Funded Status

We report a plan's funded status by comparing the plan's current assets to the present value of earned pensions of its members. Funded status can vary significantly from plan to plan, depending on the assumptions and methods used to determine the plan's assets and liabilities. For this valuation report, we present two funded status measures.

The first measures of funded status compare the Actuarial Value of Assets (AVA) to both Entry Age Normal (EAN) and Projected Unit Credit (PUC) liabilities calculated using a long-term interest assumption. The second measures of funded status compare the Market Value of Assets (MVA) to EAN and PUC liabilities calculated using a short-term interest assumption. The next sections describe these measures in more detail and display the resulting funded statuses by plan. Please see the **Glossary** for an explanation of the EAN and PUC actuarial cost methods.

Funded Status on an Actuarial Value Basis

We report the funded status on an actuarial value basis as the ratio of the AVA to both EAN and PUC liabilities calculated using the 7.8 percent valuation interest rate assumption (7.5 percent for the Law Enforcement Officers' and Fire Fighters' [LEOFF] Retirement Plan 2). We assume each plan is ongoing and, therefore, we use the same long-term assumptions to develop the liabilities as we used for determining the contribution requirements of the plan. We don't expect the assumptions to match actual experience over short-term periods. However, we do expect these assumptions to reasonably approximate average annual experience over long-term periods. This measure of funded status is consistent with the state's current funding policy and financing plan for future retirement benefits.

We use an asset valuation method to determine the AVA. This asset valuation method smooths the inherent volatility in the MVA by deferring a portion of annual investment gains or losses for a certain number of years. Investment gains and losses occur when the annual return on investments varies from the long-term assumed rate. To determine the 2014 investment gains or losses, we used an investment return assumption of 7.8 percent (7.5 percent for LEOFF 2). The AVA provides a more stable measure of the plan's assets on an ongoing basis.

We used the EAN cost method to determine the present value of earned pensions. Comparing the EAN liabilities to the AVA on the valuation date provides an appropriate measure of a plan's funded status and is acceptable according to current Governmental Accounting Standards Board (GASB) Statements 67 and 68. GASB Statements 67 and 68 became effective after June 15, 2015, replaced the prior GASB Statements, and require use of the EAN method for accounting purposes. We begin reporting the EAN funded status with the *June 30, 2014, Actuarial Valuation Report*.

We also used the PUC cost method to determine the present value of earned pensions. We present PUC funded status in the 2014 actuarial valuation so readers may track funding progress from last year, where we used this same measure. We plan to eliminate PUC funded status reporting when we publish 2015 actuarial valuation results.

The EAN and PUC liabilities are discounted to the valuation date using the valuation interest rate to determine the present value (today's value). The valuation interest rate is consistent with the long-term expected return on invested contributions.

The next tables display the funded status on an actuarial value basis for each plan.

Entry Age Normal Funded Status on an Actuarial Value Basis*

(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
EAN Liability	$12,720	$29,321	$9,250	$9,819	$3,965	$291	$4,323	$8,051	$1,041	$78,782
Valuation Assets	$7,761	$26,386	$6,353	$9,193	$3,624	$278	$5,499	$8,638	$1,044	$68,777
Unfunded Liability	$4,959	$2,935	$2,897	$626	$341	$13	($1,177)	($587)	($3)	$10,005
Funded Ratio										
2014	**61%**	**90%**	**69%**	**94%**	**91%**	**96%**	**127%**	**107%**	**100%**	**87%**

Note: Totals may not agree due to rounding.

**Liabilities valued using the EAN cost method at an interest rate of 7.8% (7.5% for LEOFF 2). All assets have been valued under the actuarial asset method.*

Projected Unit Credit Funded Status on an Actuarial Value Basis*										
(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
PUC Liability	$12,727	$26,172	$9,266	$8,843	$3,598	$225	$4,323	$7,618	$1,010	$73,781
Valuation Assets	$7,761	$26,386	$6,353	$9,193	$3,624	$278	$5,499	$8,638	$1,044	$68,777
Unfunded Liability	$4,965	($214)	$2,913	($350)	($26)	($54)	($1,176)	($1,020)	($34)	$5,004
Funded Ratio										
2014	**61%**	**101%**	**69%**	**104%**	**101%**	**124%**	**127%**	**113%**	**103%**	**93%**
2013**	63%	102%	71%	105%	102%	124%	125%	115%	105%	94%
2012	69%	111%	79%	114%	110%	134%	135%	119%	114%	101%
2011**	71%	112%	81%	113%	110%	132%	135%	119%	115%	101%
2010***	74%	113%	84%	116%	113%	129%	127%	119%	118%	102%
2009**	70%	116%	75%	118%	116%	128%	125%	128%	119%	99%
2008**	71%	119%	77%	125%	121%	127%	128%	133%	121%	100%
2007**	71%	120%	76%	130%	126%	120%	123%	129%	118%	99%
2006**	74%	121%	80%	133%	125%	99%	117%	116%	114%	100%
2005**	74%	127%	80%	134%	122%	N/A	114%	114%	113%	99%
2004	81%	134%	88%	153%	137%	N/A	109%	117%	118%	105%
2003	82%	142%	89%	155%	138%	N/A	112%	125%	123%	107%
2002	92%	158%	98%	182%	169%	N/A	119%	137%	135%	118%
2001**	97%	179%	100%	197%	197%	N/A	129%	154%	147%	126%
2000**	98%	190%	100%	196%	170%	N/A	136%	161%	152%	131%
1999	93%	189%	93%	188%	N/A	N/A	125%	154%	159%	124%
1998	86%	191%	86%	185%	N/A	N/A	117%	160%	147%	116%
1997**	83%	187%	82%	181%	N/A	N/A	108%	155%	140%	109%
1996	73%	157%	70%	144%	N/A	N/A	89%	130%	128%	92%
1995	68%	150%	65%	136%	N/A	N/A	80%	126%	119%	85%
1994**	67%	142%	65%	130%	N/A	N/A	68%	124%	110%	80%
1993	70%	142%	62%	126%	N/A	N/A	68%	127%	110%	79%
1992	67%	139%	59%	127%	N/A	N/A	65%	128%	108%	75%
1991	67%	149%	59%	131%	N/A	N/A	66%	154%	106%	75%
1990	66%	154%	60%	140%	N/A	N/A	65%	153%	105%	74%
1989**	65%	162%	58%	144%	N/A	N/A	65%	158%	103%	73%
1988	66%	165%	59%	143%	N/A	N/A	66%	153%	102%	72%
1987	71%	175%	58%	135%	N/A	N/A	69%	157%	95%	74%
1986	63%	162%	50%	125%	N/A	N/A	57%	142%	87%	63%

Note: Totals may not agree due to rounding.

**Liabilities valued using the PUC cost method at an interest rate of 7.8% (7.5% for LEOFF 2). All assets have been valued under the actuarial asset method.*
***Assumptions changed.*
****LEOFF 2 values for 2010 were updated after the 2010 AVR was published.*

The present value of actuarial liabilities is sensitive to the interest rate assumption. The following tables show how the funded status changes when we use different interest rate assumptions. We calculated liabilities using varying interest rates to show this sensitivity.

Entry Age Normal Funded Status at a 1% Lower Interest Rate Assumption*

(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
EAN Liability	$13,813	$33,934	$10,042	$11,461	$4,562	$355	$4,738	$9,404	$1,191	$89,500
Valuation Assets	$7,761	$26,386	$6,353	$9,193	$3,624	$278	$5,499	$8,638	$1,044	$68,777
Unfunded Liability	$6,052	$7,548	$3,689	$2,268	$938	$77	($761)	$766	$146	$20,723
Funded Ratio										
2014	**56%**	**78%**	**63%**	**80%**	**79%**	**78%**	**116%**	**92%**	**88%**	**77%**

Note: Totals may not agree due to rounding.

**Liabilities valued using the EAN cost method at an interest rate of 6.8% (6.5% for LEOFF 2). All assets have been valued under the actuarial asset method.*

Projected Unit Credit Funded Status at a 1% Lower Interest Rate Assumption*

(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
PUC Liability	$13,831	$30,478	$10,066	$10,470	$4,167	$280	$4,740	$9,077	$1,162	$84,274
Valuation Assets	$7,761	$26,386	$6,353	$9,193	$3,624	$278	$5,499	$8,638	$1,044	$68,777
Unfunded Liability	$6,070	$4,092	$3,714	$1,277	$544	$2	($759)	$439	$118	$15,497
Funded Ratio										
2014	**56%**	**87%**	**63%**	**88%**	**87%**	**99%**	**116%**	**95%**	**90%**	**82%**
2013	57%	87%	65%	88%	88%	99%	114%	96%	91%	82%
2012	64%	96%	73%	97%	95%	108%	124%	100%	100%	89%
2011	65%	96%	75%	96%	95%	106%	123%	100%	100%	89%
2010**	68%	96%	78%	97%	96%	103%	116%	99%	102%	90%
2009	64%	99%	69%	99%	99%	102%	114%	107%	103%	87%
2008	65%	100%	70%	104%	103%	101%	117%	111%	105%	88%
2007	65%	101%	70%	108%	107%	95%	111%	107%	102%	87%

Note: Totals may not agree due to rounding.

**Liabilities valued using the PUC cost method at an interest rate of 6.8% (6.5% for LEOFF 2). All assets have been valued under the actuarial asset method.*

***LEOFF 2 values for 2010 were updated after the 2010 AVR was published.*

Entry Age Normal Funded Status at a 1% Higher Interest Rate Assumption*

(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
EAN Liability	$11,776	$25,549	$8,567	$8,486	$3,474	$241	$3,967	$6,952	$920	$69,930
Valuation Assets	$7,761	$26,386	$6,353	$9,193	$3,624	$278	$5,499	$8,638	$1,044	$68,777
Unfunded Liability	$4,015	($838)	$2,214	($707)	($150)	($38)	($1,532)	($1,686)	($124)	$1,153
Funded Ratio										
2014	**66%**	**103%**	**74%**	**108%**	**104%**	**116%**	**139%**	**124%**	**114%**	**98%**

Note: Totals may not agree due to rounding.

**Liabilities valued using the EAN cost method at an interest rate of 6.8% (6.5% for LEOFF 2). All assets have been valued under the actuarial asset method.*

Projected Unit Credit Funded Status at a 1% Higher Interest Rate Assumption*

(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
PUC Liability	$11,774	$22,736	$8,576	$7,569	$3,139	$183	$3,967	$6,479	$889	$65,312
Valuation Assets	$7,761	$26,386	$6,353	$9,193	$3,624	$278	$5,499	$8,638	$1,044	$68,777
Unfunded Liability	$4,013	($3,650)	$2,223	($1,624)	($485)	($95)	($1,533)	($2,159)	($155)	($3,465)
Funded Ratio										
2014	**66%**	**116%**	**74%**	**121%**	**115%**	**152%**	**139%**	**133%**	**117%**	**105%**
2013	68%	118%	77%	123%	117%	153%	137%	135%	120%	106%
2012	74%	128%	85%	133%	126%	162%	146%	140%	129%	113%
2011	76%	129%	87%	133%	127%	161%	146%	140%	130%	113%
2010**	80%	130%	91%	136%	130%	157%	139%	141%	133%	115%
2009	76%	135%	82%	140%	134%	158%	137%	152%	135%	112%
2008	77%	139%	84%	149%	141%	157%	141%	159%	137%	113%
2007	77%	141%	84%	155%	148%	149%	135%	154%	134%	112%

Note: Totals may not agree due to rounding.

**Liabilities valued using the PUC cost method at an interest rate of 8.8% (8.5% for LEOFF 2). All assets have been valued under the actuarial asset method.*

***LEOFF 2 values for 2010 were updated after the 2010 AVR was published.*

Funded Status on a Market Value Basis

We report funded status on a market value basis as the ratio of the MVA to the EAN and PUC liabilities calculated using a 5 percent interest rate assumption. The funded status on a market value basis provides a measure of the plan's health if the plan is "settled" or "immunized" on the valuation date. Immunizing a pension plan means attaching assets to liabilities so the assets maturing each year match the expected pension payments due from the pension plan each year. A plan can be settled by purchasing annuities on the open market for each member, or immunized by investing the assets in bonds with payment streams that match the expected benefit payments. Expected benefit payments would include growth for future salary inflation, which is why we have used the EAN and PUC liability measures instead of purely accrued liability measures.

Because most of the Washington State plans covered in this valuation report are open and ongoing, we only present the market value funded status for the closed Plans 1. Although the Plans 1 are closed to new members, they are not settled and have not been immunized. However, there is an opportunity to immunize these plans in the future. They are considered ongoing plans because current annuitants continue to receive their benefits from the retirement trust fund, and current active members continue to accrue benefits under the plan. However, because the plans are closed to new members, the future benefit payments are more predictable, have a shorter duration, and would be easier to immunize. The decision to settle or immunize the Plans 1 is complex and would require additional actuarial analysis and information that is outside the scope of this report.

The tables below display the market value funded status for each plan as described above.

Entry Age Normal Funded Status on a Market Value Basis*

(Dollars in Millions)	PERS Plan 1	TRS Plan 1	LEOFF Plan 1
Entry Age Normal Liability	$16,266	$11,821	$5,687
Market Value of Assets	7,942	6,494	5,719
Unfunded Liability	$8,324	$5,326	($32)
Funded Ratio			
2014	**49%**	**55%**	**101%**

Note: Totals may not agree due to rounding.

**Liabilities have been valued using an interest rate of 5% while assets are their market value. The 5% interest rate approximates the "risk-free" rate of return on assets while maintaining consistency with the 3% inflation assumption used to project future benefit payments. This method was not used to determine contribution requirements.*

Projected Unit Credit Funded Status on a Market Value Basis*			
(Dollars in Millions)	**PERS Plan 1**	**TRS Plan 1**	**LEOFF Plan 1**
Projected Unit Credit Liability	$16,322	$11,871	$5,694
Market Value of Assets	7,942	6,494	5,719
Unfunded Liability	$8,380	$5,377	($25)
Funded Ratio			
2014	**49%**	**55%**	**100%**
2013	44%	50%	88%
2012	47%	54%	91%
2011	51%	58%	95%
2010	49%	56%	82%
2009	43%	46%	76%
2008	60%	65%	107%
2007	66%	70%	114%
2006	64%	67%	102%
2005	61%	63%	94%
2004	59%	60%	82%

Note: Totals may not agree due to rounding.

**Liabilities have been valued using an interest rate of 5% while assets are their market value. The 5% interest rate approximates the "risk-free" rate of return on assets while maintaining consistency with the 3% inflation assumption used to project future benefit payments. This method was not used to determine contribution requirements. Prior to 2011, liabilities were valued at 5.5%.*

Both funded status measures vary based on the measurement (valuation) date and the market conditions on that date. The market value measure, however, is more volatile because the asset value has no smoothing and the ability to immunize the plan depends on current bond and annuity purchase rates.