

PENNSYLVANIA COMPENSATION RATING BUREAU

Claim Frequencies

The attached exhibits examine historical Workers Compensation claim frequencies in Pennsylvania.

Claim frequencies per \$1 million of expected losses are shown on Page 1 based on statistics gathered by the PCRB. For informational purposes, claim frequencies are also shown at constant (2009) wage levels. The data excludes the experience of deductible business.

Staff is proposing an annual change in claim frequency of -6.2%. This is based on a claim frequency trend line of the form  $y=a*b^x$  using the most recent seven points, exclusive of Policy Year 2019, which is impacted by COVID-19.

The second page shows Unit Statistical Data reported claim counts and the associated claim development factors for experience excluding deductible business.

The third page shows a graph of the frequencies appearing in column (7) of Page 1.

The fourth through sixth pages are comparable to Pages 1 through 3 but include the experience of deductible policies.

The seventh page shows a graph comparing claim frequencies presented on Pages 3 and 6, all indexed to a common value of 1.0 at January 1, 2009.

Page 8 presents the Unit Statistical Plan claim frequencies of Page 1 by industry group and Page 9 shows a graph of those industry group claim frequencies.

**Pennsylvania W.C - Claim Frequencies**  
 PCRB Unit Statistical Plan  
 (Excluding Deductible Business)

Policy Year	Reported Claim Counts (1)	Indemnity Claim Dev Factors (2)	Ultimate Claim Counts (3)	% Change Counts (4)	Expected Losses (5)	% Change Expected Loss (6)	Claim Frequency (# Claims per \$1 million) (7)	% Change Claim Freq (8)
2009	23,110	1.000	23,110		828,607,426		27.89	
2010	23,909	1.000	23,909	3.5%	873,904,071	5.5%	27.36	-1.9%
2011	23,154	1.000	23,154	-3.2%	903,829,025	3.4%	25.62	-6.4%
2012	21,388	1.000	21,388	-7.6%	890,319,162	-1.5%	24.02	-6.2%
2013	21,537	1.000	21,537	0.7%	915,821,809	2.9%	23.52	-2.1%
2014	20,612	1.000	20,612	-4.3%	958,872,048	4.7%	21.50	-8.6%
2015	19,930	1.000	19,930	-3.3%	1,005,362,429	4.8%	19.82	-7.8%
2016	19,124	1.002	19,166	-3.8%	1,033,136,841	2.8%	18.55	-6.4%
2017	18,819	1.008	18,970	-1.0%	1,082,239,657	4.8%	17.53	-5.5%
2018	18,581	1.032	19,170	1.1%	1,136,162,091	5.0%	16.87	-3.8%
2019	16,489	1.032	17,012	-11.3%	1,135,281,252	-0.1%	14.98	-11.2%

Period	Annual % Change in Claim Frequency	Period	Annual % Change In Claim Frequency
PY09-PY19	-6.1%	PY09-PY18	-5.8%
PY10-PY19	-6.3%	PY10-PY18	-6.1%
PY11-PY19	-6.4%	PY11-PY18	-6.1%
PY12-PY19	-6.5%	<b>PY12-PY18</b>	<b>-6.2%</b>
PY13-PY19	-6.8%	PY13-PY18	-6.5%
PY14-PY19	-6.5%	PY14-PY18	-5.9%
PY15-PY19	-6.3%	PY15-PY18	-5.3%
PY16-PY19	-6.6%	PY16-PY18	-4.6%
PY17-PY19	-7.6%	PY17-PY18	-3.8%
PY18-PY19	-11.2%		

Policy Years 2018 and 2019 are both at first report. 2019 uses Policy data, 2018 and prior use Unit Statistical Plan data.

Policy Year	SAWW	% Change SAWW	SAWW Index	Adjusted Claim Frequency # Claims per \$1 million	% Change Adj Claim Frequency
2009	860.1				
2010	887.9	3.2%	1.0323	28.24	
2011	915.3	3.1%	1.0641	27.26	-3.5%
2012	932.5	1.9%	1.0841	26.04	-4.5%
2013	952.0	2.1%	1.1068	26.03	0.0%
2014	976.8	2.6%	1.1356	24.41	-6.2%
2015	996.6	2.0%	1.1587	22.97	-5.9%
2016	1,024.3	2.8%	1.1908	22.09	-3.8%
2017	1,050.0	2.5%	1.2208	21.40	-3.1%
2018	1,081.1	3.0%	1.2569	21.21	-0.9%
2019	1,114.5	3.1%	1.2957	19.42	-8.4%

Period	Annual % Change in Adjusted Claim Frequency	Period	Annual % Change in SAWW
PY09-PY19		PY09-PY19	2.5%
PY10-PY19	-4.0%	PY10-PY19	2.5%
PY11-PY19	-4.0%	PY11-PY19	2.5%
PY12-PY19	-4.1%	PY12-PY19	2.6%
PY13-PY19	-4.3%	PY13-PY19	2.6%
PY14-PY19	-4.0%	PY14-PY19	2.7%
PY15-PY19	-3.7%	PY15-PY19	2.8%
PY16-PY19	-3.9%	PY16-PY19	2.9%
PY17-PY19	-4.7%	PY17-PY19	3.0%
PY18-PY19	-8.4%	PY18-PY19	3.1%

Adjusted claim frequency is claim frequency per \$1 million expected losses at constant (2009) wages

NOTE: The SAWW values for 2018 and 2019 have been adjusted for COVID-19.  
 The unadjusted SAWW values for 2018 and 2019 are 1,083.1 and 1,133.3, respectively.

Projected Annual Change in Claim Frequency: -6.2% (see PY12-PY18)

**Pennsylvania W.C - Claim Frequencies**

PCRB Unit Statistical Plan

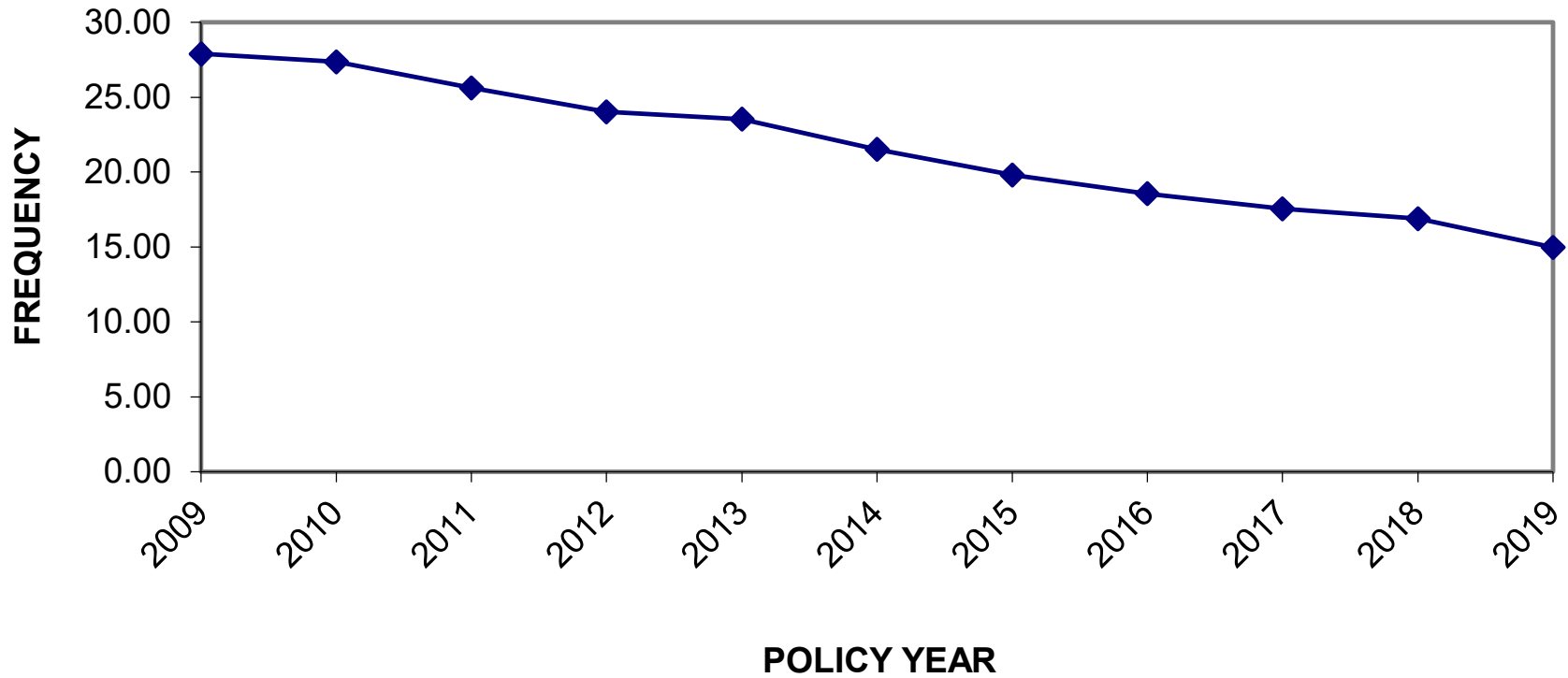
(Excluding Deductible Business)

**Reported Claim Count Development**

Policy Year	Reported Claim Counts									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
2006				27,631	27,630	27,644	27,647	27,648	27,647	27,657
2007			27,173	27,224	27,227	27,227	27,229	27,232	27,242	27,248
2008		24,523	24,736	24,785	24,793	24,801	24,798	24,806	24,809	24,811
2009	22,162	22,838	23,051	23,086	23,092	23,102	23,101	23,105	23,105	23,110
2010	23,018	23,661	23,822	23,856	23,872	23,890	23,898	23,901	23,909	
2011	22,464	22,942	23,078	23,127	23,140	23,149	23,153	23,154		
2012	20,705	21,191	21,328	21,370	21,381	21,386	21,388			
2013	20,802	21,348	21,495	21,533	21,537	21,537				
2014	19,979	20,430	20,538	20,604	20,612					
2015	19,329	19,788	19,890	19,930						
2016	18,581	19,027	19,124							
2017	18,431	18,819								
2018	18,581									

Policy Year	Claim Development Factors									Tail	
	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5-6</u>	<u>6-7</u>	<u>7-8</u>	<u>8-9</u>	<u>9-10</u>		
2006				1.000	1.001	1.000	1.000	1.000	1.000	1.000	
2007			1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2008		1.009	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2009	1.031	1.009	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2010	1.028	1.007	1.001	1.001	1.001	1.000	1.000	1.000	1.000		
2011	1.021	1.006	1.002	1.001	1.000	1.000	1.000				
2012	1.023	1.006	1.002	1.001	1.000	1.000					
2013	1.026	1.007	1.002	1.000	1.000						
2014	1.023	1.005	1.003	1.000							
2015	1.024	1.005	1.002								
2016	1.024	1.005									
2017	1.021										
<b>All Yr Ave.</b>	1.025	1.007	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
<b>5Yr Ave.</b>	1.024	1.006	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
<b>3Yr Ave.</b>	1.023	1.005	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
<b>Selected CDF</b>	1.024	1.006	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
<b>Cum CDF</b>	1.032	1.008	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

### PA W.C. - CLAIM FREQUENCIES PCRB Unit Statistical Plan (Excl. Deductible Business)



—◆— Claim Freq per \$1 Million Expected Losses

**Pennsylvania W.C - Claim Frequencies**  
 PCRB Unit Statistical Plan  
 All Business Including Deductible Business

Policy Year	# of Claim Indemnity (1)	Indemnity Claim Dev Factors (2)	Ultimate Claim Counts (3)	% Change Counts (2)	Expected Losses (3)	% Change Exp Loss (4)	Claim Frequency (#Claims per \$1 million) (5)	% Change Claim Freq (6)
2009	35,610	1.000	35,610		1,319,122,989		27.00	
2010	36,327	1.000	36,327	2.0%	1,390,363,757	5.4%	26.13	-3.2%
2011	35,380	1.000	35,380	-2.6%	1,456,135,190	4.7%	24.30	-7.0%
2012	33,789	1.000	33,789	-4.5%	1,471,824,370	1.1%	22.96	-5.5%
2013	34,629	1.000	34,629	2.5%	1,530,916,382	4.0%	22.62	-1.5%
2014	33,586	1.000	33,586	-3.0%	1,613,095,472	5.4%	20.82	-8.0%
2015	32,436	1.001	32,459	-3.4%	1,672,471,260	3.7%	19.41	-6.8%
2016	31,454	1.003	31,562	-2.8%	1,718,049,887	2.7%	18.37	-5.4%
2017	31,222	1.011	31,554	0.0%	1,819,992,098	5.9%	17.34	-5.6%
2018	30,470	1.042	31,749	0.6%	1,916,841,806	5.3%	16.56	-4.5%
2019	27,541	1.042	28,697	-9.6%	1,916,590,896	0.0%	14.97	-9.6%

Period	Annual % Change in Claim Frequency	Period	Annual % Change In Claim Frequency
PY09-PY19	-5.6%	PY09-PY18	-5.5%
PY10-PY19	-5.8%	PY10-PY18	-5.6%
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2012	932.5	1.9%	1.0841	24.89	-3.7%
2013	952.0	2.1%	1.1068	25.04	0.6%
2014	976.8	2.6%	1.1356	23.64	-5.6%
2015	996.6	2.0%	1.1587	22.49	-4.9%
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**Pennsylvania W.C - Claim Frequencies**

PCRB Unit Statistical Plan

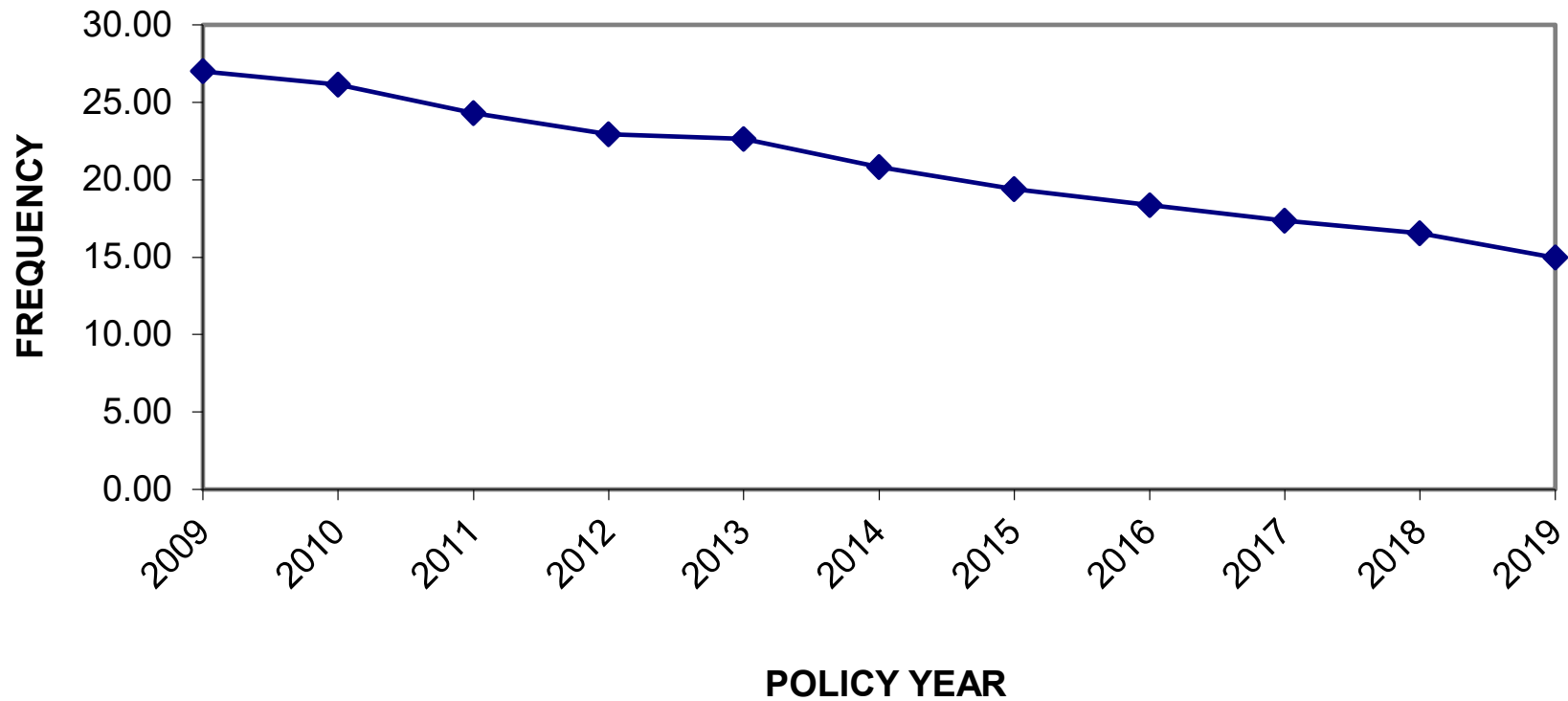
(Including Deductible Business)

**Reported Claim Count Development**

Policy Year	Reported Claim Counts									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
2006				42,008	42,017	42,033	42,043	42,049	42,053	42,066
2007			41,992	42,080	42,102	42,104	42,112	42,117	42,129	42,137
2008		37,314	37,665	37,769	37,795	37,813	37,816	37,829	37,835	37,841
2009	34,003	35,121	35,447	35,542	35,564	35,579	35,584	35,600	35,605	35,610
2010	34,751	35,886	36,171	36,238	36,265	36,294	36,317	36,317	36,327	
2011	33,993	35,000	35,252	35,333	35,352	35,369	35,374	35,380		
2012	32,309	33,341	33,640	33,743	33,771	33,783	33,789			
2013	33,133	34,237	34,497	34,591	34,591	34,617	34,629			
2014	32,274	33,249	33,454	33,562	33,586					
2015	31,170	32,161	32,361	32,436						
2016	30,286	31,237	31,454							
2017	30,366	31,222								
2018	30,470									

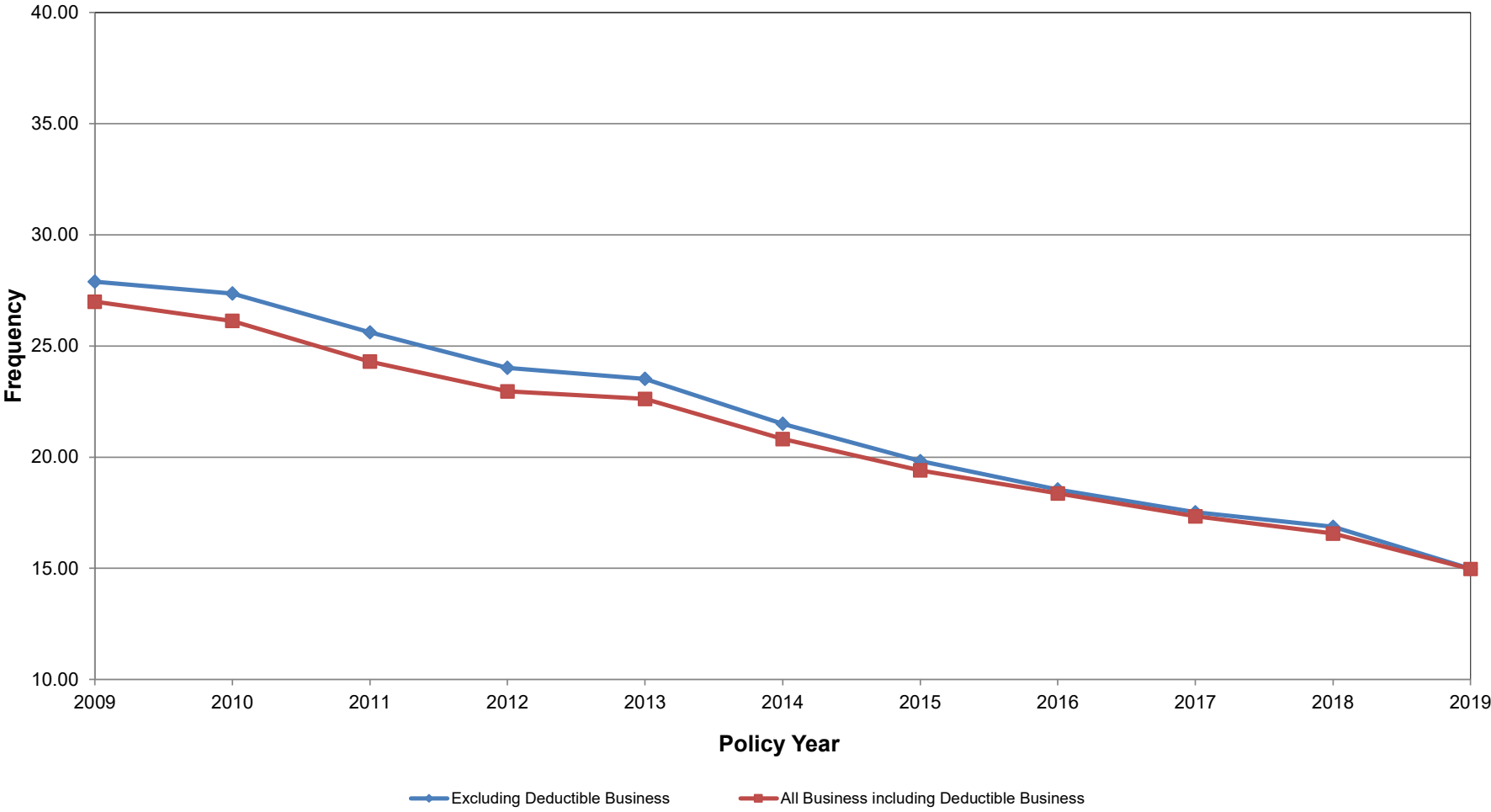
Policy Year	Claim Development Factors									
	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5-6</u>	<u>6-7</u>	<u>7-8</u>	<u>8-9</u>	<u>9-10</u>	
2006				1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007			1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000
2008		1.009	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.033	1.009	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.033	1.008	1.002	1.001	1.001	1.001	1.000	1.000		
2011	1.030	1.007	1.002	1.001	1.000	1.000	1.000			
2012	1.032	1.009	1.003	1.001	1.000	1.000				
2013	1.033	1.008	1.003	1.001	1.000					
2014	1.030	1.006	1.003	1.001						
2015	1.032	1.006	1.002							
2016	1.031	1.007								
2017	1.028									
<b>All Yr Ave.</b>	1.031	1.008	1.003	1.001	1.000	1.000	1.000	1.000	1.000	
<b>5Yr Ave.</b>	1.031	1.007	1.003	1.001	1.000	1.000	1.000	1.000	1.000	
<b>3Yr Ave.</b>	1.030	1.006	1.003	1.001	1.000	1.000	1.000	1.000	1.000	
<b>Selected CDF</b>	1.031	1.007	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000
<b>Cum CDF</b>	1.042	1.011	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000
										Tail

**PA W.C. - CLAIM FREQUENCIES**  
**PCRB Unit Statistical Plan (All Business Incl. Deductible Business)**



— Claim Freq per \$1 Million Expected Losses

# PA W.C. - COMPARISON OF CLAIM FREQUENCIES (Claim Frequencies per \$1 Million Expected Losses)





**Pennsylvania W.C. - Claim Frequencies**  
 PCRB Unit Statistical Plan  
 (Excluding Deductible Business)

Policy Year	Industry Group	Reported Claim Counts (1)	Indemnity Claim Dev Factors (2)	Ultimate Claim Counts (3)	% Change Counts (4)	Expected Losses (5)	% Change Expected Loss (6)	Claim Frequency (#Claims per \$1 million) (7)	% Change Claim Freq (8)
2009	1 (Manufacturing)	3,939	1.000	3,939		138,801,369		28.38	
2010	1	4,265	1.000	4,265	8.3%	149,784,728	7.9%	28.47	0.3%
2011	1	4,365	1.000	4,365	2.3%	154,689,699	3.3%	28.22	-0.9%
2012	1	3,736	1.000	3,736	-14.4%	146,044,979	-5.6%	25.58	-9.4%
2013	1	3,699	1.000	3,699	-1.0%	152,058,076	4.1%	24.33	-4.9%
2014	1	3,661	1.001	3,665	-0.9%	157,180,844	3.4%	23.31	-4.2%
2015	1	3,602	1.002	3,609	-1.5%	161,213,956	2.6%	22.39	-3.9%
2016	1	3,408	1.004	3,421	-5.2%	162,312,282	0.7%	21.08	-5.9%
2017	1	3,179	1.009	3,209	-6.2%	164,655,411	1.4%	19.49	-7.5%
2018	1	3,183	1.039	3,307	3.0%	172,744,316	4.9%	19.14	-1.8%
2019	1	2,858	1.039	2,969	-10.2%	168,469,717	-2.5%	17.63	-7.9%
2009	2 (Contracting)	3,928	1.000	3,928		202,488,027		19.40	
2010	2	3,934	1.000	3,934	0.2%	209,867,841	3.6%	18.75	-3.4%
2011	2	3,905	1.000	3,905	-0.7%	224,541,570	7.0%	17.39	-7.3%
2012	2	3,548	1.000	3,548	-9.1%	223,998,653	-0.2%	15.84	-8.9%
2013	2	3,460	1.000	3,460	-2.5%	228,888,770	2.2%	15.12	-4.5%
2014	2	3,397	1.000	3,397	-1.8%	245,102,224	7.1%	13.86	-8.3%
2015	2	3,194	1.001	3,197	-5.9%	260,100,504	6.1%	12.29	-11.3%
2016	2	3,039	1.002	3,046	-4.7%	270,254,366	3.9%	11.27	-8.3%
2017	2	2,980	1.008	3,003	-1.4%	283,199,179	4.8%	10.60	-5.9%
2018	2	2,925	1.023	2,993	-0.3%	297,451,219	5.0%	10.06	-5.1%
2019	2	2,606	1.023	2,667	-10.9%	293,842,337	-1.2%	9.08	-9.7%
2009	3 (Other)	15,243	1.000	15,243		487,318,030		31.28	
2010	3	15,710	1.000	15,710	3.1%	514,251,502	5.5%	30.55	-2.3%
2011	3	14,884	1.000	14,884	-5.3%	524,597,756	2.0%	28.37	-7.1%
2012	3	14,104	1.000	14,104	-5.2%	520,275,530	-0.8%	27.11	-4.4%
2013	3	14,378	1.000	14,378	1.9%	534,874,963	2.8%	26.88	-0.8%
2014	3	13,554	1.000	13,554	-5.7%	556,588,980	4.1%	24.35	-9.4%
2015	3	13,134	1.000	13,134	-3.1%	584,047,969	4.9%	22.49	-7.6%
2016	3	12,677	1.003	12,709	-3.2%	600,570,193	2.8%	21.16	-5.9%
2017	3	12,660	1.008	12,767	0.5%	634,385,067	5.6%	20.13	-4.9%
2018	3	12,473	1.033	12,881	0.9%	665,966,556	5.0%	19.34	-3.9%
2019	3	11,025	1.033	11,385	-11.6%	672,969,198	1.1%	16.92	-12.5%

Period	Annual % Change In Claim Frequency
PY09-PY19	-4.9%
PY10-PY19	-5.2%
PY11-PY19	-5.3%
PY12-PY19	-5.1%
PY13-PY19	-5.2%
PY14-PY19	-5.4%
PY15-PY19	-5.6%
PY16-PY19	-5.4%
PY17-PY19	-4.9%
PY18-PY19	-7.9%

Period	Annual % Change In Claim Frequency
PY09-PY18	-4.8%
PY10-PY18	-5.1%
PY11-PY18	-5.3%
<b>PY12-PY18</b>	<b>-4.9%</b>
PY13-PY18	-5.0%
PY14-PY18	-5.2%
PY15-PY18	-5.3%
PY16-PY18	-4.7%
PY17-PY18	-1.8%

Period	Annual % Change In Claim Frequency
PY09-PY19	-7.6%
PY10-PY19	-7.8%
PY11-PY19	-7.8%
PY12-PY19	-7.8%
PY13-PY19	-7.9%
PY14-PY19	-7.6%
PY15-PY19	-6.9%
PY16-PY19	-6.8%
PY17-PY19	-7.4%
PY18-PY19	-9.7%

Period	Annual % Change In Claim Frequency
PY09-PY18	-7.5%
PY10-PY18	-7.8%
PY11-PY18	-7.8%
<b>PY12-PY18</b>	<b>-7.8%</b>
PY13-PY18	-8.0%
PY14-PY18	-7.6%
PY15-PY18	-6.4%
PY16-PY18	-5.5%
PY17-PY18	-5.1%

Period	Annual % Change In Claim Frequency
PY09-PY19	-5.8%
PY10-PY19	-6.0%
PY11-PY19	-6.1%
PY12-PY19	-6.4%
PY13-PY19	-6.8%
PY14-PY19	-6.4%
PY15-PY19	-6.4%
PY16-PY19	-6.9%
PY17-PY19	-8.3%
PY18-PY19	-12.5%

Period	Annual % Change In Claim Frequency
PY09-PY18	-5.5%
PY10-PY18	-5.7%
PY11-PY18	-5.7%
<b>PY12-PY18</b>	<b>-6.0%</b>
PY13-PY18	-6.3%
PY14-PY18	-5.6%
PY15-PY18	-4.9%
PY16-PY18	-4.4%
PY17-PY18	-3.9%

Policy Years 2018 and 2019 are both at first report. 2019 uses Policy data, 2018 and prior use Unit Statistical Plan data.

## PA W.C. - CLAIM FREQUENCIES BY INDUSTRY GROUP PCRB Unit Statistical Plan (Excl. Deductible Business)

