/section/financial_reports/financials.aspx

PERS Board:

http://www.oregon.gov/pers/Pages/section/board_information/board_information_index.aspx

Tier One/Tier Two

Ready to retire: http://www.oregon.gov/pers/mem/pages/section/form/tier_retire.aspx

A-Z Quick Answers: http://apps.pers.state.or.us/pers238/a-z_project_chapter_238.htm

Education sessions:

http://www.oregon.gov/pers/mem/pages/section/education_sessions/2014index.aspx

OPSRP

Ready to retire: http://www.oregon.gov/pers/mem/pages/section/form/OPSRP_retire.aspx

A-Z Quick Answers: http://apps.pers.state.or.us/opsrp/a-z_project_chapter_238a.htm

Education sessions:

http://www.oregon.gov/pers/mem/pages/section/education_sessions/early_career/2014_opsrp_ec_sessions.aspx

Retired members

Online Member Services (secure site to change your address, see benefit payment information, and view/request 1099Rs):

https://orion.pers.state.or.us/SelfService/viewPage?component=/mhome.jsp&dialog_id=DState_44&mode=MBR

A-Z Quick Answers (Tier One/Tier Two retirees): <http://apps.pers.state.or.us/238retirees/Default.htm>

A-Z Quick Answers (OPSRP retirees):

http://apps.pers.state.or.us/opsrpretirees/a-z_project_chapter_238a_retirees.htm

Working after retirement for a PERS-covered employer:

http://www.oregon.gov/pers/RET/pages/section/work_after_retirement/work_after.aspx

PERS Health Insurance Program:

http://www.oregon.gov/pers/RET/Pages/section/health_insurance_program/hip_info.aspx