

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 (2010) 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 Years 2019 and 2020, which are 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, 2010.

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)
2010	23,916	1.000	23,916		823,846,221		29.03	
2011	23,162	1.000	23,162	-3.2%	850,374,995	3.2%	27.24	-6.2%
2012	21,392	1.000	21,392	-7.6%	837,453,026	-1.5%	25.54	-6.2%
2013	21,544	1.000	21,544	0.7%	861,152,708	2.8%	25.02	-2.0%
2014	20,623	1.000	20,623	-4.3%	901,487,348	4.7%	22.88	-8.6%
2015	19,925	1.000	19,925	-3.4%	944,542,713	4.8%	21.09	-7.8%
2016	19,145	1.000	19,145	-3.9%	970,401,270	2.7%	19.73	-6.4%
2017	18,927	1.002	18,963	-0.9%	1,015,798,685	4.7%	18.67	-5.4%
2018	19,035	1.007	19,176	1.1%	1,065,551,576	4.9%	18.00	-3.6%
2019	16,559	1.030	17,063	-11.0%	1,068,279,074	0.3%	15.97	-11.3%
2020	15,583	1.030	16,057	-5.9%	1,066,360,706	-0.2%	15.06	-5.7%

Period	Annual % Change in Claim Frequency	Period	Annual % Change In Claim Frequency
PY10-PY20	-6.3%	PY10-PY18	-6.0%
PY11-PY20	-6.4%	PY11-PY18	-6.1%
PY12-PY20	-6.5%	PY12-PY18	-6.2%
PY13-PY20	-6.8%	PY13-PY18	-6.4%
PY14-PY20	-6.6%	PY14-PY18	-5.8%
PY15-PY20	-6.5%	PY15-PY18	-5.2%
PY16-PY20	-6.7%	PY16-PY18	-4.5%
PY17-PY20	-7.4%	PY17-PY18	-3.6%
PY18-PY20	-8.5%		
PY19-PY20	-5.7%		

Policy Years 2019 and 2020 are both at first report. 2020 uses Policy data, 2019 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
2010	887.9		1.0000		
2011	915.3	3.1%	1.0308	28.08	
2012	932.5	1.9%	1.0503	26.83	-4.5%
2013	952.0	2.1%	1.0722	26.82	0.0%
2014	976.8	2.6%	1.1001	25.17	-6.2%
2015	996.6	2.0%	1.1225	23.68	-5.9%
2016	1,024.3	2.8%	1.1536	22.76	-3.9%
2017	1,050.0	2.5%	1.1826	22.08	-3.0%
2018	1,081.1	3.0%	1.2177	21.91	-0.8%
2019	1,114.5	3.1%	1.2552	20.05	-8.5%
2020	1,154.3	3.6%	1.3000	19.58	-2.3%

Period	Annual % Change in Adjusted Claim Frequency	Period	Annual % Change in SAWW
PY10-PY20		PY10-PY20	2.6%
PY11-PY20	-4.0%	PY11-PY20	2.6%
PY12-PY20	-4.0%	PY12-PY20	2.7%
PY13-PY20	-4.2%	PY13-PY20	2.7%
PY14-PY20	-3.9%	PY14-PY20	2.8%
PY15-PY20	-3.8%	PY15-PY20	2.9%
PY16-PY20	-3.9%	PY16-PY20	3.0%
PY17-PY20	-4.4%	PY17-PY20	3.2%
PY18-PY20	-5.5%	PY18-PY20	3.3%
PY19-PY20	-2.3%	PY19-PY20	3.6%

Adjusted claim frequency is claim frequency per \$1 million expected losses at constant (2010) wages

NOTE: The SAWW values for 2018 through 2020 have been adjusted for COVID-19.
 The unadjusted SAWW values for 2018 through 2020 are 1,083.1, 1,133.3 and 1,204.9, respectively.

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

Pennsylvania W.C - Claim Frequencies

PCRB Unit Statistical Plan

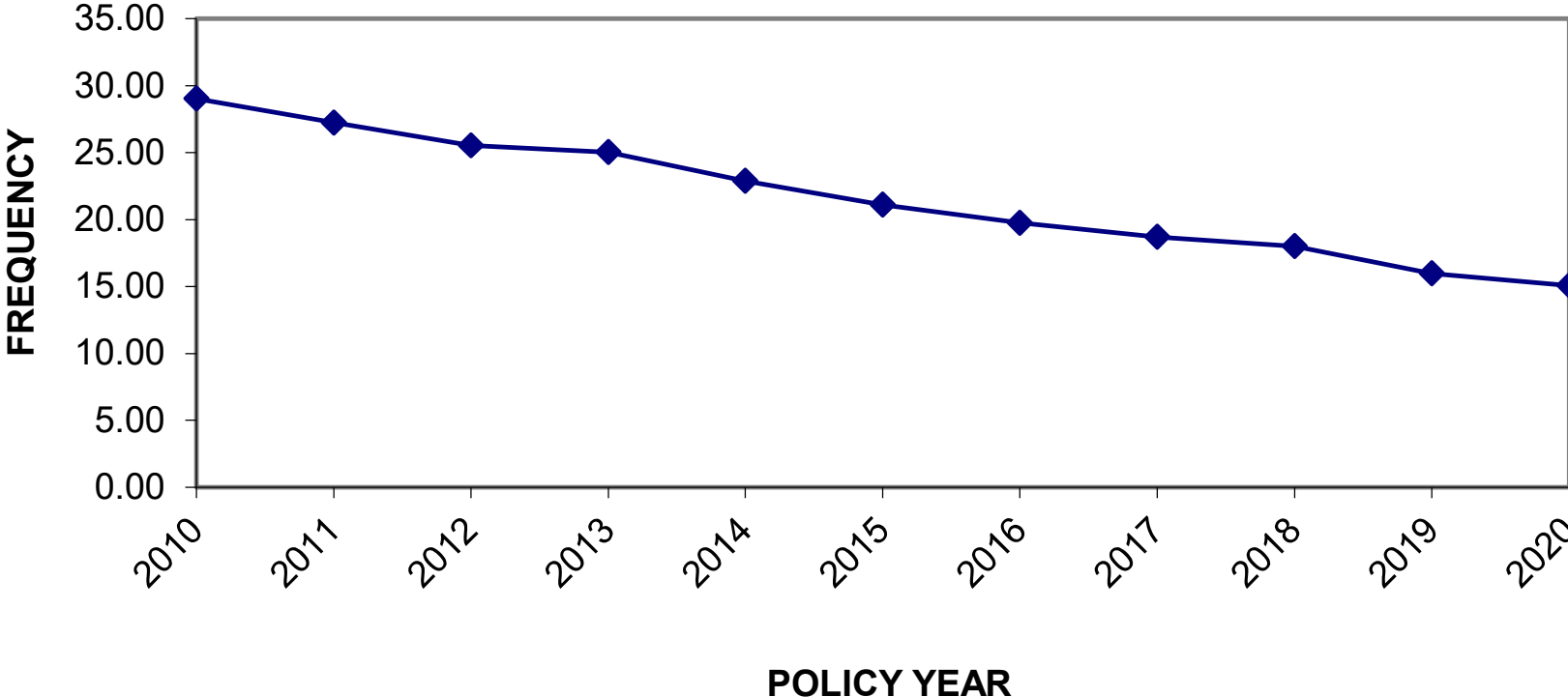
(Excluding Deductible Business)

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>
2007				27,225	27,228	27,228	27,230	27,233	27,243	27,249
2008			24,736	24,785	24,793	24,801	24,798	24,806	24,809	24,811
2009		22,839	23,051	23,086	23,092	23,102	23,101	23,105	23,105	23,110
2010	23,022	23,665	23,827	23,859	23,875	23,891	23,899	23,902	23,910	23,916
2011	22,475	22,952	23,084	23,132	23,146	23,154	23,158	23,159	23,162	
2012	20,725	21,197	21,335	21,373	21,384	21,388	21,390	21,392		
2013	20,826	21,361	21,501	21,540	21,543	21,543	21,544			
2014	19,997	20,438	20,550	20,607	20,614	20,623				
2015	19,336	19,791	19,890	19,928	19,925					
2016	18,592	19,026	19,120	19,145						
2017	18,433	18,825	18,927							
2018	18,589	19,035								
2019	16,559									

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>		
2007				1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2008			1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2009		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	1.000	
2011	1.021	1.006	1.002	1.001	1.000	1.000	1.000	1.000	1.000		
2012	1.023	1.007	1.002	1.001	1.000	1.000	1.000				
2013	1.026	1.007	1.002	1.000	1.000	1.000					
2014	1.022	1.005	1.003	1.000	1.000						
2015	1.024	1.005	1.002	1.000							
2016	1.023	1.005	1.001								
2017	1.021	1.005									
2018	1.024										
All Yr Ave.	1.024	1.006	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
5Yr Ave.	1.023	1.005	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
3Yr Ave.	1.023	1.005	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Selected CDF	1.023	1.005	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cum CDF	1.030	1.007	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)
2010	36,344	1.000	36,344		1,312,173,360		27.70	
2011	35,398	1.000	35,398	-2.6%	1,371,714,749	4.5%	25.81	-6.8%
2012	33,804	1.000	33,804	-4.5%	1,386,331,055	1.1%	24.38	-5.5%
2013	34,647	1.000	34,647	2.5%	1,442,041,292	4.0%	24.03	-1.4%
2014	33,614	1.000	33,614	-3.0%	1,518,813,152	5.3%	22.13	-7.9%
2015	32,470	1.000	32,470	-3.4%	1,574,380,918	3.7%	20.62	-6.8%
2016	31,541	1.001	31,561	-2.8%	1,616,691,937	2.7%	19.52	-5.3%
2017	31,446	1.003	31,551	0.0%	1,711,223,597	5.8%	18.44	-5.5%
2018	31,433	1.010	31,750	0.6%	1,802,017,304	5.3%	17.62	-4.4%
2019	27,682	1.040	28,802	-9.3%	1,825,889,126	1.3%	15.77	-10.5%
2020	26,746	1.040	27,828	-3.4%	1,793,545,093	-1.8%	15.52	-1.6%

Period	Annual % Change in Claim Frequency	Period	Annual % Change In Claim Frequency
PY10-PY20	-5.7%	PY10-PY18	-5.5%
PY11-PY20	-5.8%	PY11-PY18	-5.5%
PY12-PY20	-5.9%	PY12-PY18	-5.7%
PY13-PY20	-6.1%	PY13-PY18	-6.0%
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2012	932.5	1.9%	1.0503	25.61	-3.7%
2013	952.0	2.1%	1.0722	25.76	0.6%
2014	976.8	2.6%	1.1001	24.35	-5.5%
2015	996.6	2.0%	1.1225	23.15	-4.9%
2016	1,024.3	2.8%	1.1536	22.52	-2.7%
2017	1,050.0	2.5%	1.1826	21.80	-3.2%
2018	1,081.1	3.0%	1.2177	21.45	-1.6%
2019	1,114.5	3.1%	1.2552	19.80	-7.7%
2020	1,154.3	3.6%	1.3000	20.17	1.9%

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PY15-PY20	-3.1%	PY15-PY20	2.9%
PY16-PY20	-3.1%	PY16-PY20	3.0%
PY17-PY20	-3.1%	PY17-PY20	3.2%
PY18-PY20	-3.0%	PY18-PY20	3.3%
PY19-PY20	1.9%	PY19-PY20	3.6%

Adjusted claim frequency is claim frequency per \$1 million expected losses at constant (2010) wages

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The unadjusted SAWW values for 2018 through 2020 are 1,083.1, 1,133.3 and 1,204.9, respectively.

Pennsylvania W.C - Claim Frequencies

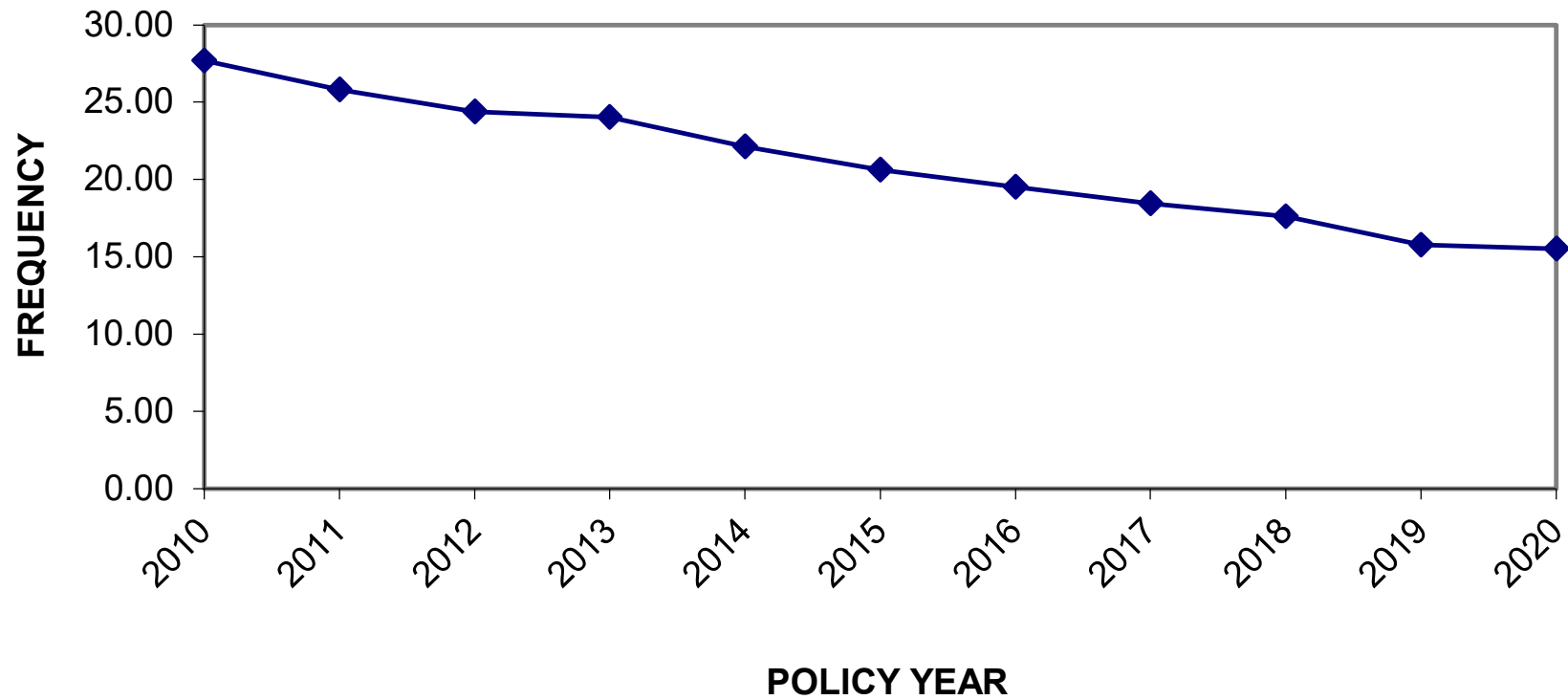
PCRB Unit Statistical Plan
(Including Deductible Business)

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>
2007				42,082	42,104	42,106	42,114	42,119	42,131	42,139
2008			37,665	37,769	37,795	37,813	37,816	37,829	37,835	37,841
2009		35,123	35,448	35,543	35,565	35,580	35,585	35,601	35,606	35,611
2010	34,765	35,898	36,185	36,250	36,276	36,303	36,326	36,326	36,336	36,344
2011	34,013	35,018	35,265	35,344	35,364	35,380	35,385	35,391	35,398	
2012	32,342	33,359	33,655	33,755	33,782	33,793	33,799	33,804		
2013	33,176	34,267	34,515	34,610	34,635	34,647	34,647			
2014	32,303	33,264	33,475	33,574	33,597	33,614				
2015	31,200	32,182	32,382	32,455	32,470					
2016	30,307	31,247	31,462	31,541						
2017	30,402	31,228	31,446							
2018	30,489	31,433								
2019	27,682									

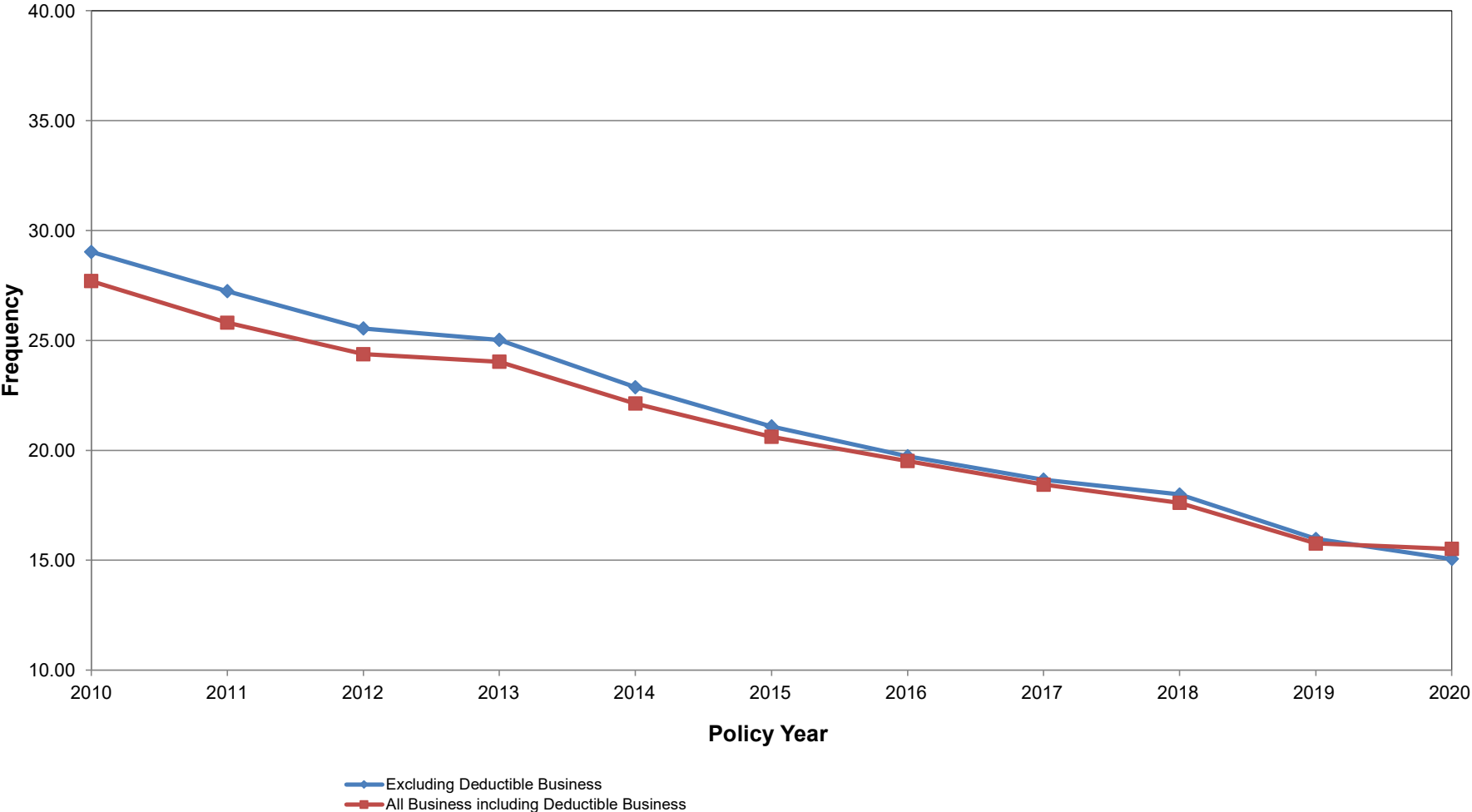
Policy Year	Claim Development Factors									Tail	
	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5-6</u>	<u>6-7</u>	<u>7-8</u>	<u>8-9</u>	<u>9-10</u>		
2007				1.001	1.000	1.000	1.000	1.000	1.000	1.000	
2008			1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
2009		1.009	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
2010	1.033	1.008	1.002	1.001	1.001	1.001	1.000	1.000	1.000	1.000	
2011	1.030	1.007	1.002	1.001	1.000	1.000	1.000	1.000	1.000		
2012	1.031	1.009	1.003	1.001	1.000	1.000	1.000				
2013	1.033	1.007	1.003	1.001	1.000	1.000					
2014	1.030	1.006	1.003	1.001	1.001						
2015	1.031	1.006	1.002	1.000							
2016	1.031	1.007	1.003								
2017	1.027	1.007									
2018	1.031										
All Yr Ave.	1.031	1.007	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
5Yr Ave.	1.030	1.007	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
3Yr Ave.	1.030	1.007	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
Selected CDF	1.030	1.007	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cum CDF	1.040	1.010	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000

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)

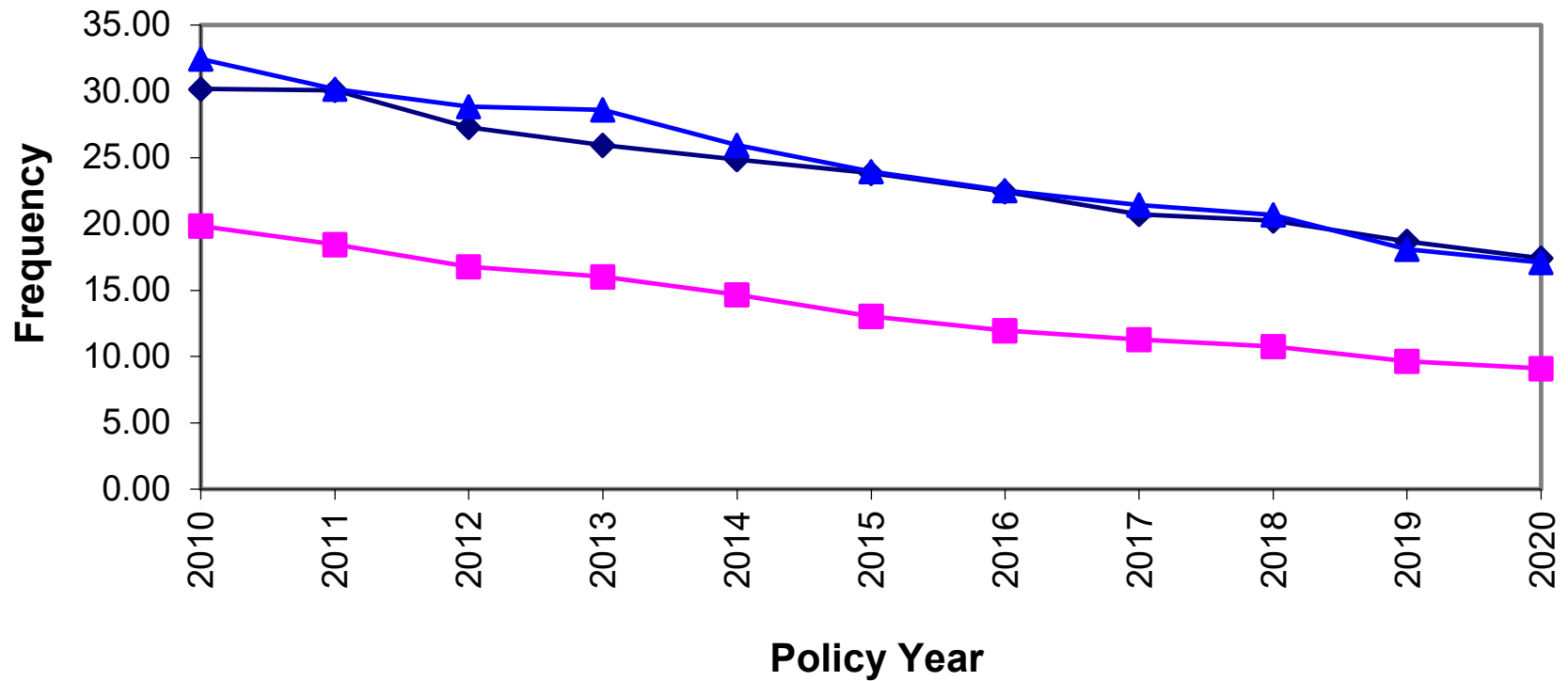


Pennsylvania W.C. - Claim Frequencies
 PCRB Unit Statistical Plan
 (Excluding Deductible Business)

Policy Year	Industry Group	Reported Claim Counts	Indemnity Claim Dev Factors	Ultimate Claim Counts	% Change Counts	Expected Losses	% Change Expected Loss	Claim Frequency (#Claims per \$1 million)	% Change Claim Freq	Period	Annual % Change In Claim Frequency	Period	Annual % Change In Claim Frequency
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				
2010	1 (Manufacturing)	4,261	1.000	4,261	0.0%	141,119,951	0.0%	30.19	0.0%	PY10-PY20	-5.4%	PY10-PY18	-5.2%
2011	1	4,361	1.000	4,361	2.3%	144,973,057	2.7%	30.08	-0.4%	PY11-PY20	-5.6%	PY11-PY18	-5.4%
2012	1	3,735	1.000	3,735	-14.4%	136,773,882	-5.7%	27.31	-9.2%	PY12-PY20	-5.4%	PY12-PY18	-5.0%
2013	1	3,698	1.000	3,698	-1.0%	142,459,632	4.2%	25.96	-4.9%	PY13-PY20	-5.5%	PY13-PY18	-5.1%
2014	1	3,664	1.000	3,664	-0.9%	147,321,963	3.4%	24.87	-4.2%	PY14-PY20	-5.8%	PY14-PY18	-5.4%
2015	1	3,599	1.000	3,599	-1.8%	151,037,508	2.5%	23.83	-4.2%	PY15-PY20	-5.9%	PY15-PY18	-5.5%
2016	1	3,422	1.000	3,422	-4.9%	152,387,519	0.9%	22.46	-5.7%	PY16-PY20	-6.0%	PY16-PY18	-5.0%
2017	1	3,199	1.002	3,206	-6.3%	154,577,090	1.4%	20.74	-7.7%	PY17-PY20	-5.9%	PY17-PY18	-2.4%
2018	1	3,260	1.008	3,286	2.5%	162,246,692	5.0%	20.25	-2.4%	PY18-PY20	-7.3%		
2019	1	2,877	1.036	2,979	-9.3%	159,487,928	-1.7%	18.68	-7.8%				
2020	1	2,588	1.036	2,680	-10.0%	153,954,786	-3.5%	17.41	-6.8%	PY19-PY20	-6.8%		
2010	2 (Contracting)	3,935	1.000	3,935	0.0%	198,220,499	0.0%	19.85	0.0%	PY10-PY20	-7.6%	PY10-PY18	-7.7%
2011	2	3,911	1.000	3,911	-0.6%	212,057,781	7.0%	18.44	-7.1%	PY11-PY20	-7.6%	PY11-PY18	-7.7%
2012	2	3,550	1.000	3,550	-9.2%	211,555,433	-0.2%	16.78	-9.0%	PY12-PY20	-7.6%	PY12-PY18	-7.7%
2013	2	3,463	1.000	3,463	-2.5%	216,148,639	2.2%	16.02	-4.5%	PY13-PY20	-7.6%	PY13-PY18	-7.9%
2014	2	3,400	1.000	3,400	-1.8%	231,583,835	7.1%	14.68	-8.4%	PY14-PY20	-7.4%	PY14-PY18	-7.4%
2015	2	3,199	1.000	3,199	-5.9%	245,628,202	6.1%	13.02	-11.3%	PY15-PY20	-6.8%	PY15-PY18	-6.1%
2016	2	3,047	1.001	3,050	-4.7%	255,123,827	3.9%	11.96	-8.1%	PY16-PY20	-6.8%	PY16-PY18	-5.1%
2017	2	3,008	1.002	3,015	-1.1%	267,309,912	4.8%	11.28	-5.7%	PY17-PY20	-7.2%	PY17-PY18	-4.6%
2018	2	2,998	1.008	3,021	0.2%	280,734,379	5.0%	10.76	-4.6%	PY18-PY20	-8.0%		
2019	2	2,621	1.024	2,684	-11.2%	278,495,013	-0.8%	9.64	-10.4%				
2020	2	2,472	1.024	2,531	-5.7%	277,804,733	-0.2%	9.11	-5.5%	PY19-PY20	-5.5%		
2010	3 (Other)	15,720	1.000	15,720	0.0%	484,505,771	0.0%	32.45	0.0%	PY10-PY20	-6.1%	PY10-PY18	-5.7%
2011	3	14,890	1.000	14,890	-5.3%	493,344,157	1.8%	30.18	-7.0%	PY11-PY20	-6.2%	PY11-PY18	-5.7%
2012	3	14,107	1.000	14,107	-5.3%	489,123,711	-0.9%	28.84	-4.4%	PY12-PY20	-6.5%	PY12-PY18	-5.9%
2013	3	14,383	1.000	14,383	2.0%	502,544,437	2.7%	28.62	-0.8%	PY13-PY20	-6.8%	PY13-PY18	-6.2%
2014	3	13,559	1.000	13,559	-5.7%	522,581,550	4.0%	25.95	-9.3%	PY14-PY20	-6.6%	PY14-PY18	-5.5%
2015	3	13,127	1.000	13,127	-3.2%	547,877,003	4.8%	23.96	-7.7%	PY15-PY20	-6.6%	PY15-PY18	-4.8%
2016	3	12,676	1.000	12,676	-3.4%	562,889,924	2.7%	22.52	-6.0%	PY16-PY20	-7.0%	PY16-PY18	-4.2%
2017	3	12,720	1.002	12,745	0.5%	593,911,683	5.5%	21.46	-4.7%	PY17-PY20	-7.8%	PY17-PY18	-3.6%
2018	3	12,777	1.007	12,872	1.0%	622,570,505	4.8%	20.68	-3.6%	PY18-PY20	-9.1%		
2019	3	11,061	1.031	11,403	-11.4%	630,296,133	1.2%	18.09	-12.5%				
2020	3	10,523	1.031	10,848	-4.9%	634,601,187	0.7%	17.09	-5.5%	PY19-PY20	-5.5%		

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)



◆ Manufacturing ■ Contracting ▲ Other