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January 28, 2014

VIA E-MAIL

Debra Hembree
Actuarial Services Coordinator
Oregon PERS

Re: 2013 Purchasing Power Study

Dear Debra:

As requested, we updated the annual purchasing power study for 2013 to compare how well monthly benefits paid to retirees and beneficiaries have kept up with inflation since retirement. Since the last study, the Consumer Price Index for Portland increased 2.31% in 2012. In accordance with Senate Bill 822 of the 2013 Legislative Session, all Tier 1/Tier 2 participants received a 1.50% annual cost-of-living adjustment in August 2013, experiencing a decrease in purchasing power over the year.

Purchasing power in this report is defined as the cumulative post-retirement benefit increases in Tier 1/Tier 2 benefits compared to the cumulative CPI increases since the year of retirement. The chart below shows the change in purchasing power from 2012 to 2013 by year of retirement.

Year Retired	Purchasing Power 2012	Purchasing Power 2013
8/1/1980 – 7/1/1981 & prior	76.5%	75.9%
8/1/1981 – 7/1/1982	79.2%	78.5%
8/1/1982 – 7/1/1983	81.2%	80.5%
8/1/1983 – 7/1/1984	81.3%	80.7%
8/1/1984 – 7/1/1985	79.1%	78.5%
8/1/1985 – 7/1/1986	78.1%	77.5%
8/1/1986 – 7/1/1987	79.0%	78.4%
8/1/1987 – 7/1/1988	79.0%	78.4%
8/1/1988 – 7/1/1989	79.4%	78.8%
8/1/1989 – 7/1/1990	80.5%	79.9%
8/1/1990 – 7/1/1991	82.9%	82.2%
8/1/1991 – 7/1/1992	86.0%	85.3%
8/1/1992 – 7/1/1993	88.6%	87.9%
8/1/1993 – 7/1/1994	90.7%	90.0%
8/1/1994 – 7/1/1995	92.0%	91.3%
8/1/1995 – 7/1/1996	92.8%	92.1%
8/1/1996 – 7/1/1997	93.6%	92.9%

Year Retired	Purchasing Power 2012	Purchasing Power 2013
8/1/1997 – 7/1/1998	95.0%	94.3%
8/1/1998 – 7/1/1999	96.2%	95.5%
8/1/1999 – 7/1/2000	96.2%	95.5%
8/1/2000 – 7/1/2001	97.2%	96.4%
8/1/2001 – 7/1/2002	97.2%	96.4%
8/1/2002 – 7/1/2003	97.2%	96.4%
8/1/2003 – 7/1/2004	97.2%	96.4%
8/1/2004 – 7/1/2005	97.2%	96.4%
8/1/2005 – 7/1/2006	97.7%	97.0%
8/1/2006 – 7/1/2007	98.3%	97.5%
8/1/2007 – 7/1/2008	98.9%	98.1%
8/1/2008 – 7/1/2009	99.2%	98.4%
8/1/2009 – 7/1/2010	99.2%	98.4%
8/1/2010 – 7/1/2011	99.2%	98.4%
8/1/2011 – 7/1/2012	99.2%	98.4%
8/1/2012 – 7/1/2013	100.0%	99.2%

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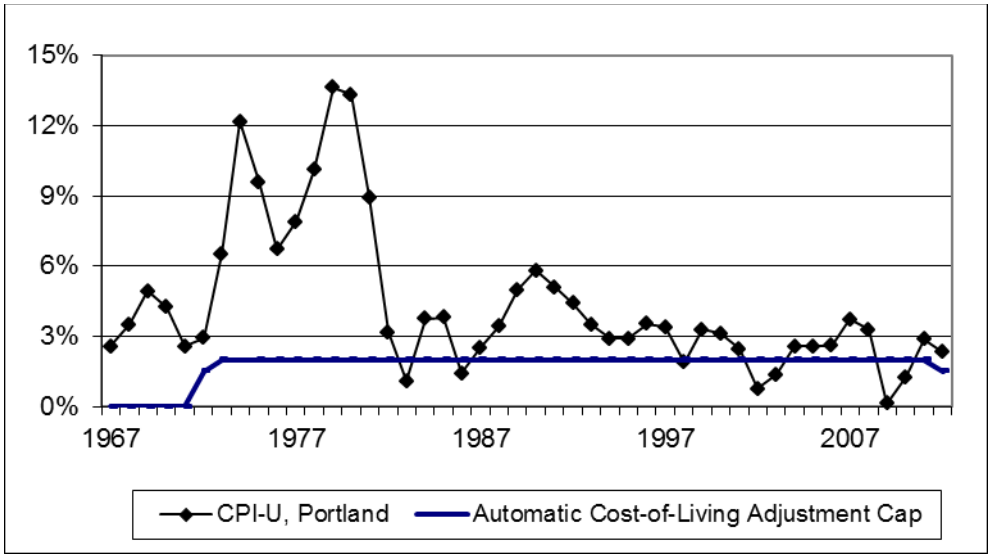
Inflation

In 2013 an automatic cost-of-living adjustment (COLA) of 1.5 percent was granted to retirees and beneficiaries. Prior to 2013, cost-of-living adjustments (COLAs) were automatically granted each year to retirees and beneficiaries up to a maximum of 2 percent based on the Consumer Price Index for Portland (defined by All Items, All Urban Consumers, Portland-Salem, OR-WA, Annual Average) as released by the Department of Labor. If the Consumer Price Index for Portland (CPI – Portland) exceeded 2 percent, then the retiree received a 2 percent COLA and the remaining percentage was carried forward in a "bank" to be used in future years when the CPI-Portland was less than 2 percent. Retirees who had recently retired, and did not have a "bank" balance, received a COLA equal to the CPI-Portland amount if less than 2 percent, otherwise they received 2 percent. With the enactment of Senate Bills 822 and 861, the COLA "bank" methodology is no longer applicable, as the annual COLA level is set without regard to current or historic CPI.

The graph below page shows the CPI-Portland compared to the automatic cost-of-living adjustment cap each year.



The automatic COLA was established in 1972, and there have only been seven years (1983, 1986, 1998, 2002, 2003, 2009 and 2010) when inflation has been below the COLA cap. Consequently, retiree benefits have tended to lose their purchasing power. Attachment A shows the history of increases in CPI-Portland from 1962 through 2012.

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The historical COLA amounts granted to retirees and beneficiaries are shown below:

Date	COLA	Exceptions
July 1972	1.5%	
July 1973 – July 2012	2.0% (maximum COLA)	1.08% in 1984 if retired on or after August 1983 1.41% in 1987 if retired on or after August 1986 1.89% in 1999 if retired on or after August 1998 1.24% in 2003 if retired on or after August 2001 and prior to August 2002 0.77% in 2003 if retired on or after August 2002 1.36% in 2004 if retired on or after August 2001 and prior to August 2004 1.73% in 2004 if retired on or after August 2000 and prior to August 2001 1.40% in 2010 if retired on or after August 2008 and prior to August 2009 0.12% in 2010 if retired on or after August 2009 and prior to August 2010 1.25% in 2011 if retired on or after August 2008 and prior to August 2011
July 2013	1.5%	

Benefit Increases

From April 1964 through December 1971 there were some one-time additional payments granted to retirees. These payments are not included in this analysis as they did not affect the ongoing benefit paid to the retiree. A summary of the one-time payments follows:

Effective Date	One Time Payment Amount
April 1964	Monthly Benefit
April 1965	1.5 × Monthly Benefit
April 1966, April 1967	2 × Monthly Benefit
April 1968, April 1969, April 1970, April 1971	3 × Monthly Benefit
December 1971	3.5 × Monthly Benefit

In addition, retirees and beneficiaries have been granted ad hoc benefit increases that resulted in increased monthly benefits going forward. A summary of the ad hoc increases granted by legislation is shown below, with the graded increases shown on Attachment B.

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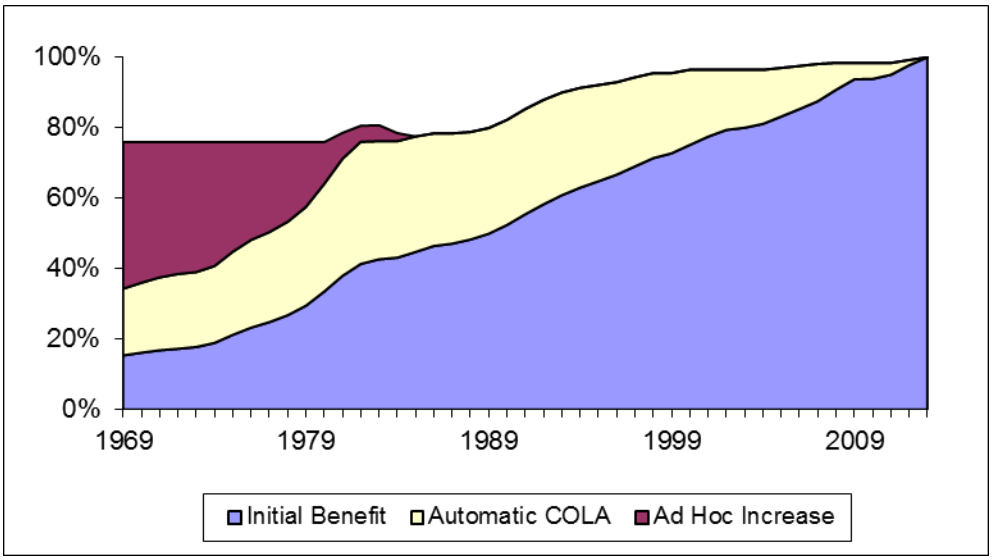
Effective Date	Ad Hoc Increase Granted by Legislation
January 1972	25% if retired prior to January 1968 12% if retired after December 1967 and prior to January 1972
January 1974	25% if retired prior to January 1968 20% if retired after December 1967 and prior to January 1972 12% if retired after December 1971 and prior to January 1974
October 1977	25% on first $50 of monthly benefit 15% on next $100 10% on next $100 5% on next $100 and 1% on monthly benefit over $350
July 1979	2% for all retirees
July 1980	2% for all retirees
August 1981	Graded table by year of retirement to 11.40%
July 1982	Graded table by year of retirement to 11.40%
July 1985	Graded table by year of retirement to 7.28%
July 1986	Graded table by year of retirement to 7.28%
July 1989	Graded table by year of retirement to produce a 95% replacement of original purchasing power

Current Purchasing Power

The current purchasing power of retirees depends on both the automatic COLA increases and the ad hoc increases granted, compared to the growth in the CPI over the same time period. The graph below shows the cumulative effects of increases granted as a percentage of a benefit adjusted by CPI by year of retirement.



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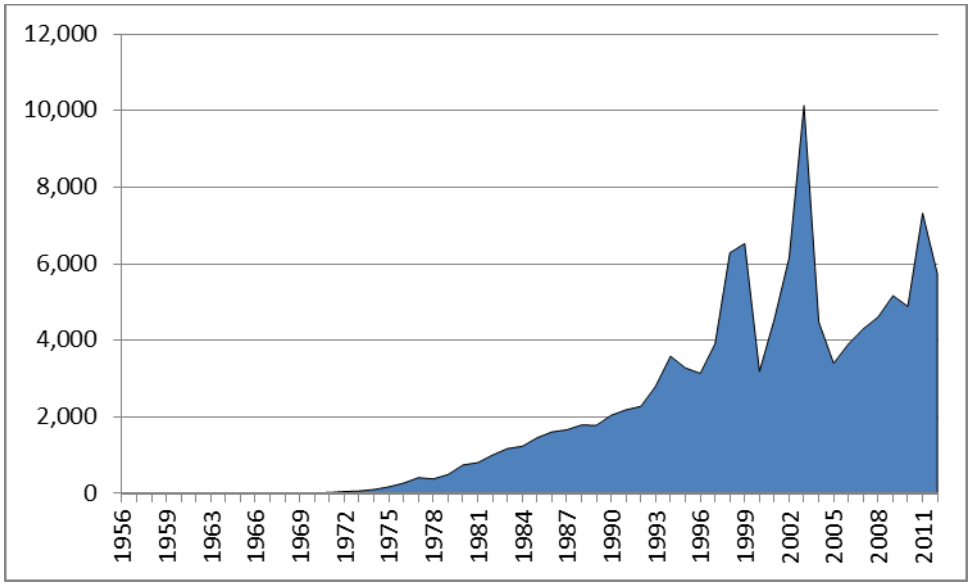
As shown in the graph above, for long-time retired members, the majority of the increases in their benefits since retirement have come from ad hoc increases. Retirees who retired within the past 28 years have not received any ad hoc increases. However, inflation has been significantly lower than in the late 1970's, and the automatic COLA increases have tracked changes in CPI more closely. Purchasing power for retirees since 1993 has remained within 90 percent of their original purchasing power.

The following graph shows the distribution of retirees and beneficiaries, from the December 31, 2012 actuarial valuation, by year of retirement. As shown in the graph below, a vast majority of retirees and beneficiaries have retired within the last 28 years and have not received any ad hoc increases. However, as their COLAs have tracked more closely with CPI, their purchasing power has remained higher than long-time retired members who have received ad hoc increases. For retirees/beneficiaries retired in the last 28 years, the average purchasing power is 94.1% compared to the average purchasing power of 78.0% for those retired more than 28 years ago.



Attachment C compares the cumulative post-retirement benefit increases in Tier 1/Tier 2 benefits to the cumulative CPI increases for the last 44 years. The middle columns show the level to which an initial benefit of $100 per month would have risen, based on CPI increases and increases granted through PERS. The columns on the right show the percentage of the original $100 benefit and the PERS-adjusted benefit as a percentage of the CPI-adjusted benefit.

For example, a 1969 retiree with an original benefit of $100 per month would need to be receiving $650.13 per month now to have kept pace with inflation. Benefit increases granted through PERS increased the $100 per month benefit to $493.45 per month. The original benefit of $100 per month is 15.4% of the CPI-adjusted benefit and the PERS-adjusted benefit of $493.45 is 75.9% of the CPI-adjusted benefit.

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Our analysis and conclusions are based on the data, methods and assumptions described above. Differences in the methods and assumptions may produce different results.

Calculations presented in this letter are for purposes of illustrating how well benefits paid to PERS retirees and beneficiaries have kept up with inflation since retirement. As such, they cannot be relied upon for other purposes, and calculations for purposes other than this use may be significantly different from the results contained in this letter. Accordingly, additional determinations may be needed for other purposes.

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No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

If you have any questions about the purchasing power report or need any additional information, please let us know

Sincerely,

Matt R. Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

encl.

cc: Steve Rodeman
Scott Preppernau

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ATTACHMENT A

History of Consumer Price Index — Portland

Year	CPI 1967 Basis	CPI 1982-84 Basis	Annual Percentage Increase
1962	88.5		
1963	90.2		1.92%
1964	92.2		2.22%
1965	94.6		2.60%
1966	97.5		3.07%
1967	100.0		2.56%
1968	103.5		3.50%
1969	108.6		4.93%
1970	113.2		4.24%
1971	116.1		2.56%
1972	119.5		2.93%
1973	127.3		6.53%
1974	142.8		12.18%
1975	156.5		9.59%
1976	167.0		6.71%
1977	180.2		7.90%
1978	198.4		10.10%
1979	225.4		13.61%
1980	255.4		13.31%
1981	278.2		8.93%
1982	287.0		3.16%
1983	290.1		1.08%
1984	301.0		3.76%
1985	312.4		3.79%
1986	316.8	108.2	1.41%
1987	324.7	110.9	2.50%

Year	CPI 1982-84 Basis	Annual Percentage Increase
1988	114.7	3.43%
1989	120.4	4.97%
1990	127.4	5.81%
1991	133.9	5.10%
1992	139.8	4.41%
1993	144.7	3.51%
1994	148.9	2.90%
1995	153.2	2.89%
1996	158.6	3.52%
1997	164.0	3.40%
1998	167.1	1.89%
1999	172.6	3.29%
2000	178.0	3.13%
2001	182.4	2.47%
2002	183.8	0.77%
2003	186.3	1.36%
2004	191.1	2.58%
2005	196.0	2.56%
2006	201.1	2.60%
2007	208.6	3.71%
2008	215.4	3.28%
2009	215.6	0.12%
2010	218.3	1.25%
2011	224.6	2.86%
2012	229.8	2.31%

Source: U.S. Department of Labor, Bureau of Labor Statistics
Consumer Price Index, All Items, All Urban Consumers, Portland-Salem, OR-WA, Annual Average

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ATTACHMENT B

Year Retired	Ad Hoc Adjustments by Effective Year				
	1981	1982	1985	1986	1989
1950	11.40	11.40	7.28	7.28	18.00
1951	10.64	10.64	7.28	7.28	19.00
1952	10.56	10.56	7.28	7.28	10.00
1953	10.16	10.16	7.28	7.28	8.00
1954	10.04	10.04	7.28	7.28	8.00
1955	10.00	10.00	7.25	7.25	7.00
1956	9.68	9.68	7.06	7.06	9.00
1957	9.28	9.28	6.82	6.82	9.00
1958	9.08	9.08	6.70	6.70	5.00
1959	8.96	8.96	6.62	6.62	3.00
1960	8.76	8.76	6.50	6.50	3.00
1961	8.64	8.64	6.42	6.42	2.00
1962	8.56	8.56	6.37	6.37	1.00
1963	8.32	8.32	6.22	6.22	1.00
1964	8.12	8.12	6.09	6.09	–
1965	7.88	7.88	5.94	5.94	–
1966	7.56	7.56	5.73	5.73	–
1967	7.36	7.36	5.60	5.60	–
1968	7.20	7.20	5.49	5.49	7.00
1969	6.88	6.88	5.28	5.28	4.00
1970	6.60	6.60	5.09	5.09	–
1971	6.36	6.36	4.93	4.93	–
1972	6.20	6.20	4.82	4.82	15.00
1973	5.92	5.92	4.63	4.63	14.00
1974	5.28	5.28	4.17	4.17	25.00
1975	4.92	4.92	3.92	3.92	15.00
1976	4.72	4.72	3.77	3.77	7.00
1977	4.44	4.44	3.57	3.57	3.00
1978	4.76	4.76	3.80	3.80	16.00
1979	4.32	4.32	3.48	3.48	11.00
1980	4.00	4.00	3.24	3.24	3.00
1981	–	4.00	3.09	3.09	–
1982		–	3.01	3.01	–
1983			3.00	3.00	–
1984			–	3.00	–
1985			–	–	–
1986				–	–
1987					–
1988					–
1989					–

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ATTACHMENT C

Comparison of Tier 1/Tier 2 Benefits to CPI at August, 2013

Year Retired	Number of Years	Cumulative Increase		Purchasing Power	
		CPI	Tier 1/Tier 2	Initial	Tier 1/Tier 2
8/1/1969-7/1/1970	44	650.13	493.45	15.4%	75.9%
8/1/1970-7/1/1971	43	619.58	470.27	16.1%	75.9%
8/1/1971-7/1/1972	42	594.38	451.14	16.8%	75.9%
8/1/1972-7/1/1973	41	579.54	439.88	17.3%	75.9%
8/1/1973-7/1/1974	40	563.05	427.36	17.8%	75.9%
8/1/1974-7/1/1975	39	528.53	401.16	18.9%	75.9%
8/1/1975-7/1/1976	38	471.15	357.61	21.2%	75.9%
8/1/1976-7/1/1977	37	429.92	326.31	23.3%	75.9%
8/1/1977-7/1/1978	36	402.89	305.79	24.8%	75.9%
8/1/1978-7/1/1979	35	373.39	283.40	26.8%	75.9%
8/1/1979-7/1/1980	34	339.14	257.41	29.5%	75.9%
8/1/1980-7/1/1981	33	298.51	226.57	33.5%	75.9%
8/1/1981-7/1/1982	32	263.44	206.90	38.0%	78.5%
8/1/1982-7/1/1983	31	241.85	194.77	41.3%	80.5%
8/1/1983-7/1/1984	30	234.44	189.18	42.7%	80.7%
8/1/1984-7/1/1985	29	231.93	181.97	43.1%	78.5%
8/1/1985-7/1/1986	28	223.53	173.23	44.7%	77.5%
8/1/1986-7/1/1987	27	215.37	168.80	46.4%	78.4%
8/1/1987-7/1/1988	26	212.37	166.45	47.1%	78.4%
8/1/1988-7/1/1989	25	207.19	163.22	48.3%	78.8%
8/1/1989-7/1/1990	24	200.32	160.05	49.9%	79.9%
8/1/1990-7/1/1991	23	190.84	156.91	52.4%	82.2%
8/1/1991-7/1/1992	22	180.36	153.84	55.4%	85.3%
8/1/1992-7/1/1993	21	171.61	150.82	58.3%	87.9%
8/1/1993-7/1/1994	20	164.36	147.86	60.8%	90.0%
8/1/1994-7/1/1995	19	158.78	144.96	63.0%	91.3%
8/1/1995-7/1/1996	18	154.31	142.12	64.8%	92.1%
8/1/1996-7/1/1997	17	149.98	139.33	66.7%	92.9%
8/1/1997-7/1/1998	16	144.88	136.60	69.0%	94.3%
8/1/1998-7/1/1999	15	140.11	133.79	71.4%	95.5%
8/1/1999-7/1/2000	14	137.51	131.30	72.7%	95.5%
8/1/2000-7/1/2001	13	133.13	128.39	75.1%	96.4%
8/1/2001-7/1/2002	12	129.09	124.48	77.5%	96.4%
8/1/2002-7/1/2003	11	125.98	121.47	79.4%	96.4%
8/1/2003-7/1/2004	10	125.02	120.54	80.0%	96.4%
8/1/2004-7/1/2005	9	123.34	118.93	81.1%	96.4%
8/1/2005-7/1/2006	8	120.24	116.59	83.2%	97.0%
8/1/2006-7/1/2007	7	117.24	114.31	85.3%	97.5%
8/1/2007-7/1/2008	6	114.27	112.07	87.5%	98.1%
8/1/2008-7/1/2009	5	110.18	108.42	90.8%	98.4%
8/1/2009-7/1/2010	4	106.68	104.95	93.7%	98.4%
8/1/2010-7/1/2011	3	106.55	104.82	93.9%	98.4%
8/1/2011-7/1/2012	2	105.24	103.53	95.0%	98.4%
8/1/2012-7/1/2013	1	102.31	101.50	97.7%	99.2%
8/1/2013-7/1/2014	0	100.00	100.00	100.0%	100.0%

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