Exhibit 7
As Filed

PENNSYLVANIA COMPENSATION RATING BUREAU

Tail Factors for Loss Development

For a given calendar year, the PCRB collects financial loss development data for the current policy year and the twenty-eight previous individual policy years. A single aggregate line of experience is reported for all older policy years combined.

Thus, the 2010 vs. 2011, 2011 vs. 2012, 2012 vs. 2013 and 2013 vs. 2014 valuations in the tail factor calculation will use Policy Year 1986 as the earliest separate policy year and an aggregate line of experience for Policy Years 1985 and prior.

The following discussion focuses on data with an earliest available policy year of 1978 for illustrative purposes. The discussion for data starting with later policy years would, however, be analogous.

Prior to 1995, the PCRB has computed incurred loss development for maturities older than Policy Year 1978 (i.e., the pre-1978 "tail") by comparing the total amount of dollar development in incurred losses occurring in a given calendar year to the incurred loss reported for Policy Year 1978 at the beginning of that same calendar period.

As part of the Insurance Department's examination of the Bureau, the actuarial firm retained to perform portions of that review commented that the PCRB's approach effectively assumed that each policy year prior to 1978 had the same amount of ultimate losses as did Policy Year 1978. Since policy year losses have tended to increase from year to year in response to benefit and price changes, changes in employment volume and other features affecting loss trends, this assumption was noted as understating the true tail in the PCRB's loss development analysis. The contractor recommended that for future filings the PCRB add a growth adjustment to its tail factor calculation.

In response to this recommendation the PCRB changed its derivation of tail factors for its 12/1/95 filing. That approach, used again for this filing, is applied separately for indemnity and medical loss experience and for each calendar year of experience, and outlined as follows:

1. A starting policy year loss amount based on the average reported incurred loss for Policy Years 1978-1980 was computed.

2. An annual loss inflation factor was selected based on observed changes in incurred losses by policy year for the older policy years having separate experience data reported.

3. A historical series of estimated incurred losses by policy year beginning with Policy Year 1977 was computed using the starting point from #1 and the selected inflation factor from #2.

4. A calendar year loss development factor was selected for Policy Year 1977 based on observed developments for the oldest years with actual separate experience available.

5. A rate of decline in calendar year loss development factors by policy year was then computed such that when the resulting series of loss development factors was applied to the historical series of estimated incurred losses in #3, the total implied dollar amount of loss development for the calendar year balanced to the observed amount of development on policy years prior to 1978.

6. The "tail factor" applicable to maturities prior to Policy Year 1978 based on that calendar year of experience was then computed as the cumulative product of the series of loss development factors constructed in #5.

In general, this approach produced policy year incurred losses and loss development factors such that measurable development terminated for policy years in the mid- to early 1930's. Because the amount of calendar year development observed for policy years prior to 1978 varied considerably from year to year, some variations in the application of the initial selected loss development factor were necessary (i.e., whether the initial selection was applied to 1, 2 or 3 prior policy years before beginning the application of the selected rate of decline in loss development). In addition, the selected rates of decline in loss development factors vary from calendar year to calendar year in order to achieve the desired balance with observed calendar year development.

Recognizing the volatility of observed calendar year development for policy years prior to 1978 in the aggregate, the PCRB elected to use an experience period comprising four calendar years of loss development in computing indicated tail factors for this filing.

A summary exhibit on page 1 presents results of the tail development factor calculations. Following the summary page, eight exhibits presenting the derivation of indicated tail factors using the procedure outlined above are attached (four for indemnity and four for medical). These exhibits are numbered as pages 2 through 9 respectively.

SUMMARY OF LOSS DEVELOPMENT TAIL FACTOR CALCULATIONS

VALUATION	MATURITY	INDEMNITY Tail Factor	MEDICAL Tail Factor
13V14	27TH TO ULT.	1.0013	1.0321
12V13	27TH TO ULT.	1.0010	1.0063
11V12	27TH TO ULT.	1.0007	1.0112
10V11	27TH TO ULT.	1.0025	1.0447
AVERAGE OF LATEST 4 VALUATIONS		1.0014	1.0236

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Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Indemnity: 13v14

Latest 12/31 Prior to 1986 Incurred	4,510,830,559
Next Latest 12/31 Prior to 1986 Incurred	4,510,539,133
CY Development of Prior Yrs	291,426
Next Latest PY 1986 Incurred	689,843,922
# of 1986 Yrs in Prior Data	6.54
Selected Decrement, Development Factor	0.75
Selected Average PY Deflation Factor	0.95

1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
2 PY 1984 & Prior = Subsequent Yr x PY Deflation
3 1985 Development Selected Based on Observed 1986, 1987, 1988
4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0

TAIL =   1.0007   vs   1.0004   291,427
-1

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

INDEMNITY

Policy Year	(*=Estimate)	12/31/14 Incurred	Prior Year Development	Dollar Development	DF	
1943	*	54,361,604	1.000000	0	1.0000	#
1944	*	57,222,741	1.000000	0	1.0000	#
1945	*	60,234,465	1.000000	0	1.0000	#
1946	*	63,404,700	1.000000	0	1.0000	#
1947	*	66,741,789	1.000000	0	1.0000	#
1948	*	70,254,515	1.000000	0	1.0000	#
1949	*	73,952,121	1.000000	0	1.0000	#
1950	*	77,844,338	1.000000	1	1.0000	#
1951	*	81,941,408	1.000000	1	1.0000	#
1952	*	86,254,114	1.000000	1	1.0000	#
1953	*	90,793,804	1.000000	2	1.0000	#
1954	*	95,572,425	1.000000	2	1.0000	#
1955	*	100,602,553	1.000000	3	1.0000	#
1956	*	105,897,424	1.000000	5	1.0000	#
1957	*	111,470,973	1.000000	6	1.0000	#
1958	*	117,337,866	1.000000	9	1.0000	#
1959	*	123,513,543	1.000000	12	1.0000	#
1960	*	130,014,256	1.000000	17	1.0000	#
1961	*	136,857,112	1.000000	25	1.0000	#
1962	*	144,060,118	1.000000	34	1.0000	#
1963	*	151,642,229	1.000000	48	1.0000	#
1964	*	159,623,399	1.000000	68	1.0000	#
1965	*	168,024,630	1.000001	95	1.0000	#
1966	*	176,868,032	1.000001	134	1.0000	#
1967	*	186,176,876	1.000001	188	1.0000	#
1968	*	195,975,659	1.000001	263	1.0000	#
1969	*	206,290,167	1.000002	370	1.0000	#
1970	*	217,147,544	1.000002	519	1.0000	#
1971	*	228,576,362	1.000003	728	1.0000	#
1972	*	240,606,697	1.000004	1,022	1.0000	#
1973	*	253,270,208	1.000006	1,434	1.0000	#
1974	*	266,600,219	1.000008	2,013	1.0000	#
1975	*	280,631,809	1.000010	2,825	1.0000	#
1976	*	295,401,904	1.000013	3,965	1.0001	#
1977	*	310,949,373	1.000018	5,565	1.0001	#
1978	*	327,315,129	1.000024	7,811	1.0001	#

Policy Year	(*=Estimate)	12/31/14 Incurred	Prior Year Development	Dollar Development	DF	
1979	*	344,542,242	1.000032	10,963	1.0001	
1980	*	362,676,044	1.000042	15,386	1.0002	
1981	*	381,764,257	1.000057	21,594	1.0002	
1982	*	401,857,112	1.000075	30,307	1.0003	
1983	*	423,007,486	1.000101	42,535	1.0004	
1984	*	445,271,038	1.000134	59,696	1.0005	
1985	*	468,706,356	1.0001787800	83,780	1.0007	28TH TO ULT
1986		690,279,035	1.0006		1.0013	27TH TO ULT
1987		847,860,421	1.0006			
1988		961,627,777	1.0002			
1989		1,112,441,988	0.9995			
1990		1,139,411,250	1.0001	Total		
1991		990,678,997	1.0007	Development:		
1992		827,757,646	0.9995	291,427		
1993		716,684,623	1.0020			
1994		670,387,566	1.0003			
1995		573,498,655	1.0012			
1996		492,219,769	1.0003			
1997		518,013,717	0.9982			
1998		525,041,297	1.0015			
1999		580,637,849	1.0006			
2000		617,932,114	0.9993			
2001		638,063,949	1.0014			
2002		679,891,581	1.0011			
2003		658,954,843	1.0024			
2004		687,310,473	1.0018			
2005		698,027,140	1.0024			
2006		722,647,813	1.0036			
2007		753,662,299	1.0023			
2008		701,843,019	1.0035			
2009		630,594,303	1.0030			
2010		661,481,327	1.0329			
2011		627,544,086	1.0994			
2012		527,991,908	1.3805			
2013		401,628,735	3.4743			
2014		118,901,415				

Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Medical **13v14**

Latest 12/31 Prior to 1986 Incurred	1,433,690,292	
Next Latest 12/31 Prior to 1986 Incurred	1,428,732,571	1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
CY Development of Prior Yrs	4,957,721	2 PY 1984 & Prior = Subsequent Yr x PY Deflation
Next Latest PY 1986 Incurred	315,940,644	3 1985 Development Selected Based on Observed 1986, 1987, 1988
# of 1986 Yrs in Prior Data	4.54	4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0
Selected Decrement, Development Factor	0.75	
Selected Average PY Deflation Factor	0.93	

TAIL =	1.0257	vs	1.0157	4,957,721
				0

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

MEDICAL

Policy Year	(*=Estimate)	12/31/14 Incurred	Prior Year Development	Dollar Development	DF		Policy Year	(*=Estimate)	12/31/14 Incurred	Prior Year Development	Dollar Development	DF	
1943	*	11,237,717	1.000000	0	1.0000	#	1979	*	153,211,703	1.001132	173,192	1.0045	
1944	*	12,083,567	1.000000	1	1.0000	#	1980	*	164,743,767	1.001509	248,210	1.0061	
1945	*	12,993,082	1.000000	1	1.0000	#	1981	*	177,143,836	1.002012	355,679	1.0081	
1946	*	13,971,056	1.000000	1	1.0000	#	1982	*	190,477,243	1.002683	509,593	1.0108	
1947	*	15,022,641	1.000000	2	1.0000	#	1983	*	204,814,239	1.003577	729,948	1.0144	
1948	*	16,153,378	1.000000	2	1.0000	#	1984	*	220,230,365	1.004769	1,045,278	1.0192	
1949	*	17,369,223	1.000000	4	1.0000	#	1985	*	236,806,844	1.006358573	1,496,240	1.0257	28TH TO ULT
1950	*	18,676,584	1.000000	5	1.0000	#	1986		317,914,797	1.0062		1.0321	27TH TO ULT
1951	*	20,082,349	1.000000	7	1.0000	#	1987		425,892,630	1.0049			
1952	*	21,593,923	1.000000	10	1.0000	#	1988		519,162,407	1.0065			
1953	*	23,219,272	1.000001	15	1.0000	#	1989		625,849,135	1.0040			
1954	*	24,966,959	1.000001	21	1.0000	#	1990		652,834,267	1.0095			
1955	*	26,846,193	1.000001	30	1.0000	#	1991		608,180,906	1.0035	Total		
1956	*	28,866,874	1.000002	44	1.0000	#	1992		550,442,432	1.0055	Development:		
1957	*	31,039,650	1.000002	63	1.0000	#	1993		457,784,411	1.0110	4,957,721		
1958	*	33,375,967	1.000003	90	1.0000	#	1994		445,090,510	1.0086			
1959	*	35,888,137	1.000004	129	1.0000	#	1995		406,207,658	1.0037			
1960	*	38,589,394	1.000005	185	1.0000	#	1996		406,925,800	1.0134			
1961	*	41,493,973	1.000006	265	1.0000	#	1997		430,741,434	1.0065			
1962	*	44,617,175	1.000009	380	1.0000	#	1998		453,064,730	1.0045			
1963	*	47,975,457	1.000011	544	1.0000	#	1999		496,910,796	1.0144			
1964	*	51,586,513	1.000015	780	1.0001	#	2000		497,552,295	1.0079			
1965	*	55,469,368	1.000020	1,118	1.0001	#	2001		494,704,851	1.0047			
1966	*	59,644,482	1.000027	1,604	1.0001	#	2002		546,717,742	1.0176			
1967	*	64,133,852	1.000036	2,299	1.0001	#	2003		551,147,631	1.0104			
1968	*	68,961,131	1.000048	3,296	1.0002	#	2004		594,915,589	1.0121			
1969	*	74,151,754	1.000064	4,725	1.0003	#	2005		615,202,939	1.0112			
1970	*	79,733,068	1.000085	6,775	1.0003	#	2006		625,711,857	1.0222			
1971	*	85,734,482	1.000113	9,712	1.0005	#	2007		665,969,637	1.0104			
1972	*	92,187,615	1.000151	13,924	1.0006	#	2008		603,988,859	1.0064			
1973	*	99,126,468	1.000201	19,962	1.0008	#	2009		558,931,500	1.0145			
1974	*	106,587,600	1.000269	28,617	1.0011	#	2010		618,866,347	1.0139			
1975	*	114,610,323	1.000358	41,024	1.0014	#	2011		623,880,241	1.0331			
1976	*	123,236,906	1.000477	58,809	1.0019	#	2012		561,425,250	1.0714			
1977	*	132,512,802	1.000637	84,301	1.0025	#	2013		558,576,089				
1978	*	142,486,884	1.000849	120,836	1.0034	#	2014		253,691,478				

Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Indemnity: **12v13**

Latest 12/31 Prior to 1986 Incurred	4,786,422,894	
Next Latest 12/31 Prior to 1986 Incurred	4,785,732,069	1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
CY Development of Prior Yrs	690,825	2 PY 1984 & Prior = Subsequent Yr x PY Deflation
Next Latest PY 1986 Incurred	724,447,259	3 1985 Development Selected Based on Observed 1986, 1987, 1988
# of 1986 Yrs in Prior Data	6.61	4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0
Selected Decrement, Development Factor	0.75	
Selected Average PY Deflation Factor	0.95	

TAIL =	1.0010	vs	1.0010	690,825
				0

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

INDEMNITY

Policy Year	(*=Estimate)	12/31/13 Incurred	Prior Year Development	Dollar Development	DF		Policy Year	(*=Estimate)	12/31/13 Incurred	Prior Year Development	Dollar Development	DF
1942	*	86,154,410	1.000000	0	1.0000	#	1978	*	546,044,101	1.000034	18,516	1.0001
1943	*	90,688,852	1.000000	0	1.0000	#	1979	*	574,783,265	1.000045	25,987	1.0002
1944	*	95,461,950	1.000000	0	1.0000	#	1980	*	605,035,015	1.000060	36,473	1.0002
1945	*	100,486,263	1.000000	0	1.0000	#	1981	*	636,878,964	1.000080	51,189	1.0003
1946	*	105,775,013	1.000000	0	1.0000	#	1982	*	670,398,909	1.000107	71,843	1.0004
1947	*	111,342,119	1.000000	1	1.0000	#	1983	*	705,683,062	1.000143	100,828	1.0006
1948	*	117,202,231	1.000000	1	1.0000	#	1984	*	742,824,276	1.000191	141,506	1.0008
1949	*	123,370,769	1.000000	1	1.0000	#	1985	*	781,920,290	1.0002540455	198,593	1.0010	27TH TO ULT
1950	*	129,863,968	1.000000	1	1.0000	#	1986		725,182,614	1.0010		
1951	*	136,698,914	1.000000	2	1.0000	#	1987		877,078,060	0.9994		
1952	*	143,893,593	1.000000	3	1.0000	#	1988		996,920,347	0.9999		
1953	*	151,466,940	1.000000	4	1.0000	#	1989		1,158,437,660	1.0009		
1954	*	159,438,884	1.000000	5	1.0000	#	1990		1,186,746,571	1.0009		
1955	*	167,830,405	1.000000	8	1.0000	#	1991		1,039,274,399	0.9990	Total	
1956	*	176,663,584	1.000000	11	1.0000	#	1992		885,471,978	0.9992	Development:	
1957	*	185,961,667	1.000000	15	1.0000	#	1993		766,415,267	1.0011	690,825	
1958	*	195,749,123	1.000000	21	1.0000	#	1994		708,799,517	1.0025		
1959	*	206,051,709	1.000000	30	1.0000	#	1995		613,092,228	1.0009		
1960	*	216,896,536	1.000000	41	1.0000	#	1996		535,289,820	0.9998		
1961	*	228,312,143	1.000000	58	1.0000	#	1997		556,100,776	1.0014		
1962	*	240,328,571	1.000000	82	1.0000	#	1998		569,027,758	1.0005		
1963	*	252,977,443	1.000000	115	1.0000	#	1999		639,401,482	0.9997		
1964	*	266,292,046	1.000001	161	1.0000	#	2000		681,117,418	1.0015		
1965	*	280,307,417	1.000001	226	1.0000	#	2001		675,300,456	1.0051		
1966	*	295,060,439	1.000001	317	1.0000	#	2002		699,285,680	1.0020		
1967	*	310,589,935	1.000001	445	1.0000	#	2003		672,559,618	1.0022		
1968	*	326,936,774	1.000002	624	1.0000	#	2004		702,935,309	1.0050		
1969	*	344,143,973	1.000003	876	1.0000	#	2005		708,118,183	1.0025		
1970	*	362,256,813	1.000003	1,230	1.0000	#	2006		731,450,002	1.0068		
1971	*	381,322,961	1.000005	1,726	1.0000	#	2007		764,845,111	1.0000		
1972	*	401,392,591	1.000006	2,423	1.0000	#	2008		713,326,485	1.0089		
1973	*	422,518,517	1.000008	3,400	1.0000	#	2009		640,223,240	1.0291		
1974	*	444,756,333	1.000011	4,772	1.0000	#	2010		652,940,395	1.1100		
1975	*	468,164,561	1.000014	6,698	1.0001	#	2011		581,366,135	1.3937		
1976	*	492,804,802	1.000019	9,400	1.0001	#	2012		388,302,639	3.3336		
1977	*	518,741,896	1.000025	13,193	1.0001	#	2013		118,254,472			

Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Medical   12v13

Latest 12/31 Prior to 1986 Incurred	1,528,379,608
Next Latest 12/31 Prior to 1986 Incurred	1,526,420,124
CY Development of Prior Yrs	1,959,484
Next Latest PY 1986 Incurred	331,519,451
# of 1986 Yrs in Prior Data	4.61
Selected Decrement, Development Factor	0.75
Selected Average PY Deflation Factor	0.93

1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
2 PY 1984 & Prior = Subsequent Yr x PY Deflation
3 1985 Development Selected Based on Observed 1986, 1987, 1988
4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0

TAIL =	1.0063	vs	1.0059	1,959,484
				0

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

MEDICAL

Policy Year	(*=Estimate)	12/31/13 Incurred	Prior Year Development	Dollar Development	DF		Policy Year	(*=Estimate)	12/31/13 Incurred	Prior Year Development	Dollar Development	DF	
1942	*	16,677,804	1.000000	0	1.0000	#	1978	*	227,380,235	1.000210	47,645	1.0008	
1943	*	17,933,122	1.000000	0	1.0000	#	1979	*	244,494,877	1.000279	68,304	1.0011	
1944	*	19,282,927	1.000000	0	1.0000	#	1980	*	262,897,717	1.000373	97,917	1.0015	
1945	*	20,734,330	1.000000	0	1.0000	#	1981	*	282,685,717	1.000497	140,366	1.0020	
1946	*	22,294,979	1.000000	0	1.0000	#	1982	*	303,963,137	1.000662	201,208	1.0027	
1947	*	23,973,096	1.000000	1	1.0000	#	1983	*	326,842,082	1.000883	288,406	1.0035	
1948	*	25,777,522	1.000000	1	1.0000	#	1984	*	351,443,099	1.001178	413,364	1.0047	
1949	*	27,717,766	1.000000	1	1.0000	#	1985	*	377,895,806	1.0015701000	592,404	1.0063	27TH TO ULT
1950	*	29,804,049	1.000000	2	1.0000	#	1986		333,434,609	1.0058			
1951	*	32,047,365	1.000000	3	1.0000	#	1987		440,861,457	1.0099			
1952	*	34,459,532	1.000000	4	1.0000	#	1988		536,476,760	1.0109			
1953	*	37,053,260	1.000000	6	1.0000	#	1989		650,977,336	1.0055			
1954	*	39,842,215	1.000000	8	1.0000	#	1990		676,887,464	1.0066			
1955	*	42,841,092	1.000000	12	1.0000	#	1991		640,752,923	1.0101	Total		
1956	*	46,065,690	1.000000	17	1.0000	#	1992		586,149,650	1.0091	Development:		
1957	*	49,533,000	1.000000	25	1.0000	#	1993		490,017,752	1.0054	1,959,484		
1958	*	53,261,290	1.000001	35	1.0000	#	1994		466,939,664	1.0051			
1959	*	57,270,205	1.000001	51	1.0000	#	1995		433,686,738	1.0073			
1960	*	61,580,865	1.000001	73	1.0000	#	1996		431,311,608	1.0111			
1961	*	66,215,984	1.000002	104	1.0000	#	1997		456,569,044	1.0092			
1962	*	71,199,983	1.000002	150	1.0000	#	1998		494,827,392	1.0073			
1963	*	76,559,121	1.000003	214	1.0000	#	1999		528,718,215	1.0064			
1964	*	82,321,636	1.000004	307	1.0000	#	2000		541,438,177	1.0079			
1965	*	88,517,888	1.000005	441	1.0000	#	2001		519,499,955	1.0071			
1966	*	95,180,525	1.000007	632	1.0000	#	2002		552,365,217	1.0103			
1967	*	102,344,650	1.000009	906	1.0000	#	2003		559,053,388	1.0026			
1968	*	110,048,011	1.000012	1,299	1.0000	#	2004		603,230,387	1.0145			
1969	*	118,331,195	1.000016	1,862	1.0001	#	2005		619,384,306	1.0135			
1970	*	127,237,844	1.000021	2,670	1.0001	#	2006		622,858,959	1.0067			
1971	*	136,814,886	1.000028	3,827	1.0001	#	2007		681,134,995	1.0120			
1972	*	147,112,780	1.000037	5,487	1.0001	#	2008		615,105,189	1.0130			
1973	*	158,185,785	1.000050	7,867	1.0002	#	2009		564,865,755	1.0146			
1974	*	170,092,242	1.000066	11,279	1.0003	#	2010		626,486,592	1.0340			
1975	*	182,894,884	1.000088	16,170	1.0004	#	2011		614,544,405	1.0904			
1976	*	196,661,166	1.000118	23,182	1.0005	#	2012		535,491,700	2.1620			
1977	*	211,463,619	1.000157	33,234	1.0006	#	2013		261,026,434				

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Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Indemnity: **11v12**

Latest 12/31 Prior to 1986 Incurred	4,712,949,899	
Next Latest 12/31 Prior to 1986 Incurred	4,712,288,420	1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
CY Development of Prior Yrs	661,479	2 PY 1984 & Prior = Subsequent Yr x PY Deflation
Next Latest PY 1986 Incurred	715,759,664	3 1985 Development Selected Based on Observed 1986, 1987, 1988
# of 1986 Yrs in Prior Data	6.58	4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0
Selected Decrement, Development Factor	0.75	
Selected Average PY Deflation Factor	0.95	

TAIL =	1.0010	vs	1.0009	661,479	
				0	

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

INDEMNITY

Policy Year	(*=Estimate)	12/31/12 Incurred	Prior Year Development	Dollar Development	DF		Policy Year	(*=Estimate)	12/31/12 Incurred	Prior Year Development	Dollar Development	DF	
1942	*	85,382,800	1.000000	0	1.0000	#	1978	*	541,153,666	1.000033	17,730	1.0001	
1943	*	89,876,632	1.000000	0	1.0000	#	1979	*	569,635,437	1.000044	24,883	1.0002	
1944	*	94,606,981	1.000000	0	1.0000	#	1980	*	599,616,250	1.000058	34,924	1.0002	
1945	*	99,586,296	1.000000	0	1.0000	#	1981	*	631,175,000	1.000078	49,015	1.0003	
1946	*	104,827,680	1.000000	0	1.0000	#	1982	*	664,394,737	1.000104	68,791	1.0004	
1947	*	110,344,926	1.000000	0	1.0000	#	1983	*	699,362,881	1.000138	96,545	1.0006	
1948	*	116,152,554	1.000000	1	1.0000	#	1984	*	736,171,453	1.000184	135,496	1.0007	27TH TO ULT
1949	*	122,265,846	1.000000	1	1.0000	#	1985	*	774,917,319	1.0002454509	190,157	1.0010	26TH TO ULT
1950	*	128,700,891	1.000000	1	1.0000	#	1986		716,125,836	1.0005			
1951	*	135,474,622	1.000000	2	1.0000	#	1987		869,689,099	1.0010			
1952	*	142,604,865	1.000000	3	1.0000	#	1988		990,087,512	0.9975			
1953	*	150,110,384	1.000000	4	1.0000	#	1989		1,146,110,037	1.0022			
1954	*	158,010,931	1.000000	5	1.0000	#	1990		1,172,030,143	1.0001			
1955	*	166,327,296	1.000000	7	1.0000	#	1991		1,027,029,414	1.0013	Total		
1956	*	175,081,364	1.000000	10	1.0000	#	1992		877,936,473	1.0025	Development:		
1957	*	184,296,172	1.000000	14	1.0000	#	1993		761,012,996	0.9999	661,479		
1958	*	193,995,971	1.000000	20	1.0000	#	1994		702,559,300	1.0011			
1959	*	204,206,285	1.000000	28	1.0000	#	1995		609,052,885	1.0012			
1960	*	214,953,984	1.000000	40	1.0000	#	1996		533,500,202	1.0028			
1961	*	226,267,352	1.000000	56	1.0000	#	1997		556,832,201	1.0021			
1962	*	238,176,160	1.000000	78	1.0000	#	1998		564,507,461	0.9975			
1963	*	250,711,747	1.000000	110	1.0000	#	1999		640,519,550	1.0009			
1964	*	263,907,103	1.000001	154	1.0000	#	2000		681,462,452	1.0017			
1965	*	277,796,950	1.000001	216	1.0000	#	2001		675,044,549	1.0028			
1966	*	292,417,842	1.000001	303	1.0000	#	2002		700,614,570	0.9996			
1967	*	307,808,255	1.000001	426	1.0000	#	2003		671,320,667	1.0032			
1968	*	324,008,689	1.000002	598	1.0000	#	2004		697,416,463	1.0041			
1969	*	341,061,778	1.000002	839	1.0000	#	2005		703,798,318	1.0016			
1970	*	359,012,398	1.000003	1,178	1.0000	#	2006		724,845,522	1.0016			
1971	*	377,907,788	1.000004	1,653	1.0000	#	2007		763,181,268	1.0017			
1972	*	397,797,671	1.000006	2,320	1.0000	#	2008		704,314,518	1.0212			
1973	*	418,734,391	1.000008	3,256	1.0000	#	2009		620,606,688	1.0957			
1974	*	440,773,043	1.000010	4,569	1.0000	#	2010		587,695,761	1.4141			
1975	*	463,971,624	1.000014	6,413	1.0001	#	2011		418,580,947	3.3468			
1976	*	488,391,183	1.000018	9,001	1.0001	#	2012		116,152,750				
1977	*	514,095,982	1.000025	12,632	1.0001	#							

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Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Medical **11v12**

Latest 12/31 Prior to 1986 Incurred	1,504,651,636	
Next Latest 12/31 Prior to 1986 Incurred	1,500,119,871	1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
CY Development of Prior Yrs	4,531,765	2 PY 1984 & Prior = Subsequent Yr x PY Deflation
Next Latest PY 1986 Incurred	325,642,139	3 1985 Development Selected Based on Observed 1986, 1987, 1988
# of 1986 Yrs in Prior Data	4.62	4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0
Selected Decrement, Development Factor	0.75	
Selected Average PY Deflation Factor	0.93	

TAIL = 1.0149 vs 1.0139 4,531,765
0

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

MEDICAL

Policy Year	(*=Estimate)	12/31/12 Incurred	Prior Year Development	Dollar Development	DF		Policy Year	(*=Estimate)	12/31/12 Incurred	Prior Year Development	Dollar Development	DF	
1942	*	16,390,236	1.000000	0	1.0000	#	1978	*	223,459,616	1.000494	110,308	1.0020	
1943	*	17,623,909	1.000000	0	1.0000	#	1979	*	240,279,157	1.000659	158,121	1.0026	
1944	*	18,950,440	1.000000	1	1.0000	#	1980	*	258,364,684	1.000878	226,647	1.0035	
1945	*	20,376,817	1.000000	1	1.0000	#	1981	*	277,811,489	1.001171	324,847	1.0047	
1946	*	21,910,556	1.000000	1	1.0000	#	1982	*	298,722,031	1.001561	465,549	1.0063	
1947	*	23,559,738	1.000000	2	1.0000	#	1983	*	321,206,485	1.002081	667,107	1.0084	
1948	*	25,333,051	1.000000	2	1.0000	#	1984	*	345,383,317	1.002775	955,765	1.0112	27TH TO ULT
1949	*	27,239,840	1.000000	3	1.0000	#	1985	*	371,379,911	1.0036999150	1,369,009	1.0149	26TH TO ULT
1950	*	29,290,151	1.000000	5	1.0000	#	1986		328,761,623	1.0096			
1951	*	31,494,786	1.000000	7	1.0000	#	1987		432,071,173	1.0050			
1952	*	33,865,361	1.000000	9	1.0000	#	1988		527,338,937	1.0037			
1953	*	36,414,367	1.000000	14	1.0000	#	1989		641,859,353	1.0075			
1954	*	39,155,233	1.000000	19	1.0000	#	1990		664,252,678	1.0029			
1955	*	42,102,401	1.000001	28	1.0000	#	1991		627,278,869	1.0090	Total		
1956	*	45,271,399	1.000001	40	1.0000	#	1992		575,902,892	1.0098	Development:		
1957	*	48,678,924	1.000001	57	1.0000	#	1993		485,061,348	1.0083	4,531,765		
1958	*	52,342,929	1.000002	82	1.0000	#	1994		462,108,749	1.0197			
1959	*	56,282,719	1.000002	118	1.0000	#	1995		427,503,796	1.0122			
1960	*	60,519,053	1.000003	169	1.0000	#	1996		424,627,519	1.0083			
1961	*	65,074,250	1.000004	242	1.0000	#	1997		454,681,294	1.0087			
1962	*	69,972,312	1.000005	346	1.0000	#	1998		487,424,316	1.0080			
1963	*	75,239,045	1.000007	497	1.0000	#	1999		526,205,898	1.0023			
1964	*	80,902,199	1.000009	712	1.0000	#	2000		536,035,395	1.0034			
1965	*	86,991,612	1.000012	1,021	1.0000	#	2001		518,043,083	1.0051			
1966	*	93,539,368	1.000016	1,463	1.0001	#	2002		549,525,682	1.0031			
1967	*	100,579,965	1.000021	2,098	1.0001	#	2003		556,435,460	1.0121			
1968	*	108,150,500	1.000028	3,008	1.0001	#	2004		592,378,853	1.0051			
1969	*	116,290,861	1.000037	4,312	1.0001	#	2005		608,403,314	0.9970			
1970	*	125,043,936	1.000049	6,182	1.0002	#	2006		616,348,411	1.0077			
1971	*	134,455,845	1.000066	8,863	1.0003	#	2007		671,182,229	0.9960			
1972	*	144,576,178	1.000088	12,707	1.0004	#	2008		603,609,815	0.9998			
1973	*	155,458,256	1.000117	18,218	1.0005	#	2009		554,956,470	1.0267			
1974	*	167,159,415	1.000156	26,117	1.0006	#	2010		606,562,364	1.0825			
1975	*	179,741,306	1.000208	37,442	1.0008	#	2011		565,089,941	2.1094			
1976	*	193,270,221	1.000278	53,677	1.0011	#	2012		246,572,981				
1977	*	207,817,442	1.000370	76,949	1.0015	#							

Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Indemnity: **10v11**

Latest 12/31 Prior to 1986 Incurred	4,786,276,751	
Next Latest 12/31 Prior to 1986 Incurred	4,783,310,914	1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
CY Development of Prior Yrs	2,965,837	2 PY 1984 & Prior = Subsequent Yr x PY Deflation
Next Latest PY 1986 Incurred	723,649,054	3 1985 Development Selected Based on Observed 1986, 1987, 1988
# of 1986 Yrs in Prior Data	6.61	4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0
Selected Decrement, Development Factor	0.75	
Selected Average PY Deflation Factor	0.95	

TAIL =   1.0044   vs   1.0041   2,965,838
                                        -1

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

INDEMNITY

Policy Year	(*=Estimate)	12/31/11 Incurred	Prior Year Development	Dollar Development	DF		Policy Year	(*=Estimate)	12/31/11 Incurred	Prior Year Development	Dollar Development	DF	
1942	*	86,198,133	1.000000	0	1.0000	#	1977	*	519,005,159	1.000109	56,664	1.0004	
1943	*	90,734,877	1.000000	1	1.0000	#	1978	*	546,321,220	1.000146	79,526	1.0006	
1944	*	95,510,397	1.000000	1	1.0000	#	1979	*	575,074,968	1.000194	111,610	1.0008	
1945	*	100,537,260	1.000000	1	1.0000	#	1980	*	605,342,072	1.000259	156,635	1.0010	
1946	*	105,828,694	1.000000	2	1.0000	#	1981	*	637,202,181	1.000345	219,820	1.0014	
1947	*	111,398,626	1.000000	2	1.0000	#	1982	*	670,739,137	1.000460	308,484	1.0018	
1948	*	117,261,711	1.000000	3	1.0000	#	1983	*	706,041,197	1.000614	432,894	1.0025	27TH TO ULT
1949	*	123,433,380	1.000000	4	1.0000	#	1984	*	743,201,260	1.000818	607,446	1.0033	26TH TO ULT
1950	*	129,929,874	1.000000	6	1.0000	#	1985	*	782,317,116	1.0010906749	852,324	1.0044	25TH TO ULT
1951	*	136,768,288	1.000000	8	1.0000	#	1986		724,138,448	1.0007			
1952	*	143,966,619	1.000000	12	1.0000	#	1987		876,818,973	1.0002			
1953	*	151,543,810	1.000000	17	1.0000	#	1988		999,542,688	1.0015			
1954	*	159,519,800	1.000000	23	1.0000	#	1989		1,155,820,850	1.0037			
1955	*	167,915,579	1.000000	33	1.0000	#	1990		1,186,568,963	1.0010			
1956	*	176,753,241	1.000000	46	1.0000	#	1991		1,039,503,614	1.0007	Total		
1957	*	186,056,043	1.000000	64	1.0000	#	1992		885,735,961	1.0023	Development:		
1958	*	195,848,466	1.000000	90	1.0000	#	1993		766,710,739	1.0023	2,965,838		
1959	*	206,156,280	1.000001	127	1.0000	#	1994		707,391,976	1.0026			
1960	*	217,006,611	1.000001	178	1.0000	#	1995		611,754,336	1.0005			
1961	*	228,428,011	1.000001	250	1.0000	#	1996		534,368,625	1.0005			
1962	*	240,450,538	1.000001	351	1.0000	#	1997		558,093,394	1.0005			
1963	*	253,105,830	1.000002	492	1.0000	#	1998		570,406,550	1.0007			
1964	*	266,427,189	1.000003	691	1.0000	#	1999		644,724,536	1.0020			
1965	*	280,449,673	1.000003	970	1.0000	#	2000		686,812,258	1.0038			
1966	*	295,210,182	1.000005	1,361	1.0000	#	2001		678,564,277	1.0029			
1967	*	310,747,560	1.000006	1,911	1.0000	#	2002		702,989,793	1.0095			
1968	*	327,102,695	1.000008	2,682	1.0000	#	2003		670,435,033	1.0132			
1969	*	344,318,626	1.000011	3,764	1.0000	#	2004		697,115,544	1.0146			
1970	*	362,440,659	1.000015	5,283	1.0001	#	2005		705,359,481	1.0133			
1971	*	381,516,483	1.000019	7,414	1.0001	#	2006		725,842,732	1.0192			
1972	*	401,596,298	1.000026	10,406	1.0001	#	2007		763,871,297	1.0333			
1973	*	422,732,945	1.000035	14,604	1.0001	#	2008		692,790,945	1.1048			
1974	*	444,982,048	1.000046	20,497	1.0002	#	2009		569,411,306	1.4153			
1975	*	468,402,156	1.000061	28,767	1.0002	#	2010		417,090,247	3.3370			
1976	*	493,054,901	1.000082	40,374	1.0003	#	2011		125,567,147				

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Inputs for Tail Factor Estimation - 2016 Loss Cost Filing

Medical **10v11**

Latest 12/31 Prior to 1986 Incurred	1,522,306,788	
Next Latest 12/31 Prior to 1986 Incurred	1,498,586,145	1 Policy Yr 1985 Incurred = Average of 1986, 1987, 1988, reduced by PY Deflation ^ 2
CY Development of Prior Yrs	23,720,643	2 PY 1984 & Prior = Subsequent Yr x PY Deflation
Next Latest PY 1986 Incurred	326,879,883	3 1985 Development Selected Based on Observed 1986, 1987, 1988
# of 1986 Yrs in Prior Data	4.66	4 PY 1984 & Prior Development = (Subsequent Yr - 1.0) x Selected Decrement + 1.0
Selected Decrement, Development Factor	0.75	
Selected Average PY Deflation Factor	0.93	

TAIL =   1.0807   vs   1.0726   23,720,643
                                                  0

Pennsylvania Compensation Rating Bureau
Tail Factor Model - 2016 Loss Cost Filing

MEDICAL

Policy Year	(*=Estimate)	12/31/11 Incurred	Prior Year Development	Dollar Development	DF		Policy Year	(*=Estimate)	12/31/11 Incurred	Prior Year Development	Dollar Development	DF	
1941	*	15,286,565	1.000000	1	1.0000	#	1977	*	208,412,493	1.001953	406,147	1.0078	
1942	*	16,437,166	1.000000	1	1.0000	#	1978	*	224,099,455	1.002603	581,911	1.0105	
1943	*	17,674,372	1.000000	2	1.0000	#	1979	*	240,967,156	1.003471	833,560	1.0140	
1944	*	19,004,701	1.000000	3	1.0000	#	1980	*	259,104,469	1.004628	1,193,692	1.0187	
1945	*	20,435,163	1.000000	4	1.0000	#	1981	*	278,606,955	1.006171	1,708,762	1.0249	
1946	*	21,973,293	1.000000	6	1.0000	#	1982	*	299,577,372	1.008228	2,444,840	1.0334	
1947	*	23,627,197	1.000000	8	1.0000	#	1983	*	322,126,206	1.010971	3,495,637	1.0447	27TH TO ULT
1948	*	25,405,588	1.000000	12	1.0000	#	1984	*	346,372,264	1.014628	4,993,603	1.0600	26TH TO ULT
1949	*	27,317,837	1.000001	17	1.0000	#	1985	*	372,443,295	1.019503671	7,125,047	1.0807	25TH TO ULT
1950	*	29,374,018	1.000001	24	1.0000	#	1986		328,500,537	1.0050			
1951	*	31,584,966	1.000001	35	1.0000	#	1987		434,507,788	1.0072			
1952	*	33,962,329	1.000001	50	1.0000	#	1988		528,851,873	1.0125			
1953	*	36,518,633	1.000002	72	1.0000	#	1989		643,191,153	1.0106			
1954	*	39,267,347	1.000003	103	1.0000	#	1990		670,831,301	1.0094	Total		
1955	*	42,222,954	1.000003	147	1.0000	#	1991		629,194,025	1.0009	Development:		
1956	*	45,401,026	1.000005	211	1.0000	#	1992		576,058,709	1.0095	23,720,643		
1957	*	48,818,308	1.000006	302	1.0000	#	1993		484,593,760	1.0060			
1958	*	52,492,804	1.000008	433	1.0000	#	1994		456,425,413	1.0141			
1959	*	56,443,875	1.000011	621	1.0000	#	1995		425,422,256	1.0075			
1960	*	60,692,339	1.000015	891	1.0001	#	1996		424,191,525	1.0077			
1961	*	65,260,579	1.000020	1,277	1.0001	#	1997		452,920,198	1.0099			
1962	*	70,172,666	1.000026	1,831	1.0001	#	1998		488,153,639	0.9911			
1963	*	75,454,480	1.000035	2,625	1.0001	#	1999		528,818,390	1.0186			
1964	*	81,133,849	1.000046	3,763	1.0002	#	2000		540,806,945	1.0033			
1965	*	87,240,698	1.000062	5,396	1.0002	#	2001		521,969,354	1.0107			
1966	*	93,807,202	1.000082	7,735	1.0003	#	2002		549,797,130	1.0151			
1967	*	100,867,959	1.000110	11,090	1.0004	#	2003		552,082,650	1.0082			
1968	*	108,460,171	1.000147	15,899	1.0006	#	2004		591,864,297	1.0112			
1969	*	116,623,840	1.000195	22,793	1.0008	#	2005		613,039,319	1.0113			
1970	*	125,401,979	1.000261	32,676	1.0010	#	2006		614,118,827	1.0126			
1971	*	134,840,837	1.000348	46,843	1.0014	#	2007		675,997,480	1.0186			
1972	*	144,990,147	1.000463	67,151	1.0019	#	2008		607,148,978	1.0374			
1973	*	155,903,384	1.000618	96,258	1.0025	#	2009		544,282,560	1.0806			
1974	*	167,638,048	1.000824	137,977	1.0033	#	2010		562,019,372	2.2256			
1975	*	180,255,965	1.001098	197,762	1.0044	#	2011		269,578,397				
1976	*	193,823,619	1.001464	283,425	1.0059								