Actuarial Committee

Meeting Agenda

Date	Time	Location	Staff Contact
December 5, 2018	9:30 AM	WCIRB California 1221 Broadway, Suite 900 Oakland, CA	David M. Bellusci

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To Members of the Actuarial Committee, WCIRB Members and All Interested Parties:

I. Approval of Minutes

Meeting held on September 4, 2018

II. Working Group Meeting Summaries

None

III. Unfinished Business

A. AC02-03-03: Experience of Large Deductible Policies

B. AC16-06-05: Update on Medical Severity Trends by Component

C. AC17-12-02: Legislative Cost Monitoring

IV. New Business

A. AC18-12-01: 9/30/2018 Experience – Review of Methodologies

B. AC18-12-02: Review of Medical On-level Adjustments

C. AC18-12-03: RMS Terrorism Risk Assessment

D. AC18-12-04: Potential Changes to Filing Schedule

E. AC18-12-05: Potential 2019 Actuarial and Research Study Projects

F. AC18-12-06: 2019 Schedule of Meetings

V. Matters Arising at Time of Meeting

VI. Next Meeting Date: TBD

VII. Adjournment

Antitrust Notice

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Notice

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Item AC02-03-03
Experience of Large Deductible Policies

Beginning with the year 2000 evaluation, the WCIRB has issued annual data calls for calendar year premium and pure premium data and December 31 evaluations of accident year loss, allocated loss adjustment expense, and claim count experience for large deductible policies.[1] Annually, the Committee reviews the summarized large deductible experience. In these annual reviews, the Committee generally found (a) the percentage of business written on a large deductible basis had been relatively stable, (b) claim reporting and development patterns for experience written on a large deductible basis were generally similar to those of non-large deductible policies, and (c) the impact of excluding the large deductible experience from the rate level calculation has generally been relatively modest. As a result, the Committee has generally agreed that no adjustment to statewide experience to address large deductibles is necessary. The Committee also agreed that annual reviews of updated large deductible experience should continue and the results monitored and presented to the Committee.

Included as Exhibits 1 through 7 is the summary of December 31, 2017 large deductible experience. For comparison purposes, Exhibits 1 through 7 also include analogous information summarizing the non-large deductible experience of insurers writing a large volume of large deductible experience, the experience of all non-large deductible policies, and the total statewide experience.

[1] A large deductible policy is defined as having a deductible amount per claim or accident of at least $100,000.

Distribution of Calendar Year Premium and Losses

Written Premium at Insurer Rate Level

Calendar	LD Insurers		Other	
Year	Large Ded.[1]	Non-LD	Non-LD	All
2006	36.3%	23.7%	40.0%	100.0%
2007	36.2%	26.5%	37.3%	100.0%
2008	33.1%	29.2%	37.7%	100.0%
2009	29.8%	34.1%	36.1%	100.0%
2010	33.2%	32.4%	34.5%	100.0%
2011	33.6%	35.1%	31.3%	100.0%
2012	35.1%	33.7%	31.2%	100.0%
2013	37.2%	28.8%	34.0%	100.0%
2014	36.9%	26.7%	36.4%	100.0%
2015	34.5%	27.3%	38.2%	100.0%
2016	32.9%	32.6%	34.6%	100.0%
2017	33.3%	35.3%	31.4%	100.0%

Earned Premium at Insurer Rate Level

Calendar	LD Insurers		Other	
Year	Large Ded.[1]	Non-LD	Non-LD	All
2006	37.3%	24.4%	38.3%	100.0%
2007	36.3%	26.7%	37.0%	100.0%
2008	34.7%	28.4%	36.9%	100.0%
2009	32.0%	32.8%	35.2%	100.0%
2010	33.7%	32.0%	34.3%	100.0%
2011	33.4%	35.5%	31.1%	100.0%
2012	35.0%	34.5%	30.5%	100.0%
2013	36.8%	30.0%	33.2%	100.0%
2014	36.3%	26.6%	37.1%	100.0%
2015	34.3%	27.7%	38.1%	100.0%
2016	33.9%	32.6%	33.5%	100.0%
2017	33.1%	35.5%	31.3%	100.0%

Written Premium at Pure Premium Rate Level

Calendar	LD Insurers		Other	
Year	Large Ded.[1]	Non-LD	Non-LD	All
2006	36.7%	25.2%	38.2%	100.0%
2007	37.7%	28.2%	34.2%	100.0%
2008	34.9%	30.3%	34.8%	100.0%
2009	32.5%	34.9%	32.6%	100.0%
2010	37.6%	33.2%	29.1%	100.0%
2011	37.7%	35.9%	26.4%	100.0%
2012	40.7%	32.5%	26.8%	100.0%
2013	42.1%	27.5%	30.5%	100.0%
2014	41.6%	25.9%	32.5%	100.0%
2015	39.1%	26.8%	34.1%	100.0%
2016	38.8%	31.4%	29.8%	100.0%
2017	39.3%	33.5%	27.2%	100.0%

Earned Premium at Pure Premium Rate Level

Calendar	LD Insurers		Other	
Year	Large Ded.[1]	Non-LD	Non-LD	All
2006	37.1%	26.6%	36.4%	100.0%
2007	37.2%	28.5%	34.4%	100.0%
2008	36.1%	29.1%	34.7%	100.0%
2009	35.6%	32.9%	31.5%	100.0%
2010	37.8%	33.0%	29.2%	100.0%
2011	37.7%	36.3%	26.1%	100.0%
2012	40.3%	33.5%	26.2%	100.0%
2013	41.7%	28.9%	29.5%	100.0%
2014	41.3%	25.5%	33.2%	100.0%
2015	39.5%	26.8%	33.7%	100.0%
2016	39.5%	31.3%	29.1%	100.0%
2017	39.0%	33.7%	27.3%	100.0%

Paid Losses

Calendar	LD Insurers		Other	
Year	Large Ded.[1]	Non-LD	Non-LD	All
2006	38.9%	17.6%	43.5%	100.0%
2007	34.5%	22.5%	43.0%	100.0%
2008	33.0%	24.9%	42.1%	100.0%
2009	32.8%	27.6%	39.6%	100.0%
2010	33.5%	26.2%	40.3%	100.0%
2011	32.8%	30.5%	36.7%	100.0%
2012	32.6%	31.8%	35.6%	100.0%
2013	33.7%	29.9%	36.5%	100.0%
2014	35.6%	30.1%	34.3%	100.0%
2015	36.3%	29.7%	34.0%	100.0%
2016	37.3%	31.4%	31.2%	100.0%
2017	37.8%	31.1%	31.1%	100.0%

Incurred Losses

Calendar	LD Insurers		Other	
Year	Large Ded.[1]	Non-LD	Non-LD	All
2006	37.9%	22.6%	39.5%	100.0%
2007	34.6%	24.5%	40.9%	100.0%
2008	38.2%	29.2%	32.6%	100.0%
2009	25.8%	41.7%	32.5%	100.0%
2010	36.1%	32.7%	31.2%	100.0%
2011	38.5%	38.7%	22.7%	100.0%
2012	35.3%	37.5%	27.2%	100.0%
2013	38.0%	32.2%	29.8%	100.0%
2014	38.7%	27.8%	33.5%	100.0%
2015	41.8%	24.2%	34.0%	100.0%
2016	40.6%	29.3%	30.1%	100.0%
2017	42.6%	31.8%	25.6%	100.0%

Notes: [1] Large deductible policies are defined as policies with a deductible amount per claim or accident of at least $100,000.

Source: Based on WCIRB's quarterly and large deductible data calls.

Policy Year Ratios of Premiums at Insurer Rate Level to Pure Premium Level

Policy	Written Premium				Earned Premium			
	LD Insurers		Other		LD Insurers		Other	
Year	Large Ded.[1]	Non-LD	Non-LD	All	Large Ded.[1]	Non-LD	Non-LD	All
2006	1.452	1.462	1.541	1.486	1.473	1.419	1.539	1.481
2007	1.409	1.449	1.600	1.485	1.412	1.460	1.600	1.490
2008	1.293	1.370	1.537	1.394	1.299	1.360	1.538	1.394
2009	1.246	1.313	1.575	1.363	1.244	1.323	1.580	1.365
2010	1.218	1.351	1.680	1.381	1.218	1.354	1.683	1.382
2011	1.272	1.416	1.735	1.432	1.274	1.421	1.735	1.432
2012	0.961	1.157	1.271	1.103	0.962	1.156	1.272	1.103
2013	1.015	1.212	1.283	1.150	1.016	1.212	1.285	1.151
2014	0.949	1.141	1.254	1.097	0.949	1.142	1.253	1.098
2015	0.987	1.139	1.282	1.122	0.987	1.143	1.284	1.122
2016	1.000	1.182	1.366	1.161	1.002	1.186	1.368	1.162
2017	1.026	1.217	1.374	1.182	0.995	1.219	1.403	1.178

Notes: [1] Large deductible policies are defined as policies with a deductible amount per claim or accident of at least $100,000.

Source: Based on WCIRB's quarterly and large deductible data calls.

Calendar/Accident Year Loss Ratios as of December 31, 2016

Insurers with Large Deductible Experience [1]:

	Large Deductible Experience					Non-Large Deductible Experience				
	Indemnity		Medical [2]		Total	Indemnity		Medical [2]		Total
CY/AY	Paid	Incurred	Paid	Incurred	Incurred [3]	Paid	Incurred	Paid	Incurred	Incurred [3]
2006	0.147	0.154	0.211	0.229	0.461	0.142	0.148	0.212	0.229	0.395
2007	0.201	0.210	0.294	0.323	0.627	0.200	0.209	0.302	0.328	0.566
2008	0.256	0.272	0.364	0.406	0.729	0.258	0.273	0.384	0.424	0.747
2009	0.330	0.352	0.455	0.507	0.911	0.276	0.295	0.418	0.464	0.825
2010	0.302	0.323	0.414	0.463	0.840	0.281	0.303	0.436	0.482	0.864
2011	0.270	0.294	0.373	0.428	0.799	0.248	0.272	0.383	0.433	0.801
2012	0.242	0.269	0.310	0.359	0.732	0.201	0.225	0.302	0.348	0.677
2013	0.187	0.213	0.229	0.274	0.682	0.161	0.184	0.225	0.270	0.627
2014	0.166	0.200	0.188	0.239	0.680	0.133	0.162	0.178	0.224	0.552
2015	0.138	0.183	0.156	0.216	0.704	0.103	0.142	0.139	0.200	0.562
2016	0.085	0.136	0.110	0.183	0.677	0.064	0.114	0.095	0.166	0.562
2017	0.028	0.067	0.048	0.122	0.705	0.021	0.063	0.042	0.116	0.617

All Insurers with WC Experience:

	All California WC Experience					All Non-Large Deductible Experience				
	Indemnity		Medical [2]		Total	Indemnity		Medical [2]		Total
CY/AY	Paid	Incurred	Paid	Incurred	Incurred [3]	Paid	Incurred	Paid	Incurred	Incurred [3]
2006	0.148	0.157	0.211	0.233	0.438	0.149	0.159	0.211	0.236	0.425
2007	0.201	0.214	0.292	0.327	0.602	0.202	0.216	0.291	0.329	0.588
2008	0.252	0.270	0.359	0.402	0.732	0.250	0.269	0.357	0.400	0.733
2009	0.288	0.311	0.410	0.462	0.846	0.268	0.291	0.388	0.440	0.814
2010	0.272	0.295	0.394	0.441	0.817	0.257	0.280	0.383	0.430	0.805
2011	0.245	0.269	0.357	0.409	0.776	0.232	0.256	0.348	0.399	0.764
2012	0.210	0.236	0.292	0.342	0.684	0.193	0.219	0.282	0.332	0.659
2013	0.170	0.195	0.223	0.269	0.641	0.160	0.185	0.219	0.266	0.616
2014	0.144	0.176	0.178	0.228	0.608	0.132	0.163	0.172	0.222	0.568
2015	0.115	0.158	0.140	0.204	0.618	0.103	0.145	0.132	0.198	0.572
2016	0.071	0.122	0.097	0.172	0.595	0.063	0.114	0.090	0.166	0.553
2017	0.023	0.067	0.043	0.121	0.617	0.021	0.066	0.040	0.121	0.574

Notes: [1] Large deductible policies are defined as policies with a deductible amount per claim or accident of at least $100,000.

[2] Including MCCP.

[3] Including IBNR.

Source: Based on WCIRB's quarterly and large deductible data calls.

Incurred Indemnity Development

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	2.452	1.369	1.137	1.052	1.031	1.026	1.015	1.008	1.006	1.004	1.006	1.004	1.004
2002	2.431	1.328	1.093	1.044	1.041	1.016	1.008	1.010	1.006	1.007	1.005	1.005	1.003
2003	2.126	1.247	1.090	1.064	1.026	1.018	1.016	1.009	1.010	1.009	1.006	1.008	1.005
2004	1.744	1.212	1.101	1.047	1.035	1.024	1.023	1.013	1.014	1.009	1.010	1.006	1.003
2005	1.862	1.265	1.110	1.062	1.050	1.032	1.025	1.016	1.014	1.011	1.008	1.005	
2006	2.066	1.304	1.123	1.085	1.053	1.034	1.024	1.017	1.014	1.011	1.006		
2007	2.027	1.318	1.148	1.078	1.052	1.042	1.032	1.015	1.014	1.007			
2008	2.075	1.349	1.158	1.079	1.059	1.037	1.026	1.017	1.015				
2009	2.192	1.352	1.158	1.093	1.057	1.033	1.023	1.017					
2010	2.234	1.349	1.159	1.079	1.057	1.028	1.018						
2011	2.159	1.365	1.151	1.077	1.040	1.027							
2012	2.307	1.329	1.144	1.073	1.052								
2013	2.161	1.321	1.146	1.067									
2014	2.279	1.350	1.135										
2015	2.249	1.328											
2016	2.255												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	1.849	1.291	1.073	1.026	1.021	1.021	1.008	1.006	1.003	1.002	1.005	1.005	1.000
2002	1.914	1.207	1.050	1.022	1.033	1.011	1.010	1.010	1.005	1.008	1.003	1.000	1.002
2003	1.532	1.122	1.039	1.041	1.022	1.017	1.013	1.013	1.017	1.008	1.009	1.004	1.001
2004	1.254	1.074	1.061	1.033	1.032	1.020	1.017	1.011	1.015	1.009	1.005	1.006	1.004
2005	1.318	1.199	1.084	1.065	1.045	1.028	1.020	1.021	1.017	1.008	1.004	1.008	
2006	1.725	1.218	1.105	1.063	1.046	1.038	1.026	1.018	1.005	1.005	1.001		
2007	1.752	1.270	1.107	1.054	1.049	1.036	1.022	1.012	1.004	1.002			
2008	1.889	1.268	1.117	1.071	1.041	1.031	1.018	1.008	1.008				
2009	1.893	1.269	1.125	1.074	1.049	1.026	1.015	1.010					
2010	1.917	1.302	1.123	1.067	1.043	1.028	1.015						
2011	1.963	1.249	1.132	1.063	1.039	1.020							
2012	1.941	1.266	1.105	1.060	1.035								
2013	1.862	1.231	1.089	1.041									
2014	1.856	1.234	1.095										
2015	1.896	1.223											
2016	1.818												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	1.873	1.325	1.106	1.035	1.023	1.021	1.014	1.009	1.006	1.007	1.006	1.005	1.003
2002	1.952	1.263	1.069	1.033	1.033	1.018	1.011	1.010	1.010	1.007	1.005	1.003	1.002
2003	1.782	1.187	1.069	1.056	1.033	1.021	1.018	1.015	1.015	1.009	1.006	1.004	1.003
2004	1.448	1.158	1.083	1.042	1.041	1.026	1.028	1.018	1.014	1.007	1.007	1.003	1.001
2005	1.503	1.218	1.098	1.068	1.053	1.040	1.028	1.016	1.012	1.005	1.005	1.006	
2006	1.690	1.247	1.111	1.080	1.053	1.035	1.023	1.015	1.009	1.007	1.004		
2007	1.784	1.273	1.120	1.070	1.049	1.037	1.022	1.012	1.011	1.005			
2008	1.858	1.302	1.136	1.074	1.045	1.030	1.019	1.012	1.009				
2009	1.983	1.293	1.142	1.076	1.048	1.023	1.019	1.014					
2010	1.994	1.315	1.131	1.069	1.045	1.026	1.016						
2011	1.997	1.277	1.133	1.061	1.037	1.022							
2012	1.992	1.279	1.113	1.063	1.041								
2013	1.931	1.259	1.111	1.055									
2014	1.960	1.278	1.115										
2015	1.969	1.260											
2016	1.941												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	1.800	1.311	1.097	1.029	1.020	1.019	1.013	1.010	1.007	1.009	1.006	1.006	1.003
2002	1.818	1.245	1.061	1.029	1.030	1.018	1.013	1.010	1.012	1.007	1.005	1.002	1.002
2003	1.697	1.164	1.060	1.052	1.036	1.023	1.019	1.018	1.018	1.008	1.007	1.003	1.002
2004	1.350	1.135	1.076	1.039	1.043	1.028	1.030	1.020	1.015	1.006	1.005	1.002	1.000
2005	1.376	1.196	1.090	1.070	1.055	1.045	1.030	1.016	1.011	1.002	1.003	1.006	
2006	1.577	1.217	1.104	1.077	1.052	1.036	1.022	1.014	1.006	1.005	1.002		
2007	1.687	1.252	1.107	1.065	1.048	1.034	1.016	1.010	1.010	1.003			
2008	1.777	1.280	1.126	1.072	1.037	1.026	1.015	1.009	1.006				
2009	1.896	1.264	1.134	1.068	1.043	1.018	1.017	1.013					
2010	1.889	1.298	1.116	1.063	1.037	1.025	1.015						
2011	1.926	1.233	1.123	1.053	1.035	1.019							
2012	1.847	1.249	1.094	1.057	1.033								
2013	1.816	1.224	1.090	1.047									
2014	1.808	1.234	1.101										
2015	1.831	1.219											
2016	1.788												

Incurred Medical Development *

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	2.111	1.302	1.129	1.067	1.047	1.056	1.043	1.026	1.030	1.019	1.013	1.011	1.014
2002	1.992	1.221	1.066	1.050	1.060	1.043	1.032	1.028	1.023	1.020	1.016	1.015	0.997
2003	1.726	1.128	1.075	1.076	1.051	1.035	1.035	1.029	1.023	1.015	1.012	1.012	1.002
2004	1.528	1.180	1.112	1.075	1.057	1.049	1.039	1.028	1.029	1.017	1.012	1.007	0.997
2005	1.558	1.180	1.094	1.077	1.065	1.049	1.035	1.031	1.019	1.019	1.009	1.003	
2006	1.618	1.200	1.124	1.086	1.054	1.044	1.036	1.027	1.018	1.005	1.002		
2007	1.579	1.224	1.131	1.078	1.069	1.067	1.036	1.023	1.008	1.004			
2008	1.631	1.224	1.131	1.091	1.075	1.048	1.034	1.016	1.005				
2009	1.646	1.237	1.130	1.104	1.072	1.041	1.022	1.010					
2010	1.711	1.235	1.143	1.078	1.056	1.032	1.016						
2011	1.688	1.269	1.122	1.074	1.042	1.031							
2012	1.712	1.206	1.110	1.061	1.037								
2013	1.607	1.185	1.105	1.044									
2014	1.623	1.178	1.090										
2015	1.583	1.172											
2016	1.608												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	1.663	1.254	1.075	1.039	1.044	1.041	1.029	1.023	1.018	1.013	1.012	1.015	1.013
2002	1.746	1.151	1.053	1.025	1.060	1.017	1.026	1.022	1.025	1.011	1.013	1.008	1.000
2003	1.318	1.090	1.033	1.060	1.043	1.038	1.030	1.023	1.021	1.016	1.015	1.000	0.998
2004	1.241	1.061	1.091	1.071	1.058	1.045	1.037	1.023	1.021	1.014	1.006	1.002	0.997
2005	1.235	1.156	1.066	1.073	1.067	1.044	1.033	1.030	1.010	1.007	1.004	1.000	
2006	1.404	1.183	1.107	1.068	1.061	1.043	1.040	1.020	1.012	1.000	0.998		
2007	1.483	1.216	1.107	1.063	1.063	1.044	1.035	1.017	1.004	0.996			
2008	1.537	1.180	1.105	1.097	1.061	1.042	1.027	1.010	1.005				
2009	1.528	1.205	1.143	1.088	1.063	1.030	1.014	1.003					
2010	1.531	1.243	1.136	1.084	1.047	1.022	1.007						
2011	1.585	1.213	1.120	1.075	1.035	1.016							
2012	1.546	1.181	1.094	1.059	1.028								
2013	1.497	1.144	1.087	1.037									
2014	1.438	1.156	1.056										
2015	1.494	1.134											
2016	1.420												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	1.658	1.274	1.107	1.047	1.041	1.045	1.040	1.034	1.035	1.022	1.017	1.015	1.013
2002	1.632	1.203	1.059	1.039	1.056	1.040	1.036	1.029	1.028	1.022	1.014	1.010	0.999
2003	1.567	1.119	1.057	1.059	1.060	1.042	1.042	1.037	1.029	1.018	1.011	1.003	0.998
2004	1.351	1.135	1.113	1.081	1.060	1.061	1.043	1.032	1.026	1.012	1.006	1.001	0.996
2005	1.389	1.172	1.087	1.074	1.084	1.055	1.045	1.032	1.020	1.006	1.006	0.999	
2006	1.460	1.196	1.103	1.081	1.066	1.048	1.040	1.022	1.011	1.000	1.001		
2007	1.518	1.204	1.124	1.081	1.070	1.050	1.032	1.018	1.004	1.008			
2008	1.527	1.212	1.129	1.092	1.061	1.041	1.025	1.010	1.004				
2009	1.604	1.227	1.140	1.087	1.061	1.029	1.016	1.007					
2010	1.620	1.245	1.134	1.077	1.045	1.025	1.012						
2011	1.667	1.222	1.125	1.069	1.034	1.016							
2012	1.592	1.188	1.092	1.056	1.031								
2013	1.559	1.150	1.086	1.039									
2014	1.523	1.159	1.079										
2015	1.511	1.146											
2016	1.498												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	1.617	1.269	1.101	1.040	1.040	1.041	1.038	1.038	1.038	1.023	1.019	1.016	1.012
2002	1.586	1.198	1.057	1.035	1.054	1.038	1.038	1.029	1.030	1.022	1.013	1.008	0.999
2003	1.519	1.116	1.050	1.051	1.064	1.045	1.045	1.041	1.032	1.019	1.011	0.999	0.996
2004	1.285	1.115	1.110	1.085	1.060	1.068	1.045	1.034	1.024	1.010	1.002	0.998	0.996
2005	1.316	1.163	1.083	1.072	1.095	1.059	1.051	1.033	1.021	0.998	1.005	0.996	
2006	1.402	1.194	1.092	1.079	1.072	1.050	1.042	1.020	1.008	0.997	1.000		
2007	1.488	1.194	1.119	1.083	1.070	1.042	1.030	1.015	1.002	1.010			
2008	1.482	1.206	1.128	1.093	1.054	1.037	1.021	1.007	1.004				
2009	1.584	1.222	1.144	1.078	1.055	1.023	1.012	1.006					
2010	1.575	1.250	1.130	1.077	1.039	1.021	1.010						
2011	1.657	1.198	1.126	1.066	1.029	1.009							
2012	1.534	1.178	1.083	1.053	1.028								
2013	1.533	1.131	1.075	1.037									
2014	1.473	1.149	1.072										
2015	1.476	1.133											
2016	1.444												

* Incurred medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

Paid Indemnity Development

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	3.712	1.867	1.353	1.172	1.087	1.057	1.035	1.025	1.016	1.012	1.010	1.011	1.008
2002	3.871	1.839	1.344	1.144	1.087	1.043	1.032	1.018	1.017	1.012	1.012	1.010	1.007
2003	3.613	1.758	1.276	1.144	1.071	1.038	1.027	1.022	1.015	1.016	1.012	1.012	1.009
2004	3.080	1.574	1.269	1.122	1.070	1.047	1.034	1.029	1.025	1.019	1.013	1.011	1.010
2005	2.906	1.562	1.237	1.123	1.082	1.055	1.045	1.035	1.023	1.022	1.015	1.010	
2006	3.135	1.559	1.238	1.143	1.087	1.064	1.045	1.032	1.027	1.022	1.014		
2007	3.001	1.554	1.262	1.144	1.095	1.069	1.049	1.036	1.032	1.019			
2008	3.057	1.614	1.276	1.151	1.102	1.070	1.047	1.031	1.023				
2009	3.244	1.615	1.284	1.165	1.101	1.066	1.047	1.032					
2010	3.236	1.627	1.285	1.157	1.100	1.065	1.040						
2011	3.306	1.619	1.285	1.155	1.087	1.059							
2012	3.265	1.616	1.267	1.142	1.099								
2013	3.270	1.609	1.271	1.138									
2014	3.366	1.660	1.267										
2015	3.410	1.631											
2016	3.447												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	3.838	1.837	1.335	1.145	1.076	1.051	1.031	1.023	1.015	1.013	1.010	1.008	1.005
2002	3.691	1.886	1.293	1.131	1.070	1.048	1.033	1.018	1.015	1.012	1.013	1.008	1.006
2003	3.358	1.767	1.242	1.116	1.074	1.046	1.026	1.024	1.024	1.020	1.016	1.011	1.010
2004	3.050	1.531	1.220	1.117	1.077	1.041	1.034	1.033	1.023	1.022	1.011	1.015	1.007
2005	2.870	1.516	1.261	1.128	1.071	1.061	1.044	1.039	1.027	1.020	1.014	1.014	
2006	2.864	1.580	1.246	1.142	1.092	1.064	1.048	1.036	1.026	1.019	1.012		
2007	2.995	1.615	1.246	1.132	1.088	1.065	1.042	1.032	1.027	1.014			
2008	3.040	1.590	1.269	1.145	1.088	1.058	1.043	1.026	1.024				
2009	3.014	1.628	1.268	1.153	1.091	1.060	1.044	1.028					
2010	3.133	1.635	1.285	1.146	1.090	1.063	1.039						
2011	3.160	1.610	1.267	1.148	1.087	1.051							
2012	3.030	1.600	1.265	1.132	1.085								
2013	3.098	1.602	1.257	1.125									
2014	3.183	1.631	1.250										
2015	3.278	1.628											
2016	3.147												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	3.545	1.796	1.322	1.145	1.077	1.051	1.034	1.024	1.017	1.014	1.012	1.011	1.008
2002	3.590	1.782	1.290	1.127	1.075	1.046	1.031	1.020	1.018	1.015	1.014	1.008	1.008
2003	3.370	1.696	1.249	1.128	1.072	1.043	1.030	1.026	1.023	1.021	1.015	1.012	1.009
2004	2.914	1.522	1.236	1.116	1.073	1.049	1.041	1.035	1.030	1.020	1.015	1.011	1.009
2005	2.734	1.512	1.235	1.121	1.079	1.060	1.047	1.042	1.028	1.020	1.015	1.013	
2006	2.866	1.539	1.229	1.135	1.090	1.068	1.050	1.035	1.026	1.018	1.016		
2007	2.905	1.547	1.246	1.140	1.092	1.066	1.046	1.033	1.027	1.020			
2008	2.927	1.577	1.271	1.150	1.092	1.060	1.041	1.027	1.023				
2009	3.069	1.616	1.280	1.156	1.092	1.060	1.043	1.031					
2010	3.157	1.628	1.281	1.147	1.091	1.060	1.038						
2011	3.208	1.613	1.266	1.144	1.087	1.056							
2012	3.137	1.597	1.262	1.137	1.087								
2013	3.169	1.606	1.260	1.129									
2014	3.229	1.635	1.257										
2015	3.278	1.618											
2016	3.235												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	3.572	1.772	1.313	1.135	1.074	1.048	1.033	1.023	1.017	1.015	1.013	1.011	1.009
2002	3.501	1.766	1.271	1.121	1.071	1.048	1.031	1.020	1.018	1.016	1.014	1.007	1.008
2003	3.305	1.670	1.237	1.121	1.073	1.045	1.032	1.028	1.027	1.023	1.016	1.012	1.009
2004	2.844	1.498	1.223	1.113	1.075	1.050	1.045	1.039	1.032	1.020	1.015	1.011	1.009
2005	2.653	1.492	1.233	1.119	1.077	1.064	1.048	1.047	1.031	1.018	1.015	1.015	
2006	2.765	1.528	1.223	1.131	1.092	1.070	1.052	1.037	1.025	1.016	1.017		
2007	2.856	1.544	1.238	1.138	1.091	1.064	1.044	1.032	1.025	1.020			
2008	2.869	1.558	1.269	1.150	1.087	1.055	1.038	1.026	1.023				
2009	2.981	1.616	1.278	1.151	1.087	1.057	1.041	1.030					
2010	3.113	1.629	1.279	1.141	1.085	1.057	1.037						
2011	3.155	1.609	1.256	1.138	1.087	1.055							
2012	3.061	1.584	1.259	1.133	1.079								
2013	3.104	1.605	1.253	1.123									
2014	3.143	1.618	1.249										
2015	3.194	1.608											
2016	3.103												

Paid Medical Development *

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	3.220	1.478	1.203	1.119	1.077	1.059	1.050	1.037	1.031	1.031	1.023	1.023	1.023
2002	3.058	1.372	1.165	1.107	1.076	1.056	1.044	1.032	1.031	1.025	1.025	1.020	1.016
2003	2.665	1.304	1.172	1.112	1.075	1.050	1.041	1.034	1.029	1.030	1.021	1.019	1.018
2004	2.417	1.378	1.188	1.122	1.081	1.064	1.047	1.040	1.037	1.027	1.024	1.019	1.015
2005	2.372	1.335	1.203	1.129	1.093	1.066	1.053	1.051	1.031	1.031	1.021	1.017	
2006	2.456	1.380	1.213	1.136	1.087	1.067	1.056	1.039	1.035	1.026	1.019		
2007	2.374	1.382	1.218	1.131	1.098	1.082	1.053	1.041	1.033	1.022			
2008	2.335	1.411	1.220	1.144	1.110	1.076	1.053	1.038	1.028				
2009	2.477	1.427	1.244	1.163	1.106	1.073	1.051	1.035					
2010	2.508	1.443	1.260	1.153	1.099	1.070	1.042						
2011	2.576	1.465	1.245	1.149	1.094	1.061							
2012	2.626	1.458	1.244	1.145	1.093								
2013	2.568	1.454	1.235	1.137									
2014	2.535	1.449	1.222										
2015	2.572	1.427											
2016	2.547												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	2.754	1.482	1.191	1.104	1.070	1.055	1.047	1.039	1.027	1.028	1.021	1.021	1.015
2002	2.916	1.406	1.178	1.098	1.074	1.055	1.047	1.025	1.025	1.022	1.022	1.015	1.013
2003	2.449	1.356	1.153	1.120	1.078	1.060	1.042	1.035	1.032	1.032	1.023	1.015	1.015
2004	2.367	1.260	1.194	1.130	1.090	1.064	1.053	1.042	1.033	1.024	1.024	1.021	1.014
2005	2.072	1.346	1.212	1.140	1.085	1.072	1.056	1.048	1.031	1.027	1.018	1.013	
2006	2.255	1.397	1.219	1.139	1.098	1.068	1.058	1.035	1.033	1.027	1.014		
2007	2.383	1.430	1.230	1.136	1.097	1.072	1.051	1.042	1.029	1.017			
2008	2.312	1.415	1.240	1.148	1.100	1.070	1.054	1.033	1.022				
2009	2.308	1.444	1.248	1.162	1.107	1.066	1.046	1.029					
2010	2.420	1.470	1.273	1.152	1.100	1.067	1.042						
2011	2.517	1.470	1.242	1.148	1.095	1.051							
2012	2.499	1.470	1.253	1.142	1.085								
2013	2.418	1.469	1.233	1.123									
2014	2.499	1.464	1.216										
2015	2.565	1.440											
2016	2.503												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	2.842	1.472	1.212	1.109	1.076	1.057	1.045	1.038	1.034	1.030	1.022	1.022	1.022
2002	2.887	1.416	1.168	1.112	1.072	1.054	1.046	1.034	1.032	1.024	1.023	1.018	1.016
2003	2.592	1.318	1.170	1.112	1.074	1.057	1.048	1.041	1.030	1.030	1.026	1.019	1.016
2004	2.298	1.345	1.189	1.123	1.092	1.070	1.055	1.040	1.036	1.034	1.024	1.018	1.015
2005	2.251	1.345	1.209	1.138	1.095	1.073	1.054	1.049	1.038	1.031	1.021	1.019	
2006	2.340	1.399	1.220	1.140	1.099	1.068	1.056	1.042	1.033	1.025	1.020		
2007	2.416	1.413	1.230	1.142	1.097	1.075	1.057	1.041	1.031	1.022			
2008	2.325	1.421	1.241	1.148	1.103	1.072	1.051	1.035	1.027				
2009	2.408	1.447	1.251	1.160	1.104	1.067	1.046	1.032					
2010	2.479	1.468	1.265	1.152	1.096	1.066	1.043						
2011	2.580	1.470	1.248	1.145	1.095	1.058							
2012	2.561	1.468	1.247	1.143	1.087								
2013	2.492	1.464	1.238	1.130									
2014	2.518	1.462	1.226										
2015	2.533	1.439											
2016	2.479												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	2.878	1.465	1.216	1.106	1.076	1.056	1.045	1.039	1.036	1.029	1.020	1.021	1.022
2002	2.845	1.432	1.169	1.115	1.070	1.055	1.047	1.035	1.032	1.022	1.020	1.018	1.016
2003	2.567	1.324	1.169	1.112	1.077	1.061	1.051	1.044	1.030	1.030	1.028	1.019	1.016
2004	2.241	1.326	1.188	1.129	1.098	1.074	1.060	1.040	1.036	1.037	1.024	1.017	1.015
2005	2.180	1.354	1.218	1.142	1.097	1.078	1.055	1.047	1.043	1.030	1.021	1.020	
2006	2.270	1.420	1.224	1.142	1.106	1.069	1.056	1.044	1.032	1.024	1.021		
2007	2.461	1.432	1.237	1.148	1.096	1.070	1.059	1.042	1.030	1.022			
2008	2.320	1.427	1.252	1.150	1.099	1.070	1.050	1.034	1.026				
2009	2.371	1.458	1.256	1.159	1.103	1.063	1.043	1.031					
2010	2.463	1.485	1.268	1.151	1.094	1.064	1.043						
2011	2.583	1.473	1.249	1.143	1.095	1.057							
2012	2.520	1.474	1.249	1.141	1.083								
2013	2.448	1.470	1.240	1.126									
2014	2.508	1.470	1.228										
2015	2.510	1.445											
2016	2.441												

* Paid medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

Paid ALAE (Excluding MCCP) Development *

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001						1.098	1.044	1.042	1.032	1.028	1.022	1.023	1.021
2002					1.127	1.061	1.048	1.035	1.029	1.023	1.022	1.019	1.015
2003				1.191	1.097	1.058	1.046	1.036	1.031	1.026	1.022	1.018	1.015
2004			1.351	1.165	1.100	1.071	1.048	1.038	1.033	1.026	1.022	1.016	1.012
2005		1.785	1.347	1.178	1.118	1.080	1.059	1.048	1.036	1.029	1.023	1.017	
2006	4.628	1.744	1.334	1.189	1.116	1.083	1.060	1.047	1.036	1.025	1.019		
2007	4.057	1.734	1.350	1.191	1.128	1.091	1.063	1.049	1.035	1.026			
2008	4.178	1.759	1.363	1.198	1.135	1.090	1.066	1.045	1.030				
2009	4.586	1.793	1.358	1.210	1.132	1.090	1.060	1.038					
2010	4.680	1.744	1.348	1.199	1.128	1.080	1.053						
2011	4.415	1.749	1.345	1.195	1.113	1.077							
2012	4.584	1.754	1.347	1.183	1.110								
2013	4.568	1.717	1.306	1.159									
2014	4.382	1.670	1.285										
2015	4.350	1.634											
2016	4.381												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001						1.070	1.043	1.037	1.026	1.020	1.019	1.017	1.015
2002					1.098	1.063	1.050	1.029	1.025	1.020	1.019	1.016	1.013
2003				1.161	1.085	1.071	1.041	1.032	1.027	1.022	1.019	1.015	1.012
2004			1.305	1.150	1.103	1.062	1.048	1.033	1.030	1.024	1.017	1.016	1.011
2005		1.625	1.289	1.185	1.106	1.076	1.051	1.046	1.035	1.025	1.022	1.016	
2006	3.124	1.659	1.330	1.179	1.123	1.076	1.062	1.045	1.034	1.026	1.021		
2007	3.753	1.765	1.341	1.194	1.116	1.087	1.056	1.040	1.029	1.020			
2008	4.186	1.755	1.348	1.188	1.119	1.081	1.057	1.039	1.029				
2009	4.072	1.753	1.338	1.192	1.121	1.082	1.052	1.037					
2010	4.100	1.762	1.348	1.190	1.118	1.076	1.047						
2011	4.219	1.721	1.332	1.192	1.111	1.070							
2012	4.196	1.725	1.341	1.179	1.107								
2013	4.345	1.717	1.311	1.173									
2014	4.252	1.644	1.294										
2015	3.964	1.640											
2016	4.196												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001	4.001	1.797	1.384	1.182	1.121	1.084	1.044	1.039	1.028	1.024	1.020	1.017	1.017
2002	3.822	1.805	1.318	1.177	1.109	1.064	1.047	1.032	1.026	1.021	1.018	1.017	1.014
2003	3.950	1.705	1.329	1.171	1.101	1.063	1.045	1.034	1.029	1.023	1.020	1.017	1.013
2004	4.073	1.734	1.339	1.161	1.101	1.069	1.048	1.036	1.030	1.025	1.020	1.016	1.012
2005	3.932	1.740	1.330	1.181	1.113	1.079	1.056	1.044	1.035	1.027	1.022	1.016	
2006	3.976	1.727	1.330	1.186	1.120	1.081	1.060	1.046	1.035	1.025	1.019		
2007	3.956	1.716	1.340	1.194	1.126	1.088	1.060	1.045	1.032	1.023			
2008	4.015	1.758	1.367	1.199	1.126	1.085	1.060	1.040	1.029				
2009	4.322	1.775	1.354	1.199	1.126	1.083	1.054	1.037					
2010	4.300	1.737	1.342	1.190	1.120	1.075	1.049						
2011	4.233	1.728	1.350	1.195	1.109	1.072							
2012	4.323	1.765	1.343	1.173	1.105								
2013	4.504	1.704	1.296	1.160									
2014	4.281	1.629	1.284										
2015	4.028	1.628											
2016	4.227												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001						1.074	1.044	1.037	1.026	1.020	1.019	1.016	1.014
2002					1.095	1.068	1.045	1.030	1.024	1.019	1.017	1.014	1.012
2003				1.152	1.106	1.068	1.045	1.031	1.027	1.022	1.018	1.015	1.011
2004			1.325	1.155	1.102	1.066	1.048	1.032	1.030	1.023	1.017	1.015	1.012
2005		1.704	1.309	1.183	1.108	1.077	1.052	1.045	1.034	1.024	1.021	1.016	
2006	3.574	1.710	1.326	1.183	1.124	1.079	1.063	1.044	1.033	1.025	1.020		
2007	3.865	1.701	1.333	1.197	1.124	1.089	1.057	1.041	1.029	1.021			
2008	3.902	1.761	1.370	1.199	1.123	1.081	1.055	1.036	1.028				
2009	4.159	1.761	1.350	1.194	1.121	1.078	1.049	1.036					
2010	4.055	1.731	1.338	1.184	1.114	1.072	1.045						
2011	4.099	1.711	1.327	1.185	1.109	1.070							
2012	4.134	1.710	1.326	1.174	1.105								
2013	4.237	1.678	1.308	1.170									
2014	4.127	1.634	1.295										
2015	3.918	1.629											
2016	4.110												

* Based on private insurer data only.

Paid MCCP Development

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2012	2.517	1.346	1.185	1.084	1.053								
2013	2.410	1.374	1.158	1.080									
2014	2.610	1.337	1.140										
2015	2.388	1.283											
2016	2.357												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2012	2.463	1.323	1.177	1.098	1.052								
2013	2.337	1.350	1.155	1.075									
2014	2.414	1.356	1.130										
2015	2.464	1.298											
2016	2.461												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2012	2.491	1.279	1.156	1.097	1.056								
2013	2.282	1.333	1.169	1.084									
2014	2.430	1.367	1.145										
2015	2.462	1.301											
2016	2.409												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2012	2.466	1.340	1.185	1.093	1.051								
2013	2.417	1.378	1.148	1.074									
2014	2.499	1.339	1.134										
2015	2.424	1.309											
2016	2.463												

Average Incurred Indemnity Per Reported Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						25,870	26,523	26,899	27,123	27,276	27,360	27,496	27,618	27,725
2002					24,122	24,969	25,346	25,540	25,770	25,908	26,048	26,113	26,192	26,252
2003				21,858	23,037	23,550	24,001	24,374	24,586	24,813	25,011	25,121	25,300	25,424
2004			16,443	17,867	18,631	19,246	19,702	20,120	20,370	20,570	20,719	20,896	21,008	21,061
2005		11,735	14,321	15,748	16,648	17,466	17,977	18,406	18,663	18,901	19,087	19,217	19,309	
2006	7,052	11,778	14,942	16,500	17,855	18,712	19,311	19,628	19,928	20,172	20,364	20,482		
2007	7,172	12,180	15,577	17,710	18,958	19,828	20,492	21,128	21,401	21,671	21,820			
2008	7,758	13,025	17,001	19,319	20,683	21,731	22,476	22,993	23,342	23,669				
2009	8,247	14,058	18,150	20,704	22,395	23,527	24,209	24,715	25,097					
2010	8,349	14,125	18,299	20,850	22,318	23,442	23,998	24,384						
2011	8,904	14,534	18,835	21,176	22,534	23,307	23,856							
2012	8,848	14,996	18,972	21,264	22,636	23,681								
2013	9,198	14,895	18,766	21,134	22,358									
2014	9,105	15,593	20,077	22,412										
2015	9,624	16,282	20,606											
2016	9,811	15,998												
2017	9,807													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						25,100	25,546	25,653	25,800	25,874	25,908	25,995	26,055	26,029
2002					22,718	23,347	23,413	23,606	23,820	23,911	24,060	24,085	24,075	24,115
2003				20,775	21,618	22,025	22,401	22,715	22,967	23,318	23,498	23,693	23,755	23,760
2004			15,753	16,674	17,163	17,844	18,149	18,412	18,590	18,855	19,002	19,074	19,174	19,234
2005		11,479	13,353	14,430	15,414	16,020	16,332	16,635	16,938	17,240	17,396	17,504	17,621	
2006	8,387	12,182	14,482	16,097	17,020	17,759	18,401	18,771	19,055	19,192	19,279	19,256		
2007	8,256	12,778	16,002	17,608	18,392	19,236	19,865	20,252	20,499	20,590	20,644			
2008	8,625	14,293	17,785	19,692	21,015	21,747	22,312	22,706	22,872	23,012				
2009	8,710	14,414	17,992	20,026	21,237	22,092	22,671	22,986	23,199					
2010	8,836	14,434	18,274	20,149	21,195	22,050	22,632	22,942						
2011	8,994	14,580	17,500	19,510	20,551	21,249	21,637							
2012	8,975	14,443	17,482	19,123	20,119	20,776								
2013	9,468	14,628	17,521	18,890	19,553									
2014	9,493	14,568	17,379	18,769										
2015	9,743	15,073	17,929											
2016	10,026	15,145												
2017	9,999													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						24,788	25,304	25,665	25,918	26,088	26,274	26,431	26,570	26,650
2002					22,692	23,421	23,839	24,125	24,378	24,632	24,812	24,928	24,983	25,039
2003				21,366	22,544	23,296	23,829	24,274	24,670	25,058	25,290	25,447	25,554	25,630
2004			16,029	17,325	18,031	18,800	19,304	19,853	20,215	20,524	20,655	20,786	20,856	20,884
2005		11,374	13,693	14,997	16,019	16,853	17,504	18,008	18,288	18,515	18,617	18,718	18,823	
2006	8,049	12,066	14,858	16,437	17,709	18,617	19,261	19,664	19,941	20,117	20,257	20,337		
2007	8,162	12,927	16,222	18,053	19,236	20,139	20,871	21,300	21,539	21,768	21,863			
2008	8,618	13,956	17,763	19,976	21,351	22,235	22,839	23,236	23,481	23,693				
2009	8,784	14,599	18,339	20,719	22,178	23,126	23,631	24,052	24,386					
2010	8,768	14,310	18,248	20,396	21,618	22,504	23,039	23,382						
2011	9,160	14,781	18,222	20,304	21,384	22,115	22,551							
2012	9,185	14,691	18,028	19,772	20,893	21,673								
2013	9,431	14,575	17,756	19,502	20,448									
2014	9,376	14,816	18,365	20,226										
2015	9,796	15,477	18,921											
2016	9,987	15,445												
2017	10,172													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						24,333	24,793	25,148	25,413	25,590	25,817	25,982	26,133	26,202
2002					22,135	22,817	23,245	23,566	23,829	24,128	24,323	24,447	24,494	24,547
2003				21,133	22,307	23,169	23,741	24,220	24,705	25,171	25,426	25,604	25,676	25,730
2004			15,833	17,062	17,737	18,589	19,118	19,738	20,160	20,499	20,621	20,727	20,776	20,790
2005		11,191	13,357	14,589	15,678	16,521	17,251	17,798	18,077	18,298	18,352	18,435	18,548	
2006	8,538	12,255	14,852	16,444	17,673	18,611	19,282	19,683	19,949	20,085	20,196	20,254		
2007	8,666	13,371	16,634	18,312	19,466	20,392	21,062	21,395	21,615	21,822	21,887			
2008	9,030	14,464	18,200	20,366	21,752	22,495	23,034	23,367	23,557	23,706				
2009	9,060	14,927	18,500	20,797	22,047	22,901	23,313	23,687	23,994					
2010	8,999	14,462	18,288	20,131	21,224	21,981	22,503	22,821						
2011	9,318	14,978	17,881	19,827	20,759	21,464	21,838							
2012	9,404	14,489	17,468	18,898	19,871	20,492								
2013	9,532	14,378	17,161	18,541	19,318									
2014	9,504	14,377	17,374	18,950										
2015	9,832	15,027	17,952											
2016	10,075	15,124												
2017	10,367													

Average Incurred Medical Per Reported Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												29,943	30,280	30,729
2002											29,210	29,581	29,983	29,878
2003										26,365	26,724	26,979	27,314	27,366
2004									24,573	25,168	25,541	25,845	26,012	25,920
2005								25,086	25,808	26,249	26,759	27,009	27,086	
2006							25,709	26,596	27,283	27,772	27,895	27,916		
2007						27,322	28,893	29,919	30,584	30,799	30,907			
2008					27,767	29,726	31,129	32,156	32,660	32,782				
2009				26,773	29,389	31,428	32,661	33,334	33,632					
2010			24,253	27,392	29,335	30,891	31,794	32,245						
2011		19,562	23,887	26,311	28,054	29,101	29,918							
2012	15,102	19,198	22,434	24,613	25,957	26,826								
2013	15,422	18,666	21,382	23,351	24,242									
2014	14,805	18,161	20,661	22,296										
2015	14,840	17,766	20,133											
2016	15,130	17,802												
2017	14,805													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												28,670	29,027	29,344
2002											28,634	28,905	29,115	29,114
2003										27,306	27,646	28,006	27,979	27,911
2004									24,234	24,646	24,940	25,060	25,111	25,017
2005								23,922	24,492	24,698	24,916	25,087	25,072	
2006							26,101	26,892	27,390	27,756	27,737	27,619		
2007						27,521	28,752	29,714	30,276	30,370	30,163			
2008					29,241	30,910	32,176	33,078	33,367	33,463				
2009				28,848	31,094	32,696	33,711	34,163	34,230					
2010			26,278	29,559	31,519	32,931	33,608	33,780						
2011		21,012	24,548	27,004	28,823	29,666	30,043							
2012	16,252	20,934	23,879	25,794	27,018	27,696								
2013	16,105	19,827	22,040	23,658	24,362									
2014	16,010	18,800	21,103	22,021										
2015	16,131	19,573	21,716											
2016	16,246	19,017												
2017	16,160													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												28,816	29,291	29,645
2002											27,935	28,302	28,532	28,522
2003										27,968	28,518	28,830	28,797	28,675
2004									24,967	25,622	25,879	25,942	25,907	25,807
2005								24,555	25,385	25,952	25,905	26,047	25,935	
2006							26,682	27,769	28,327	28,571	28,497	28,508		
2007						28,558	29,792	30,685	31,174	31,241	31,570			
2008					29,751	31,294	32,438	33,138	33,323	33,464				
2009				29,369	31,538	33,114	33,887	34,279	34,464					
2010			25,681	28,789	30,721	31,878	32,516	32,777						
2011		21,439	24,883	27,713	29,365	30,119	30,236							
2012	16,154	20,778	23,859	25,594	26,781	27,457								
2013	15,715	20,104	22,229	23,670	24,396									
2014	15,342	18,885	21,290	22,638										
2015	15,860	19,453	21,714											
2016	16,193	19,546												
2017	17,184													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												29,143	29,584	29,964
2002											28,278	28,674	28,950	28,913
2003										27,430	27,934	28,228	28,315	28,250
2004									24,788	25,467	25,761	25,908	25,944	25,846
2005								24,682	25,531	26,058	26,213	26,395	26,351	
2006							26,248	27,350	27,950	28,282	28,279	28,294		
2007						28,007	29,478	30,412	30,964	31,084	31,334			
2008					28,997	30,755	31,981	32,794	33,090	33,225				
2009				28,369	30,795	32,522	33,453	33,943	34,169					
2010			25,101	28,297	30,232	31,526	32,257	32,586						
2011		20,725	24,533	27,225	28,905	29,760	30,123							
2012	15,696	20,214	23,343	25,234	26,477	27,223								
2013	15,613	19,590	21,920	23,552	24,339									
2014	15,169	18,625	21,060	22,512										
2015	15,541	18,848	21,137											
2016	15,839	18,905												
2017	16,357													

Average Paid Indemnity Per Closed Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						18,487	20,044	21,381	22,193	22,781	23,239	23,503	23,972	24,364
2002					16,931	18,692	20,111	21,098	21,742	22,191	22,595	22,989	23,349	23,731
2003				14,282	16,494	18,402	19,445	20,224	20,765	21,240	21,778	22,165	22,506	22,932
2004			8,008	11,041	13,264	14,551	15,462	16,097	16,719	17,379	17,805	18,283	18,643	18,981
2005		3,433	6,331	9,516	11,259	12,652	13,613	14,490	15,382	15,958	16,518	16,974	17,283	
2006	1,435	3,402	7,004	10,066	11,947	13,425	14,619	15,549	16,289	17,083	17,683	18,204		
2007	1,391	3,709	7,044	10,109	12,224	13,880	15,267	16,506	17,343	18,246	18,955			
2008	1,543	3,908	7,721	10,756	13,133	15,241	17,006	18,233	19,302	20,030				
2009	1,636	4,285	7,932	11,310	14,428	16,783	18,696	20,150	21,169					
2010	1,675	4,129	8,000	11,848	15,119	17,314	19,207	20,565						
2011	1,771	4,478	8,704	12,762	15,779	17,931	19,603							
2012	1,863	4,947	9,648	13,443	16,389	18,648								
2013	2,032	5,411	10,092	14,003	16,925									
2014	2,187	5,962	11,109	15,266										
2015	2,448	6,626	11,941											
2016	2,661	6,883												
2017	2,788													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						18,424	19,719	20,493	21,372	21,916	22,304	22,773	23,049	23,321
2002					15,787	17,339	18,567	19,467	20,048	20,462	20,869	21,341	21,732	22,018
2003				12,388	14,381	16,177	17,326	18,076	18,628	19,073	19,804	20,319	20,859	21,281
2004			7,517	10,269	11,739	13,009	13,996	14,574	15,233	15,831	16,407	16,773	17,160	17,561
2005		3,134	6,238	8,178	10,574	11,454	12,294	13,105	13,859	14,579	15,085	15,537	15,784	
2006	1,680	3,779	6,285	8,954	11,190	12,556	13,553	14,677	15,479	16,304	17,010	17,405		
2007	1,388	3,547	7,101	9,929	11,892	13,542	14,922	16,043	16,992	17,827	18,342			
2008	1,465	4,074	7,694	10,935	13,509	15,616	16,896	18,381	19,271	19,965				
2009	1,596	3,979	7,819	11,132	13,845	15,772	17,625	18,888	19,813					
2010	1,513	4,129	7,926	11,683	14,491	16,674	18,352	19,542						
2011	1,549	4,305	8,351	11,889	14,593	16,525	17,876							
2012	1,796	5,033	8,920	12,255	14,720	16,565								
2013	2,237	5,347	9,464	12,666	14,991									
2014	2,036	5,311	9,626	13,010										
2015	2,148	5,776	10,297											
2016	2,356	6,209												
2017	2,462													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						17,570	18,876	19,853	20,701	21,277	21,743	22,144	22,658	23,043
2002					15,223	16,909	18,236	19,207	19,836	20,324	20,822	21,458	21,827	22,160
2003				12,810	15,105	16,879	17,997	18,769	19,417	20,035	20,849	21,346	21,794	22,317
2004			7,078	9,929	11,941	13,226	14,112	14,817	15,619	16,491	17,039	17,518	17,956	18,343
2005		2,990	5,727	8,405	10,282	11,440	12,332	13,190	14,237	14,924	15,486	15,987	16,369	
2006	1,436	3,302	6,292	9,085	11,014	12,435	13,657	14,902	15,782	16,526	17,207	17,688		
2007	1,401	3,510	6,778	9,661	11,779	13,504	15,085	16,261	17,184	18,047	18,703			
2008	1,511	3,828	7,478	10,694	13,237	15,524	16,998	18,251	19,233	19,966				
2009	1,590	4,083	7,859	11,277	14,277	16,373	18,094	19,438	20,392					
2010	1,541	4,148	8,065	11,813	14,637	16,695	18,396	19,615						
2011	1,657	4,465	8,576	12,172	14,913	16,866	18,387							
2012	1,815	5,005	9,100	12,574	15,125	17,018								
2013	2,100	5,326	9,526	12,956	15,406									
2014	2,131	5,631	10,164	13,757										
2015	2,340	6,177	10,883											
2016	2,493	6,543												
2017	2,591													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						17,146	18,344	19,185	20,046	20,616	21,086	21,544	22,109	22,491
2002					14,514	16,163	17,449	18,411	19,036	19,543	20,081	20,836	21,208	21,520
2003				12,074	14,403	16,104	17,259	18,028	18,737	19,428	20,405	20,948	21,449	22,020
2004			6,565	9,301	11,181	12,463	13,338	14,088	14,990	16,023	16,628	17,107	17,589	18,002
2005		2,733	5,370	7,743	9,684	10,703	11,559	12,407	13,595	14,334	14,898	15,426	15,850	
2006	1,436	3,246	5,892	8,510	10,459	11,849	13,086	14,544	15,492	16,209	16,937	17,395		
2007	1,404	3,400	6,620	9,393	11,509	13,270	14,981	16,125	17,097	17,938	18,564			
2008	1,483	3,752	7,279	10,565	13,177	15,657	16,993	18,259	19,195	19,931				
2009	1,553	3,938	7,744	11,149	14,180	16,145	17,764	19,049	19,967					
2010	1,444	4,075	7,937	11,776	14,368	16,351	17,947	19,088						
2011	1,577	4,387	8,495	11,854	14,446	16,292	17,728							
2012	1,757	5,020	8,784	12,071	14,394	16,067								
2013	2,133	5,273	9,197	12,345	14,514									
2014	2,100	5,446	9,629	12,882										
2015	2,291	5,931	10,284											
2016	2,411	6,351												
2017	2,487													

Average Paid Medical Per Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												25,957	26,560	27,170
2002											25,733	26,360	26,890	27,335
2003										22,993	23,705	24,232	24,717	25,181
2004									20,876	21,663	22,291	22,843	23,294	23,665
2005								21,172	22,318	23,042	23,813	24,341	24,769	
2006							21,364	22,641	23,551	24,426	25,093	25,592		
2007						22,077	23,941	25,259	26,314	27,213	27,844			
2008					21,322	23,812	25,757	27,176	28,245	29,077				
2009				19,693	23,032	25,561	27,472	28,910	29,956					
2010			15,626	19,896	23,150	25,524	27,335	28,511						
2011		9,913	14,875	18,808	21,779	23,938	25,459							
2012	4,166	9,572	14,210	17,824	20,501	22,468								
2013	4,071	9,300	13,711	17,047	19,494									
2014	4,008	9,108	13,434	16,581										
2015	3,926	9,145	13,288											
2016	4,122	9,209												
2017	4,108													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												25,496	25,984	26,362
2002											25,334	25,837	26,211	26,572
2003										23,885	24,666	25,226	25,586	25,971
2004									20,626	21,298	21,839	22,370	22,860	23,168
2005								19,988	20,972	21,663	22,309	22,786	23,081	
2006							21,316	22,642	23,454	24,342	25,036	25,393		
2007						22,115	23,853	25,147	26,281	27,090	27,555			
2008					22,744	25,128	26,969	28,490	29,455	30,089				
2009				20,419	23,892	26,517	28,375	29,710	30,589					
2010			16,526	21,409	24,712	27,241	29,105	30,334						
2011		10,123	15,468	19,475	22,416	24,652	25,956							
2012	4,269	10,110	15,068	18,846	21,426	23,272								
2013	4,210	9,503	14,102	17,442	19,533									
2014	3,944	9,220	13,694	16,690										
2015	4,021	9,601	14,078											
2016	4,097	9,584												
2017	4,404													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												24,923	25,622	26,202
2002											24,395	25,140	25,611	26,050
2003										23,032	23,980	24,635	25,115	25,544
2004									20,336	21,315	22,088	22,641	23,067	23,439
2005								19,840	21,123	21,999	22,724	23,243	23,708	
2006							20,957	22,403	23,406	24,245	24,887	25,429		
2007						21,810	23,752	25,187	26,281	27,135	27,768			
2008					21,921	24,414	26,264	27,657	28,646	29,457				
2009				20,011	23,501	26,028	27,836	29,144	30,118					
2010			15,819	20,338	23,545	25,878	27,635	28,814						
2011		9,975	15,134	19,131	22,028	24,256	25,725							
2012	4,105	9,715	14,462	18,161	20,781	22,615								
2013	4,118	9,304	13,817	17,203	19,473									
2014	3,925	9,109	13,566	16,743										
2015	3,965	9,219	13,524											
2016	4,160	9,385												
2017	4,366													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001												24,495	25,230	25,798
2002											23,873	24,645	25,093	25,530
2003										23,045	24,119	24,828	25,307	25,718
2004									20,064	21,140	21,980	22,534	22,946	23,319
2005								19,104	20,464	21,411	22,109	22,622	23,107	
2006							20,736	22,277	23,325	24,143	24,770	25,337		
2007						21,692	23,658	25,147	26,263	27,091	27,725			
2008					22,191	24,729	26,537	27,917	28,863	29,662				
2009				20,156	23,752	26,280	28,036	29,273	30,208					
2010			15,866	20,576	23,761	26,074	27,803	28,983						
2011		9,939	15,271	19,303	22,163	24,428	25,871							
2012	4,109	9,797	14,606	18,357	20,946	22,702								
2013	4,138	9,307	13,879	17,296	19,461									
2014	3,885	9,109	13,642	16,838										
2015	3,979	9,260	13,661											
2016	4,179	9,487												
2017	4,503													

Average Incurred Indemnity Loss Per Open Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						66,399	76,971	84,565	93,493	101,930	105,559	115,046	121,211	126,190
2002					53,012	63,030	72,330	81,050	89,319	95,495	101,567	106,573	109,623	112,734
2003				43,237	52,307	59,644	69,992	79,151	84,862	92,042	99,019	103,989	111,762	118,877
2004			30,388	37,951	45,482	53,328	61,132	68,321	74,157	80,092	86,727	91,664	96,285	99,428
2005		20,436	29,021	35,758	43,808	51,544	57,825	63,954	69,312	75,223	80,332	84,191	89,147	
2006	9,490	20,399	29,487	36,801	46,924	53,455	60,160	65,822	71,752	75,667	80,539	82,804		
2007	9,172	20,424	30,766	40,419	48,607	54,873	63,166	70,577	75,753	79,879	81,612			
2008	10,247	21,615	32,922	42,704	50,831	59,118	66,950	74,932	81,337	88,815				
2009	10,750	22,641	33,631	44,059	53,151	60,391	66,553	73,543	79,402					
2010	10,914	22,788	34,052	44,417	51,899	59,439	64,752	69,591						
2011	11,609	23,274	34,959	43,961	51,643	57,601	63,527							
2012	11,625	24,274	34,620	43,882	51,633	60,072								
2013	12,110	23,704	34,292	44,006	51,555									
2014	11,729	24,883	36,896	47,554										
2015	12,303	26,017	38,900											
2016	12,641	26,266												
2017	12,943													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						66,101	75,228	82,420	90,531	98,577	104,654	108,519	112,782	115,656
2002					53,747	65,634	67,774	75,625	83,344	92,326	98,233	101,278	103,824	108,522
2003				43,525	56,125	60,432	70,262	80,133	95,426	107,530	115,468	124,676	123,596	129,302
2004			29,738	37,526	43,903	51,355	57,624	67,657	71,982	79,325	85,033	89,664	97,544	99,766
2005		18,500	25,734	34,123	38,587	46,568	52,985	57,311	60,921	67,703	73,774	80,548	88,446	
2006	10,596	20,517	30,155	38,160	43,565	51,223	58,550	63,149	70,664	70,769	71,842	72,201		
2007	11,552	22,451	32,568	40,713	48,086	54,617	63,414	70,760	77,396	83,212	89,937			
2008	11,517	23,954	34,451	43,671	51,885	59,035	68,034	72,768	81,063	87,584				
2009	11,332	23,524	34,144	42,882	50,335	58,547	64,535	72,614	80,551					
2010	11,453	23,500	34,175	42,600	49,922	56,898	65,270	71,870						
2011	11,807	23,653	32,685	41,877	48,617	55,482	63,052							
2012	11,647	22,831	32,600	40,514	47,378	53,824								
2013	11,945	23,588	32,715	39,669	45,810									
2014	12,292	23,984	33,225	40,434										
2015	12,589	25,203	35,457											
2016	13,289	26,057												
2017	13,377													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						63,121	71,715	80,603	88,428	96,102	104,944	113,167	122,088	127,978
2002					50,881	59,080	65,914	72,738	79,961	89,238	96,449	104,252	109,736	114,679
2003				42,134	51,058	59,112	68,163	77,442	88,699	100,077	112,786	121,075	126,186	133,841
2004			29,998	37,211	43,607	51,166	58,444	68,621	76,421	87,681	95,010	100,423	108,330	113,136
2005		19,509	27,516	34,507	40,986	48,714	57,310	65,493	72,831	79,880	84,809	91,437	99,198	
2006	10,421	20,762	30,273	37,707	46,248	54,171	61,468	68,990	75,486	79,646	85,585	90,950		
2007	10,702	22,275	32,672	41,402	49,523	56,711	66,857	74,750	80,981	89,241	95,383			
2008	11,312	23,333	34,394	43,960	52,203	60,398	69,349	76,879	85,805	94,751				
2009	11,405	23,665	34,070	43,570	52,151	60,271	66,588	75,138	83,980					
2010	11,434	23,270	33,948	43,027	50,481	57,831	65,040	71,489						
2011	12,025	24,038	34,087	43,005	50,100	57,383	64,141							
2012	12,023	23,697	33,538	41,434	48,978	56,884								
2013	12,168	23,298	32,776	41,042	48,402									
2014	12,036	23,866	34,368	43,451										
2015	12,594	25,139	36,421											
2016	13,007	25,839												
2017	13,576													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						61,782	69,704	79,133	86,581	93,991	104,556	112,228	122,432	128,683
2002					50,160	57,805	63,988	70,429	77,452	87,618	95,182	103,498	109,771	115,367
2003				41,678	50,539	58,867	67,469	76,767	89,823	102,639	118,246	127,920	131,857	139,770
2004			29,849	36,938	42,919	50,443	57,583	68,889	77,493	91,091	98,851	104,423	114,261	120,055
2005		19,054	26,751	33,914	39,722	47,524	57,127	66,202	74,477	82,118	86,931	95,058	104,472	
2006	10,859	21,021	30,818	38,346	46,202	54,883	62,572	70,557	77,412	81,650	88,252	95,391		
2007	11,495	23,345	33,816	42,096	50,245	57,979	68,757	77,022	83,951	94,952	104,392			
2008	11,805	24,231	35,184	44,697	53,059	61,109	70,605	77,917	88,295	98,275				
2009	11,739	24,271	34,475	43,636	51,646	60,204	66,614	76,060	86,803					
2010	11,716	23,629	34,138	42,254	49,688	56,905	65,216	72,678						
2011	12,268	24,575	33,585	42,457	49,238	57,254	64,511							
2012	12,292	23,333	32,858	39,931	47,321	54,886								
2013	12,179	23,040	31,861	39,239	46,456									
2014	12,183	23,281	32,843	40,995										
2015	12,611	24,637	34,947											
2016	13,190	25,583												
2017	13,913													

Average Outstanding Indemnity Per Open Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						20,464	22,026	23,436	23,770	24,437	23,774	25,123	24,757	25,294
2002					17,839	18,986	21,246	21,534	23,657	22,938	23,992	23,188	21,770	21,150
2003				16,156	16,982	18,034	20,597	23,234	23,021	24,889	26,138	25,485	26,488	28,422
2004			13,450	14,166	15,994	18,063	20,037	22,087	22,498	23,567	23,370	26,169	27,434	27,049
2005		10,130	11,386	13,085	15,204	17,668	19,211	20,456	21,251	22,942	23,486	24,208	25,613	
2006	6,139	9,415	11,665	13,797	16,763	18,654	19,903	20,812	21,859	22,712	23,386	24,188		
2007	5,696	9,428	12,280	15,000	16,788	17,762	19,932	22,998	22,990	22,863	22,629			
2008	6,475	10,238	13,317	15,519	16,788	18,663	20,109	21,801	23,986	26,759				
2009	6,803	10,745	13,295	15,449	17,572	18,897	20,278	21,809	23,055					
2010	6,840	10,803	13,335	15,725	17,045	18,478	19,032	20,132						
2011	7,505	10,991	14,170	16,001	17,478	18,541	19,922							
2012	7,118	11,562	13,687	15,762	17,686	19,560								
2013	7,725	11,146	13,356	15,502	16,959									
2014	7,404	12,094	14,806	17,219										
2015	7,868	12,637	15,796											
2016	8,115	12,834												
2017	8,206													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						21,470	23,343	22,786	23,901	24,372	22,704	23,271	23,492	22,446
2002					18,640	22,504	20,375	21,278	23,427	24,479	26,384	25,377	23,507	23,567
2003				16,382	19,537	18,678	20,249	22,925	26,257	28,073	28,457	29,349	28,616	26,068
2004			13,626	15,416	15,695	16,832	18,928	21,261	20,190	22,275	21,932	23,237	22,582	25,347
2005		9,929	11,656	12,444	14,450	17,390	18,470	19,084	19,166	22,115	23,313	25,661	26,791	
2006	7,765	11,605	13,564	15,680	17,281	19,366	21,330	22,793	25,306	24,009	24,897	23,357		
2007	8,367	12,008	14,330	16,199	17,302	19,175	21,598	24,149	25,990	25,870	27,779			
2008	7,968	12,579	15,005	16,430	18,243	20,032	22,212	23,905	26,634	26,922				
2009	7,913	12,745	14,972	16,776	18,059	20,266	22,531	24,635	27,103					
2010	8,074	12,659	15,265	16,433	18,026	20,199	23,170	25,373						
2011	8,326	12,877	14,042	16,525	18,177	20,173	23,013							
2012	8,111	12,407	14,623	16,013	18,290	20,113								
2013	8,582	13,172	14,868	15,457	16,382									
2014	8,940	13,356	14,805	15,959										
2015	9,192	14,388	16,426											
2016	9,607	14,704												
2017	9,731													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						19,876	21,226	22,660	24,081	25,072	26,875	28,182	30,204	30,795
2002					16,407	17,660	18,577	19,439	21,114	22,923	23,923	25,282	25,828	25,419
2003				15,274	16,812	18,671	21,089	23,792	26,791	30,107	33,690	34,792	34,926	37,718
2004			13,077	14,177	15,539	17,899	19,963	23,335	25,278	29,370	30,537	32,303	35,141	36,194
2005		9,782	11,190	12,582	14,816	17,684	20,680	23,480	25,672	27,488	28,378	30,852	33,476	
2006	7,301	10,456	12,595	14,689	17,696	20,228	22,094	24,774	26,613	27,460	30,595	31,498		
2007	7,330	11,177	13,883	16,034	17,963	19,846	23,818	26,426	27,848	30,730	31,763			
2008	7,603	11,631	14,551	16,566	18,131	20,719	23,172	25,592	29,377	32,097				
2009	7,742	12,301	14,474	16,499	18,748	21,023	22,533	25,496	28,358					
2010	7,794	11,935	14,406	16,239	17,812	19,625	21,837	24,088						
2011	8,338	12,644	14,704	17,035	18,685	20,600	22,606							
2012	8,214	12,474	14,715	16,128	18,240	20,554								
2013	8,528	12,403	14,158	15,597	17,279									
2014	8,420	12,742	14,919	17,008										
2015	8,886	13,667	16,355											
2016	9,134	14,052												
2017	9,604													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						19,659	20,951	22,366	24,160	25,251	27,946	29,229	32,305	32,963
2002					15,913	17,236	17,749	18,845	20,410	22,969	23,960	26,048	27,287	26,936
2003				14,928	16,734	18,872	21,209	23,907	27,989	31,820	36,676	38,517	38,242	41,401
2004			12,933	14,237	15,414	17,919	20,031	23,934	26,531	32,017	33,871	35,106	38,936	40,810
2005		9,626	11,122	12,380	14,705	17,772	21,426	24,929	27,679	29,669	30,697	34,173	37,602	
2006	7,829	11,040	13,160	15,224	18,246	21,117	23,292	26,740	29,061	29,846	34,405	35,484		
2007	8,168	12,167	14,808	16,651	18,662	21,028	25,776	28,289	30,608	35,529	37,738			
2008	8,124	12,363	15,192	17,118	18,824	21,819	24,775	27,602	32,381	35,265				
2009	8,206	13,176	15,232	17,248	19,379	22,185	23,792	27,628	31,628					
2010	8,285	12,650	15,169	16,516	18,240	20,301	23,549	26,566						
2011	8,788	13,672	14,980	17,597	19,364	21,806	24,224							
2012	8,809	12,952	15,294	16,346	18,586	21,177								
2013	8,903	13,096	14,621	15,655	17,478									
2014	8,918	13,109	14,987	16,882										
2015	9,309	14,256	16,687											
2016	9,646	14,782												
2017	10,349													

Average Outstanding Medical Per Open Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						28,023	39,155	51,517	62,920	78,435	84,407	91,662	99,221	107,814
2002					20,287	27,830	38,088	49,267	61,392	69,719	79,256	86,194	93,843	89,787
2003				16,532	21,834	29,711	39,000	49,381	57,996	66,857	72,151	76,029	82,962	84,110
2004			13,629	18,231	25,035	32,783	41,800	49,879	57,865	68,916	76,858	84,315	89,232	87,218
2005		13,749	17,338	21,394	27,449	34,936	42,188	49,548	57,368	64,574	73,188	79,957	82,166	
2006	11,886	14,290	17,668	23,033	30,142	35,332	42,316	48,780	56,892	63,456	65,693	65,920		
2007	11,611	14,386	18,745	24,484	29,735	35,916	45,409	54,517	61,450	64,523	66,975			
2008	13,056	16,351	20,804	26,025	32,126	39,995	49,054	59,315	67,790	70,052				
2009	14,352	16,823	20,530	24,681	30,920	37,940	45,047	51,750	54,507					
2010	14,509	17,680	21,834	27,142	31,600	36,885	42,390	47,940						
2011	15,476	18,091	23,374	27,826	33,313	38,092	46,048							
2012	15,278	18,527	22,030	26,425	30,782	35,869								
2013	15,962	18,077	21,403	26,525	30,268									
2014	14,897	17,786	20,780	25,824										
2015	14,988	17,311	21,299											
2016	15,367	18,275												
2017	15,477													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						31,421	41,817	49,859	60,404	72,431	77,758	84,819	90,822	101,672
2002					25,834	37,662	39,387	47,875	58,281	73,853	79,801	89,409	101,785	104,902
2003				20,876	28,062	32,812	42,106	51,574	63,940	70,538	77,175	85,988	84,891	84,529
2004			16,384	21,534	26,665	34,368	43,362	54,354	60,740	70,269	81,994	85,221	89,831	90,872
2005		14,787	18,643	22,080	27,082	36,042	43,126	49,322	53,802	60,588	66,217	76,036	78,741	
2006	13,370	16,094	20,828	25,924	30,609	38,158	44,482	50,317	60,731	64,375	65,273	65,899		
2007	14,919	18,304	22,859	27,574	32,366	39,057	48,049	59,363	68,790	77,640	81,108			
2008	14,673	19,091	22,569	26,092	33,300	40,943	49,171	57,672	67,132	74,861				
2009	15,006	19,257	23,714	30,145	35,558	41,819	49,605	58,374	65,327					
2010	15,928	19,764	24,750	29,777	35,975	42,579	49,361	53,033						
2011	16,608	20,531	24,152	29,626	36,586	41,355	49,081							
2012	16,471	20,484	24,364	28,589	33,822	39,141								
2013	15,967	20,286	22,909	26,970	32,628									
2014	16,601	19,324	22,552	25,383										
2015	16,643	20,838	25,179											
2016	17,319	20,951												
2017	17,027													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						27,604	35,297	44,662	55,994	69,843	80,775	89,675	100,715	109,457
2002					20,601	26,979	33,844	42,749	51,861	62,947	73,431	84,329	93,003	91,996
2003				17,836	21,845	29,243	37,146	46,646	58,907	69,942	81,879	87,396	88,845	91,071
2004			14,602	19,138	25,173	31,382	40,380	50,118	58,768	73,320	79,185	82,865	89,623	89,788
2005		13,922	17,616	21,317	25,835	34,609	43,032	52,606	63,792	73,408	77,247	87,093	89,210	
2006	12,240	15,767	20,357	24,774	30,902	37,838	45,240	56,212	65,222	70,979	76,067	79,222		
2007	13,074	17,120	21,447	26,834	32,882	40,318	51,267	60,661	68,611	75,545	86,533			
2008	14,010	18,049	22,542	27,789	33,998	42,422	51,240	60,407	69,625	75,598				
2009	14,421	18,731	23,316	28,598	34,983	42,219	49,196	57,938	64,491					
2010	14,761	18,946	23,595	28,963	34,338	39,994	46,432	51,950						
2011	15,794	20,417	24,872	30,693	37,399	42,494	48,321							
2012	16,063	20,277	24,315	28,358	33,428	39,464								
2013	15,799	20,001	22,894	27,237	31,842									
2014	15,379	18,891	22,117	26,476										
2015	15,920	19,634	24,187											
2016	16,386	20,636												
2017	17,375													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						27,296	33,669	42,066	53,334	66,542	78,977	88,323	101,283	110,105
2002					20,771	26,755	32,594	40,939	49,248	61,100	71,852	83,707	92,693	92,774
2003				18,416	21,952	29,199	36,670	45,920	59,379	71,189	85,723	91,962	91,154	93,828
2004			15,155	19,682	25,369	30,976	39,995	50,351	59,247	75,189	80,288	82,197	89,815	91,085
2005		14,109	17,917	21,499	25,369	34,811	43,821	54,440	66,860	77,669	79,168	90,660	92,906	
2006	12,491	16,701	22,075	26,033	31,797	39,760	47,565	59,870	69,517	74,763	81,549	86,475		
2007	13,901	18,761	23,138	28,384	34,931	43,157	54,262	64,011	72,680	82,269	99,328			
2008	14,515	19,034	23,584	28,906	35,213	43,653	52,383	60,989	70,648	78,891				
2009	14,560	19,896	25,076	31,054	37,093	44,561	51,512	61,515	70,648					
2010	14,979	19,817	24,846	29,962	35,850	41,803	48,899	54,462						
2011	16,078	21,933	25,697	32,278	39,686	45,069	49,691							
2012	16,608	21,242	25,647	29,536	35,080	41,717								
2013	15,727	21,076	23,766	27,670	32,813									
2014	15,611	19,522	22,923	26,866										
2015	16,264	20,963	25,905											
2016	16,898	22,050												
2017	18,388													

Average Paid ALAE (Excluding Paid MCCP) Per Indemnity Claim *

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						4,999	5,508	5,744	5,990	6,172	6,335	6,468	6,620	6,761
2002					5,181	5,836	6,188	6,488	6,700	6,886	7,031	7,184	7,324	7,429
2003				4,793	5,672	6,214	6,584	6,876	7,120	7,332	7,527	7,693	7,830	7,945
2004			3,474	4,671	5,421	5,958	6,379	6,680	6,922	7,148	7,338	7,489	7,601	7,692
2005		1,829	3,226	4,314	5,062	5,649	6,088	6,438	6,756	6,994	7,189	7,351	7,472	
2006	533	2,079	3,543	4,646	5,491	6,116	6,607	6,971	7,306	7,564	7,748	7,888		
2007	646	2,239	3,768	5,026	5,949	6,670	7,268	7,718	8,079	8,348	8,559			
2008	708	2,384	4,040	5,424	6,452	7,284	7,929	8,426	8,793	9,050				
2009	736	2,618	4,493	6,031	7,236	8,155	8,854	9,364	9,710					
2010	797	2,837	4,767	6,320	7,523	8,432	9,070	9,533						
2011	875	2,981	4,957	6,547	7,741	8,566	9,192							
2012	896	3,010	5,043	6,666	7,826	8,637								
2013	970	3,295	5,403	6,932	7,974									
2014	1,088	3,547	5,638	7,122										
2015	1,124	3,680	5,730											
2016	1,173	3,714												
2017	1,223													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						5,439	5,806	6,036	6,255	6,414	6,532	6,650	6,748	6,844
2002					5,633	6,195	6,567	6,867	7,076	7,240	7,374	7,499	7,614	7,719
2003				4,728	5,505	5,974	6,386	6,655	6,860	7,036	7,186	7,308	7,418	7,503
2004			3,300	4,301	4,926	5,461	5,787	6,052	6,243	6,432	6,582	6,683	6,786	6,860
2005		1,863	3,004	3,863	4,572	5,032	5,371	5,633	5,879	6,090	6,262	6,410	6,513	
2006	627	1,794	2,914	3,871	4,557	5,081	5,462	5,757	6,011	6,212	6,370	6,499		
2007	530	1,760	3,058	4,063	4,819	5,364	5,837	6,154	6,416	6,602	6,732			
2008	527	1,948	3,336	4,477	5,298	5,928	6,392	6,763	7,018	7,215				
2009	615	2,172	3,722	4,931	5,849	6,531	7,067	7,427	7,694					
2010	649	2,240	3,824	5,106	6,031	6,723	7,222	7,546						
2011	653	2,207	3,679	4,852	5,749	6,364	6,805							
2012	629	2,196	3,681	4,877	5,710	6,313								
2013	639	2,277	3,850	5,005	5,855									
2014	686	2,512	4,027	5,154										
2015	829	2,685	4,293											
2016	812	2,838												
2017	897													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						5,067	5,492	5,724	5,945	6,109	6,245	6,366	6,480	6,589
2002					5,066	5,617	5,974	6,247	6,441	6,605	6,735	6,861	6,975	7,070
2003				4,633	5,405	5,947	6,320	6,602	6,821	7,015	7,181	7,323	7,443	7,540
2004			3,284	4,374	5,056	5,568	5,944	6,222	6,436	6,633	6,798	6,929	7,034	7,116
2005		1,744	3,006	3,973	4,679	5,198	5,587	5,891	6,155	6,369	6,544	6,691	6,797	
2006	524	1,842	3,120	4,113	4,859	5,425	5,854	6,177	6,458	6,678	6,841	6,969		
2007	566	1,963	3,309	4,400	5,222	5,855	6,372	6,744	7,045	7,262	7,425			
2008	607	2,110	3,607	4,869	5,799	6,515	7,052	7,462	7,746	7,961				
2009	667	2,382	4,088	5,463	6,509	7,291	7,881	8,291	8,587					
2010	729	2,533	4,251	5,630	6,650	7,415	7,950	8,324						
2011	750	2,531	4,214	5,536	6,535	7,231	7,739							
2012	755	2,599	4,318	5,676	6,639	7,324								
2013	798	2,752	4,520	5,826	6,741									
2014	880	2,975	4,742	6,028										
2015	959	3,112	4,904											
2016	972	3,236												
2017	1,060													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						5,118	5,467	5,692	5,891	6,039	6,151	6,261	6,349	6,431
2002					4,946	5,395	5,754	6,001	6,179	6,319	6,435	6,539	6,630	6,714
2003				4,423	5,063	5,604	5,981	6,249	6,437	6,609	6,752	6,866	6,964	7,040
2004			3,039	3,990	4,583	5,063	5,386	5,634	5,812	5,986	6,122	6,228	6,322	6,393
2005		1,650	2,762	3,593	4,251	4,696	5,032	5,286	5,508	5,697	5,851	5,979	6,069	
2006	515	1,642	2,757	3,648	4,309	4,821	5,196	5,493	5,730	5,917	6,060	6,177		
2007	508	1,754	2,955	3,916	4,659	5,222	5,688	6,003	6,257	6,433	6,561			
2008	543	1,918	3,300	4,470	5,329	5,979	6,444	6,794	7,022	7,207				
2009	625	2,223	3,811	5,074	6,019	6,713	7,231	7,574	7,837					
2010	688	2,338	3,919	5,184	6,088	6,761	7,230	7,546						
2011	684	2,273	3,767	4,927	5,805	6,420	6,855							
2012	682	2,339	3,856	5,043	5,880	6,482								
2013	698	2,407	3,948	5,105	5,935									
2014	757	2,605	4,149	5,301										
2015	859	2,750	4,365											
2016	859	2,928												
2017	964													

* Based on private insurer data only.

Paid MCCP per Indemnity Claim

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2012	857	1,578	2,039	2,370	2,543	2,663								
2013	867	1,580	2,069	2,346	2,510									
2014	817	1,612	2,050	2,297										
2015	908	1,632	1,994											
2016	870	1,481												
2017	806													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2012	810	1,603	2,058	2,381	2,563	2,679								
2013	780	1,536	2,002	2,262	2,397									
2014	740	1,472	1,920	2,126										
2015	659	1,323	1,670											
2016	565	1,158												
2017	568													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2012	670	1,341	1,743	2,030	2,181	2,282								
2013	653	1,278	1,694	1,914	2,041									
2014	609	1,253	1,615	1,809										
2015	613	1,184	1,488											
2016	569	1,092												
2017	563													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2012	599	1,206	1,572	1,832	1,969	2,059								
2013	544	1,105	1,475	1,659	1,764									
2014	504	1,051	1,363	1,524										
2015	462	933	1,197											
2016	418	866												
2017	433													

Ratio of Paid Losses to Reported Incurred - Indemnity

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	30.9%	46.8%	63.7%	75.7%	83.6%	87.8%	90.5%	92.4%	93.9%	94.9%	95.6%	96.0%	96.6%	97.0%
2002	29.4%	46.5%	64.2%	78.2%	85.5%	89.4%	91.8%	93.9%	94.7%	95.7%	96.1%	96.7%	97.3%	97.7%
2003	29.6%	48.7%	68.8%	80.9%	86.7%	90.6%	92.4%	93.4%	94.6%	95.1%	95.6%	96.3%	96.7%	97.1%
2004	30.4%	53.9%	69.5%	80.2%	85.9%	88.9%	90.8%	91.8%	93.2%	94.2%	95.2%	95.5%	96.0%	96.7%
2005	37.6%	58.0%	72.3%	80.5%	85.1%	87.7%	89.7%	91.4%	93.1%	94.0%	95.0%	95.8%	96.3%	
2006	39.5%	60.8%	72.7%	80.1%	84.3%	87.0%	89.6%	91.4%	92.8%	94.1%	95.1%	95.8%		
2007	41.1%	60.9%	71.7%	78.8%	83.7%	87.0%	89.4%	90.7%	92.5%	94.1%	95.3%			
2008	40.6%	59.7%	71.4%	78.7%	84.0%	87.3%	90.2%	92.0%	93.3%	94.0%				
2009	40.2%	59.6%	71.2%	78.9%	83.9%	87.6%	90.4%	92.5%	93.8%					
2010	41.0%	59.3%	71.5%	79.2%	85.1%	88.5%	91.7%	93.6%						
2011	39.2%	60.0%	71.0%	79.6%	85.4%	89.2%	91.9%							
2012	42.3%	59.9%	73.1%	81.0%	86.2%	90.0%								
2013	40.3%	61.2%	74.5%	82.6%	88.1%									
2014	41.0%	60.5%	74.4%	83.0%										
2015	40.5%	61.4%	75.4%											
2016	40.7%	62.3%												
2017	42.2%													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	22.7%	44.6%	61.2%	74.3%	83.3%	88.0%	90.6%	92.5%	94.1%	95.2%	96.2%	96.7%	97.0%	97.5%
2002	22.5%	41.7%	62.2%	76.8%	84.7%	88.1%	91.3%	93.4%	94.2%	95.1%	95.5%	96.4%	97.2%	97.6%
2003	21.2%	44.6%	67.3%	78.8%	84.6%	88.8%	91.3%	92.4%	93.4%	94.1%	95.3%	96.0%	96.6%	97.5%
2004	21.9%	48.3%	67.8%	78.3%	84.6%	88.3%	90.2%	91.7%	93.6%	94.4%	95.6%	96.2%	97.0%	97.3%
2005	26.0%	52.6%	68.1%	79.3%	84.0%	86.0%	88.9%	91.0%	92.6%	93.6%	94.7%	95.6%	96.2%	
2006	30.3%	52.7%	68.3%	77.1%	82.5%	86.1%	88.3%	89.7%	91.4%	93.4%	94.7%	95.9%		
2007	31.7%	54.2%	69.0%	77.4%	83.5%	86.6%	88.9%	90.8%	92.6%	94.7%	95.7%			
2008	33.9%	54.9%	68.6%	78.1%	83.6%	87.0%	89.5%	91.6%	93.2%	94.7%				
2009	33.7%	53.5%	68.6%	77.4%	82.8%	86.4%	89.3%	91.8%	93.5%					
2010	33.0%	54.0%	68.2%	77.7%	83.9%	87.8%	90.7%	92.8%						
2011	33.5%	54.3%	69.8%	78.5%	84.5%	88.5%	91.1%							
2012	35.5%	54.6%	69.8%	79.6%	85.0%	89.1%								
2013	32.5%	54.2%	70.6%	81.1%	87.6%									
2014	31.5%	54.5%	72.0%	82.1%										
2015	31.4%	54.3%	72.2%											
2016	32.8%	56.3%												
2017	32.8%													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	25.4%	46.8%	63.0%	75.1%	82.9%	87.2%	89.8%	91.5%	92.9%	93.8%	94.4%	95.0%	95.5%	96.0%
2002	25.1%	45.9%	64.6%	77.9%	84.8%	88.4%	90.9%	92.6%	93.5%	94.2%	95.0%	95.7%	96.3%	96.8%
2003	25.4%	47.7%	67.9%	79.2%	84.7%	87.9%	89.7%	90.8%	91.8%	92.5%	93.6%	94.4%	95.1%	95.6%
2004	26.1%	51.9%	68.1%	77.8%	83.4%	86.0%	87.9%	89.0%	90.6%	91.9%	93.1%	93.9%	94.6%	95.4%
2005	31.4%	56.2%	70.1%	78.8%	82.8%	84.8%	86.5%	88.1%	90.3%	91.8%	93.1%	94.0%	94.7%	
2006	33.2%	56.5%	69.8%	77.2%	81.2%	84.1%	86.7%	88.9%	90.7%	92.2%	93.3%	94.4%		
2007	34.8%	56.6%	68.8%	76.6%	81.6%	84.9%	87.2%	89.3%	91.2%	92.6%	94.0%			
2008	36.0%	56.7%	68.7%	76.9%	82.4%	86.1%	88.7%	90.6%	92.0%	93.2%				
2009	35.5%	54.8%	68.6%	76.9%	82.4%	86.0%	89.1%	91.2%	92.7%					
2010	35.2%	55.7%	69.1%	78.1%	84.0%	87.7%	90.6%	92.5%						
2011	34.3%	55.1%	69.5%	77.9%	83.9%	87.9%	90.9%							
2012	35.8%	56.0%	70.2%	79.7%	85.1%	88.9%								
2013	34.2%	56.2%	71.8%	81.4%	87.1%									
2014	34.3%	56.7%	72.5%	81.7%										
2015	34.0%	56.7%	72.8%											
2016	34.8%	58.0%												
2017	34.8%													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	24.5%	47.6%	62.8%	74.7%	82.5%	87.0%	89.4%	91.2%	92.3%	93.3%	93.9%	94.5%	95.0%	95.6%
2002	24.4%	45.8%	64.7%	77.7%	84.6%	87.9%	90.5%	92.1%	93.0%	93.6%	94.4%	95.3%	95.9%	96.5%
2003	24.2%	47.2%	67.4%	78.4%	83.6%	86.6%	88.5%	89.6%	90.5%	91.3%	92.6%	93.5%	94.3%	94.9%
2004	24.5%	50.9%	67.4%	76.5%	82.0%	84.5%	86.3%	87.5%	89.2%	90.7%	92.0%	93.0%	93.8%	94.6%
2005	28.9%	55.2%	68.8%	77.8%	81.4%	83.1%	84.6%	86.1%	88.7%	90.5%	92.0%	93.0%	93.8%	
2006	30.8%	54.3%	68.2%	75.6%	79.4%	82.4%	85.1%	87.5%	89.5%	91.2%	92.2%	93.6%		
2007	32.2%	54.6%	67.4%	75.4%	80.5%	83.8%	86.2%	88.6%	90.4%	91.8%	93.3%			
2008	34.1%	55.3%	67.4%	75.9%	81.5%	85.4%	87.9%	89.9%	91.3%	92.8%				
2009	33.5%	52.5%	67.2%	75.7%	81.5%	85.1%	88.4%	90.5%	92.1%					
2010	32.7%	54.0%	67.8%	77.5%	83.3%	87.2%	89.9%	91.9%						
2011	32.3%	52.8%	68.7%	76.9%	83.1%	87.2%	90.3%							
2012	32.7%	53.8%	68.4%	78.8%	84.4%	88.2%								
2013	31.2%	53.3%	70.1%	80.5%	86.4%									
2014	31.1%	54.3%	71.2%	80.8%										
2015	30.8%	53.9%	71.1%											
2016	31.9%	55.4%												
2017	31.2%													

Ratio of Paid Losses to Reported Incurred - Medical

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	42.3%	64.2%	72.9%	78.0%	81.4%	83.5%	83.9%	84.4%	85.3%	85.4%	86.4%	87.2%	88.4%	89.0%
2002	42.3%	65.3%	73.5%	80.1%	84.4%	85.6%	86.7%	87.7%	88.0%	88.7%	89.1%	89.7%	90.3%	92.0%
2003	42.3%	63.7%	73.8%	81.0%	83.6%	85.5%	86.8%	87.4%	87.8%	88.4%	89.5%	90.5%	91.1%	92.5%
2004	38.5%	62.1%	73.6%	78.5%	82.0%	83.8%	85.0%	85.7%	86.7%	87.2%	88.3%	89.3%	90.4%	92.0%
2005	40.5%	62.6%	70.6%	77.6%	81.4%	83.4%	84.8%	86.2%	87.6%	88.8%	89.9%	90.9%	92.2%	
2006	41.3%	62.0%	71.3%	77.0%	80.5%	83.0%	84.8%	86.4%	87.5%	89.0%	90.8%	92.4%		
2007	42.3%	63.5%	71.8%	77.2%	81.1%	83.2%	84.3%	85.7%	87.1%	89.3%	90.9%			
2008	42.4%	60.9%	70.2%	75.7%	79.4%	81.7%	84.1%	85.7%	87.5%	89.5%				
2009	39.9%	60.0%	69.2%	76.1%	80.0%	82.7%	85.2%	87.6%	89.8%					
2010	40.0%	58.6%	68.4%	74.8%	80.5%	83.8%	86.9%	89.2%						
2011	38.6%	58.8%	65.5%	73.7%	79.3%	83.5%	86.1%							
2012	38.9%	54.9%	66.6%	74.6%	80.6%	85.0%								
2013	34.3%	54.8%	67.3%	75.2%	82.0%									
2014	35.6%	55.6%	68.4%	76.7%										
2015	35.1%	56.9%	69.4%											
2016	36.0%	57.0%												
2017	36.8%													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	38.1%	62.1%	70.7%	76.5%	81.2%	83.4%	84.4%	85.8%	86.9%	87.6%	88.9%	89.7%	90.1%	90.4%
2002	36.8%	59.9%	69.0%	76.8%	81.7%	82.9%	86.0%	87.7%	88.1%	88.2%	89.1%	90.0%	90.6%	91.8%
2003	33.1%	58.1%	70.3%	76.8%	81.1%	83.8%	85.5%	86.5%	87.6%	88.6%	89.9%	90.7%	92.0%	93.5%
2004	32.3%	60.0%	68.5%	75.6%	79.7%	82.1%	83.5%	84.8%	86.4%	87.4%	88.4%	90.0%	91.7%	93.1%
2005	34.5%	55.2%	66.0%	75.0%	79.8%	81.0%	83.4%	85.2%	86.8%	88.7%	90.4%	91.6%	92.7%	
2006	34.9%	57.2%	67.5%	74.4%	79.3%	82.2%	84.2%	85.3%	86.7%	88.6%	91.0%	92.5%		
2007	35.3%	56.7%	66.9%	74.2%	79.7%	82.2%	84.2%	85.7%	87.7%	89.9%	92.0%			
2008	37.5%	56.5%	67.4%	76.1%	79.8%	82.6%	84.9%	87.0%	89.0%	90.6%				
2009	37.3%	56.1%	67.5%	74.0%	78.3%	82.3%	85.1%	87.7%	90.0%					
2010	35.5%	56.5%	67.1%	74.1%	79.7%	83.7%	87.4%	90.4%						
2011	35.3%	56.0%	65.5%	73.8%	79.1%	84.1%	87.2%							
2012	35.7%	52.0%	65.5%	74.7%	80.6%	85.0%								
2013	31.6%	51.7%	66.4%	75.4%	81.5%									
2014	30.5%	53.2%	67.6%	77.6%										
2015	30.9%	53.2%	67.5%											
2016	31.4%	54.9%												
2017	33.8%													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	35.6%	60.7%	69.2%	75.4%	79.8%	82.4%	83.5%	84.3%	84.7%	84.7%	85.3%	86.1%	87.1%	87.9%
2002	34.5%	59.2%	69.5%	76.5%	81.8%	83.4%	84.8%	85.6%	86.1%	86.4%	86.9%	88.2%	88.9%	90.5%
2003	35.5%	58.9%	69.2%	76.4%	80.7%	82.1%	83.4%	83.9%	84.1%	84.8%	86.5%	87.8%	89.2%	90.9%
2004	33.8%	57.9%	68.3%	74.0%	77.7%	80.0%	80.7%	81.7%	83.2%	84.6%	86.5%	88.1%	89.5%	91.2%
2005	35.1%	56.7%	66.0%	73.9%	78.3%	79.2%	80.5%	81.8%	83.8%	85.4%	87.5%	88.8%	90.6%	
2006	35.0%	56.0%	66.0%	72.9%	76.9%	79.3%	81.3%	83.1%	84.8%	86.6%	88.8%	90.5%		
2007	35.1%	56.8%	66.7%	72.9%	77.0%	79.5%	81.8%	83.9%	85.8%	88.1%	89.3%			
2008	37.2%	56.6%	66.4%	73.0%	77.3%	80.7%	83.2%	85.3%	87.4%	89.3%				
2009	37.1%	55.6%	65.6%	72.7%	77.7%	81.2%	84.2%	86.7%	88.8%					
2010	36.4%	55.7%	66.3%	73.6%	79.2%	83.1%	86.5%	89.1%						
2011	35.1%	54.9%	64.2%	72.1%	77.6%	82.6%	86.2%							
2012	35.1%	52.0%	64.5%	73.8%	79.8%	84.1%								
2013	32.1%	51.4%	65.6%	74.8%	81.3%									
2014	32.2%	53.2%	67.1%	76.2%										
2015	31.7%	53.2%	66.7%											
2016	32.6%	54.0%												
2017	33.3%													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001	34.1%	60.7%	68.1%	74.5%	79.2%	82.0%	83.5%	84.4%	84.4%	84.3%	84.8%	85.6%	86.6%	87.5%
2002	32.9%	57.2%	67.9%	75.1%	80.8%	82.4%	84.0%	84.7%	85.2%	85.4%	86.0%	87.5%	88.4%	89.9%
2003	33.3%	56.9%	67.2%	74.3%	79.2%	80.5%	81.7%	82.2%	82.4%	83.2%	85.1%	86.6%	88.3%	90.1%
2004	31.9%	55.8%	65.4%	71.5%	75.2%	77.9%	78.4%	79.5%	81.4%	83.2%	85.6%	87.4%	89.0%	90.8%
2005	32.6%	53.1%	63.1%	71.6%	76.4%	76.5%	77.9%	79.1%	81.6%	83.4%	86.1%	87.5%	89.6%	
2006	31.9%	52.7%	63.0%	70.6%	74.8%	77.2%	79.3%	81.2%	83.2%	85.3%	87.6%	89.4%		
2007	31.6%	53.2%	63.9%	70.6%	74.9%	77.5%	80.5%	82.9%	85.0%	87.4%	88.4%			
2008	34.8%	54.5%	64.5%	71.6%	76.2%	80.1%	82.7%	85.0%	87.3%	89.2%				
2009	35.8%	53.4%	63.7%	70.9%	76.6%	80.4%	83.6%	86.1%	88.3%					
2010	34.7%	54.3%	65.3%	73.0%	78.5%	82.7%	86.2%	89.0%						
2011	33.3%	53.0%	63.6%	71.2%	76.7%	82.1%	86.3%							
2012	33.2%	50.5%	63.4%	73.3%	79.4%	83.6%								
2013	31.0%	49.6%	64.6%	74.6%	80.9%									
2014	30.4%	51.8%	66.4%	76.0%										
2015	30.1%	51.2%	65.3%											
2016	31.0%	52.3%												
2017	31.6%													

Reported Indemnity Claim Count Development

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001						1.000	1.001	1.000	1.000	1.001	1.001	1.000	1.000
2002					1.002	1.002	1.000	1.001	1.001	1.002	1.001	1.001	1.000
2003				1.011	1.003	0.999	1.000	1.001	1.000	1.001	1.000	1.000	1.000
2004			1.013	1.004	1.002	0.998	1.001	1.001	1.001	1.000	1.001	1.001	1.000
2005		1.035	1.011	1.005	1.000	1.002	1.001	1.000	1.001	1.001	1.001	1.000	
2006	1.236	1.030	1.017	1.002	1.005	1.002	1.003	1.002	1.001	1.001	1.001		
2007	1.196	1.030	1.009	1.007	1.006	1.002	1.002	1.002	1.001	1.000			
2008	1.236	1.033	1.018	1.008	1.006	1.002	1.003	1.002	1.001				
2009	1.284	1.047	1.015	1.009	1.005	1.004	1.002	1.001					
2010	1.322	1.041	1.017	1.008	1.006	1.004	1.002						
2011	1.320	1.052	1.018	1.010	1.006	1.004							
2012	1.362	1.045	1.019	1.009	1.006								
2013	1.337	1.047	1.018	1.008									
2014	1.326	1.051	1.017										
2015	1.329	1.050											
2016	1.385												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001						1.005	1.002	1.001	1.000	1.001	1.001	1.002	1.001
2002					1.007	1.004	1.002	1.001	1.002	1.002	1.002	1.000	1.000
2003				1.003	1.002	0.999	1.000	1.001	1.001	1.001	1.001	1.001	1.000
2004			1.004	1.005	0.996	1.006	1.002	1.002	1.001	1.001	1.001	1.000	1.001
2005		1.010	1.004	0.997	1.005	1.006	1.002	1.003	1.000	0.999	0.999	1.000	
2006	1.122	1.019	0.996	1.006	1.001	1.001	1.000	1.002	1.000	1.001	1.000		
2007	1.126	1.011	1.009	1.004	1.003	1.001	1.001	1.000	1.000	1.001			
2008	1.136	1.024	1.009	1.004	1.003	1.002	1.001	1.001	1.002				
2009	1.153	1.022	1.011	1.005	1.004	1.002	1.001	1.001					
2010	1.180	1.026	1.008	1.009	1.003	1.002	1.001						
2011	1.200	1.022	1.011	1.007	1.003	1.001							
2012	1.194	1.030	1.009	1.007	1.003								
2013	1.207	1.021	1.008	1.006									
2014	1.200	1.024	1.012										
2015	1.228	1.026											
2016	1.198												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001						1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2002					1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003				1.001	0.999	0.998	0.999	0.999	1.000	0.999	1.000	1.000	1.000
2004			1.003	1.001	0.999	1.000	0.999	0.999	0.999	1.000	1.000	1.000	1.000
2005		1.010	1.003	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
2006	1.126	1.011	1.005	1.002	1.001	1.000	1.001	1.001	1.001	1.000	1.000		
2007	1.122	1.014	1.006	1.004	1.002	1.000	1.001	1.001	1.000	1.000			
2008	1.146	1.022	1.011	1.005	1.003	1.001	1.001	1.001	1.000				
2009	1.192	1.029	1.011	1.006	1.003	1.002	1.001	1.001					
2010	1.217	1.030	1.011	1.006	1.003	1.002	1.001						
2011	1.233	1.032	1.013	1.007	1.003	1.002							
2012	1.243	1.035	1.013	1.006	1.003								
2013	1.248	1.031	1.012	1.006									
2014	1.236	1.032	1.012										
2015	1.246	1.031											
2016	1.255												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001						1.001	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2002					1.000	0.999	1.000	0.999	0.999	0.999	1.000	1.000	1.000
2003				0.996	0.998	0.998	0.999	0.998	0.999	0.999	1.000	1.000	1.000
2004			0.997	0.999	0.997	1.000	0.998	0.999	0.998	0.999	1.000	0.999	1.000
2005		0.997	0.999	0.997	1.001	1.001	0.999	1.000	0.999	1.000	0.999	1.000	
2006	1.075	1.001	0.998	1.002	0.999	1.000	0.999	1.000	1.000	1.000	1.000		
2007	1.086	1.005	1.005	1.002	1.001	1.000	1.000	1.000	1.000	1.000			
2008	1.104	1.017	1.007	1.004	1.002	1.001	1.000	1.001	1.000				
2009	1.150	1.020	1.009	1.003	1.003	1.001	1.001	1.000					
2010	1.167	1.025	1.008	1.005	1.002	1.001	1.001						
2011	1.192	1.023	1.011	1.005	1.001	1.001							
2012	1.190	1.029	1.010	1.005	1.002								
2013	1.204	1.023	1.009	1.004									
2014	1.191	1.022	1.009										
2015	1.204	1.020											
2016	1.190												

Reported Total Claim Count Development

Large Deductible (LD) Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001								1.000	1.000	1.001	1.001	1.000	1.000
2002							1.000	1.001	1.001	1.001	1.000	1.000	1.000
2003						1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000
2004					1.000	0.999	1.001	1.000	1.000	1.000	1.000	1.000	1.000
2005				1.000	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	
2006			1.007	1.002	1.002	1.001	1.001	1.000	1.000	1.000	1.000		
2007		1.012	1.005	1.003	1.003	1.001	1.001	1.001	1.000	1.000			
2008	1.165	1.013	1.009	1.003	1.003	1.001	1.001	1.001	1.000				
2009	1.184	1.019	1.006	1.003	1.001	1.002	1.001	1.001					
2010	1.199	1.015	1.007	1.003	1.003	1.002	1.001						
2011	1.198	1.021	1.006	1.004	1.002	1.002							
2012	1.226	1.016	1.006	1.003	1.002								
2013	1.206	1.016	1.006	1.003									
2014	1.201	1.016	1.006										
2015	1.215	1.018											
2016	1.236												

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001								1.002	1.001	1.001	1.001	1.001	1.000
2002							1.003	1.001	1.001	1.001	1.001	1.000	1.000
2003						1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000
2004					1.002	1.005	1.001	1.001	1.000	1.000	1.001	1.000	1.000
2005				1.002	1.003	1.002	1.001	1.001	1.000	0.999	1.000	1.000	
2006			1.002	1.003	1.002	1.001	1.001	1.001	1.000	1.000	1.000		
2007		1.013	1.006	1.003	1.001	1.001	1.001	1.001	1.000	1.000			
2008	1.126	1.013	1.006	1.002	1.002	1.001	1.001	1.001	1.001				
2009	1.131	1.014	1.006	1.004	1.003	1.001	1.001	1.001					
2010	1.138	1.015	1.006	1.005	1.002	1.001	1.001						
2011	1.134	1.012	1.007	1.005	1.002	1.001							
2012	1.128	1.019	1.007	1.004	1.002								
2013	1.157	1.018	1.007	1.004									
2014	1.169	1.015	1.007										
2015	1.172	1.014											
2016	1.148												

All California WC Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001								1.001	1.001	1.001	1.000	1.000	1.000
2002							1.001	1.001	1.001	1.000	1.000	1.000	1.000
2003						1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000
2004					1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000
2005				1.001	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	
2006			1.005	1.003	1.002	1.001	1.001	1.001	1.001	1.000	1.000		
2007		1.012	1.005	1.004	1.002	1.001	1.001	1.001	1.000	1.000			
2008	1.128	1.013	1.008	1.003	1.002	1.001	1.001	1.001	1.000				
2009	1.146	1.016	1.006	1.004	1.002	1.002	1.001	1.001					
2010	1.154	1.016	1.007	1.004	1.003	1.002	1.001						
2011	1.158	1.017	1.007	1.004	1.002	1.002							
2012	1.167	1.017	1.007	1.004	1.002								
2013	1.172	1.018	1.007	1.004									
2014	1.174	1.016	1.007										
2015	1.181	1.016											
2016	1.184												

All Non-Large Deductible Experience

	Evaluated as of (months):												
AY	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168
2001								1.001	1.001	1.001	1.000	1.000	1.000
2002							1.001	1.001	1.001	1.000	1.000	1.000	1.000
2003						1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000
2004					1.001	1.003	1.001	1.001	1.000	1.000	1.000	1.000	1.000
2005				1.002	1.002	1.002	1.001	1.001	1.000	1.000	1.000	1.000	
2006			1.003	1.003	1.002	1.001	1.001	1.001	1.001	1.000	1.000		
2007		1.012	1.006	1.004	1.001	1.001	1.001	1.001	1.000	1.000			
2008	1.106	1.013	1.007	1.003	1.002	1.001	1.001	1.001	1.000				
2009	1.123	1.015	1.007	1.004	1.003	1.002	1.001	1.001					
2010	1.128	1.016	1.007	1.004	1.003	1.002	1.001						
2011	1.133	1.015	1.008	1.005	1.002	1.001							
2012	1.133	1.018	1.008	1.005	1.003								
2013	1.149	1.019	1.007	1.004									
2014	1.155	1.016	1.008										
2015	1.161	1.015											
2016	1.149												

Reported Indemnity Claim Settlement Ratios

Large Deductible (LD) Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						84.6%	88.6%	91.3%	93.1%	94.3%	95.0%	95.6%	96.2%	96.7%
2002					80.1%	85.8%	90.0%	92.6%	94.0%	94.9%	95.6%	96.3%	96.7%	97.2%
2003				73.8%	81.7%	87.5%	91.0%	93.0%	94.0%	95.0%	95.8%	96.4%	96.9%	97.4%
2004			62.3%	74.6%	83.3%	87.9%	90.7%	92.3%	93.6%	94.9%	95.8%	96.4%	97.0%	97.4%
2005		51.2%	64.8%	76.2%	83.4%	87.6%	90.1%	92.1%	93.9%	95.0%	96.0%	96.7%	97.2%	
2006	30.3%	50.7%	64.7%	75.9%	83.1%	86.8%	89.7%	91.9%	93.4%	94.7%	95.7%	96.5%		
2007	25.7%	49.3%	64.0%	74.9%	81.5%	85.5%	89.1%	91.5%	93.1%	94.4%	95.4%			
2008	28.6%	48.5%	63.2%	73.2%	80.0%	85.2%	89.0%	91.6%	93.5%	94.7%				
2009	27.5%	46.8%	60.2%	71.3%	79.4%	84.5%	88.5%	91.5%	93.3%					
2010	27.8%	46.4%	60.5%	72.4%	80.4%	85.5%	89.5%	92.2%						
2011	27.5%	46.5%	61.4%	73.0%	81.2%	86.4%	90.3%							
2012	28.4%	48.0%	62.7%	74.3%	82.3%	87.8%								
2013	28.9%	48.2%	64.2%	76.2%	84.3%									
2014	27.5%	49.1%	65.2%	77.9%										
2015	27.2%	50.2%	67.9%											
2016	28.4%	53.0%												
2017	30.9%													

Non-Large Deductible Experience from Insurers Writing LD

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						86.0%	89.5%	91.7%	93.6%	94.8%	95.6%	96.2%	96.6%	97.1%
2002					81.7%	87.6%	90.2%	92.6%	94.0%	95.2%	95.9%	96.6%	97.1%	97.6%
2003				73.1%	82.7%	86.8%	90.4%	92.5%	94.4%	95.2%	96.1%	96.8%	97.2%	97.7%
2004			62.9%	76.5%	83.1%	87.4%	90.5%	92.8%	94.1%	95.2%	96.2%	96.8%	97.5%	98.0%
2005		45.7%	63.5%	75.9%	82.7%	87.0%	90.1%	92.0%	93.5%	95.0%	96.1%	97.0%	97.5%	
2006	24.8%	49.8%	65.7%	75.5%	82.0%	86.5%	89.2%	91.6%	93.5%	94.7%	95.9%	96.6%		
2007	32.4%	51.2%	65.0%	75.1%	82.0%	86.1%	89.8%	92.3%	94.2%	95.8%	96.8%			
2008	28.8%	48.6%	62.3%	73.2%	80.4%	85.9%	89.4%	92.0%	94.2%	95.5%				
2009	26.9%	46.6%	61.4%	72.0%	79.7%	85.2%	89.2%	92.4%	94.4%					
2010	26.3%	46.8%	60.6%	72.6%	81.1%	86.6%	90.9%	93.5%						
2011	27.4%	46.9%	62.4%	74.6%	82.5%	87.9%	91.7%							
2012	27.1%	47.1%	63.8%	75.7%	83.5%	88.7%								
2013	25.5%	49.1%	65.3%	77.0%	85.2%									
2014	27.3%	50.4%	67.1%	79.0%										
2015	27.3%	52.1%	69.7%											
2016	29.8%	55.0%												
2017	31.0%													

All California WC Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						84.2%	87.8%	90.4%	92.3%	93.6%	94.6%	95.3%	96.1%	96.6%
2002					79.1%	84.6%	88.2%	90.8%	92.4%	93.7%	94.7%	95.8%	96.4%	96.9%
2003				70.8%	79.3%	84.8%	88.4%	90.6%	92.4%	93.7%	95.2%	95.9%	96.4%	97.0%
2004			60.9%	72.9%	80.8%	85.3%	88.3%	90.6%	92.4%	94.3%	95.4%	96.1%	96.8%	97.3%
2005		49.2%	63.4%	74.7%	81.3%	85.5%	88.5%	90.8%	93.1%	94.5%	95.5%	96.4%	97.0%	
2006	26.4%	49.8%	64.3%	74.3%	81.0%	85.2%	88.3%	91.2%	93.0%	94.3%	95.5%	96.4%		
2007	27.3%	49.8%	63.5%	73.6%	80.2%	84.6%	88.8%	91.4%	93.2%	94.8%	95.9%			
2008	27.5%	48.1%	61.8%	72.1%	79.2%	85.0%	88.8%	91.5%	93.6%	95.0%				
2009	26.7%	46.3%	60.0%	70.8%	79.1%	84.6%	88.6%	91.7%	93.7%					
2010	27.0%	46.9%	60.7%	72.5%	80.5%	85.9%	90.0%	92.7%						
2011	27.6%	47.3%	62.2%	73.6%	81.6%	87.0%	90.9%							
2012	27.8%	48.2%	63.5%	75.1%	83.0%	88.3%								
2013	27.2%	48.5%	64.6%	76.7%	84.7%									
2014	26.9%	49.6%	66.1%	78.2%										
2015	27.3%	51.0%	68.5%											
2016	28.7%	53.9%												
2017	31.0%													

All Non-Large Deductible Experience

	Evaluated as of (months):													
AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168
2001						83.9%	87.4%	90.1%	91.9%	93.2%	94.3%	95.1%	96.0%	96.5%
2002					78.6%	84.0%	87.5%	90.1%	91.8%	93.3%	94.4%	95.6%	96.3%	96.8%
2003				69.4%	78.1%	83.5%	87.1%	89.5%	91.6%	93.1%	94.9%	95.6%	96.2%	96.8%
2004			60.2%	71.9%	79.3%	83.9%	86.9%	89.7%	91.7%	94.0%	95.1%	95.9%	96.7%	97.3%
2005		48.2%	62.6%	73.8%	80.0%	84.2%	87.5%	90.0%	92.6%	94.2%	95.2%	96.2%	97.0%	
2006	24.6%	49.3%	64.1%	73.4%	79.8%	84.3%	87.5%	90.8%	92.8%	94.1%	95.4%	96.3%		
2007	28.0%	50.0%	63.2%	72.7%	79.5%	84.1%	88.7%	91.3%	93.2%	95.0%	96.1%			
2008	26.9%	47.7%	60.9%	71.3%	78.5%	85.0%	88.7%	91.4%	93.7%	95.2%				
2009	26.3%	46.0%	59.8%	70.3%	79.0%	84.7%	88.6%	91.9%	94.0%					
2010	26.5%	46.9%	60.5%	72.6%	80.6%	86.1%	90.4%	93.0%						
2011	27.6%	47.5%	62.6%	73.9%	81.9%	87.4%	91.2%							
2012	27.4%	48.3%	63.9%	75.5%	83.4%	88.6%								
2013	26.4%	48.8%	64.9%	77.0%	85.0%									
2014	26.6%	49.9%	66.6%	78.4%										
2015	26.9%	51.4%	68.9%											
2016	28.9%	54.4%												
2017	31.0%													

Item AC16-06-05
Update on Medical Severity Trends by Component

The Committee regularly reviews a summary of changes in paid per transaction and paid transactions per claim by medical component in six-month calendar interval periods. An update to that analysis with medical transaction information through June 30, 2018 will be presented at the meeting.

Item AC17-12-02
Legislative Cost Monitoring

The Actuarial Committee regularly reviews the impact of recent legislative reforms on emerging costs. Staff's most recent analysis of the cost impact of several recent reforms, including Senate Bill No. 863 (SB 863), Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244), and the new Drug Formulary effective January 1, 2018, are summarized below.

SB 863 Provisions

SB 863, effective starting in 2013, increased permanent disability (PD) benefits and made a number of structural changes to the workers' compensation system. The WCIRB's last comprehensive report on emerging post-SB 863 costs was published in 2016.[1] For a number of provisions of SB 863, the emerging post-reform costs have been stable. However, several other provisions, such as those related to PD ratings and the utilization of medical services, are related to costs that emerge later in the life of a claim and continue to be monitored. Follow-up analyses in these areas were reviewed by the Committee at the December 6, 2017 and August 1, 2018 meetings. Additional follow-up analysis based on the most recent data is discussed by component below.

Permanent Disability Benefits

SB 863 increased minimum and maximum weekly PD benefits for 2013 and 2014 injuries and made a number of changes to the manner in which PD ratings are computed. Effective in 2013, SB 863 increased PD benefit minimums and maximums, replaced the adjustment for future earning capacity (FEC) (which previously ranged from 1.1 to 1.4 based on the type of impairment) with a uniform 1.4 adjustment to all impairments, and eliminated PD add-ons for psychiatric impairment, sleep disorder, and sexual dysfunction. Effective in 2014, SB 863 further increased PD benefit maximums. Prior WCIRB SB 863 cost monitoring reports have noted that emerging information on PD ratings suggest that PD costs are emerging generally consistent with prospective estimates. However, the reports have also noted that PD benefits are generally paid later in the life of a claim and it often takes a number of years before the final PD rating on a claim is determined.

Exhibit 1.1 shows average PD ratings based on WCIRB unit statistical data. Estimates of average PD ratings following SB 863 continue to follow a downward trend. Exhibit 1.2 shows distributions of PD ratings by PD rating interval. There has been a gradual shift from mid-range PD ratings to lower ratings over the last few years. However, these shifts have been occurring before the implementation of SB 863 in 2013. Other diagnostics show there has not been a significant change in the proportion of indemnity claims involving PD, suggesting that the shifts in average rating are not driven by an increase in the frequency of lower-rated PD claims.[2] Exhibit 2 shows average PD ratings based on information obtained from the Disability Evaluation Unit (DEU). The DEU data shows a steady increase in average PD ratings over time, with a more significant increase in early 2013 ratings coinciding with the SB 863 changes to the manner in which PD ratings are computed. Since the new rating formula was adopted in 2013 ratings have been relatively flat.

Staff investigated some of the inconsistencies between the two sources of PD ratings, with the DEU data generally showing increases in average PD rating in recent years while the unit statistical data shows declines over the same period. PD ratings reported in unit statistical data at early maturities are typically based on claims adjuster's estimates of the final rating, though claims adjusters have access to disability reports and other tools that allow them to estimate the rating.[3] Although ratings issued by the DEU are

[1] *Senate Bill No. 863 WCIRB Cost Monitoring Report – 2016 Retrospective Evaluation*, WCIRB, November 17, 2016.

[2] See Exhibit M4 of Item AC18-08-01 of the August 1, 2018 Actuarial Committee Agenda.

[3] In this review, staff compared the PD rating reported on the claim to the reported paid and incurred indemnity benefits to determine if any shift in the relationship between the reported PD rating and the actual claim costs was occurring. Staff did not observe any signs of a significant shift.

typically closer to final, not all PD claims are rated through the DEU. In particular, claims where the factors of disability are clearly indicated in the physician's report may settle quicker and have lower ratings than the more complex PD claims and generally do not receive a DEU rating. The DEU may also provide alternative ratings for a claim based on requests from the applicant's attorney, which are typically higher than average.

Exhibit 3 shows distributions of PD ratings from the DEU data based on the type of rating for ratings issued within 24 months from the date of injury. "Summary" ratings are typically for unrepresented workers and based on the primary treating physician's report or a panel QME report. "Consult" ratings are typically for represented workers and generally based on reports provided by the applicant's attorney. As shown in Exhibit 3, Consult ratings are typically much higher on average. Consult ratings also represent a growing share of the ratings issued by the DEU, which contributes to the growth in average PD rating in the DEU data as shown in Exhibit 2. Some of the increasing proportion of Consult ratings may be related to the speed-up in the process to settle PD claims.

Recent increases in the rate at which PD claims are settling may be having a dampening effect on average PD ratings and, consequently, average PD benefits. PD claims that settle quickly are typically less complex and less likely to be rated by the DEU. Exhibits 4.1 and 4.2 show average paid indemnity per closed or open PD claim, respectively, based on unit statistical data. Although average paid indemnity per closed PD claim increased moderately for accident year 2013 at first report level, it is relatively flat at later report levels. Average paid indemnity per open indemnity claim shows modest declines for accident year 2013 at all report levels. These changes are contrary to the SB 863 provisions effective in 2013 which were, in net, estimated to increase PD benefits. Average paid indemnity per closed PD claim increased more significantly in 2014, which is consistent with the SB 863 provisions increasing maximum PD benefits effective in 2014. However, paid per open PD claim continues to be somewhat flat in 2014, suggesting that the increases in PD claim settlement rates also had a dampening effect on average PD benefits in 2014.

Exhibit 5 shows the proportion of PD claims with add-ons for psychiatric impairment, sleep disorder, and sexual dysfunction based on DEU data. The WCIRB's prospective estimate of SB 863 assumed the frequency of the PD add-ons would reduce by approximately 94%.[4] The proportion of ratings involving these add-ons declined significantly when the reforms became effective in 2013 and continues to decline for more recent accident years. For accident year 2015, approximately 1% or fewer ratings issued by the DEU involve these add-ons through 42 months. Although a somewhat larger proportion of ratings continue to involve these add-ons than prospectively estimated, overall declines in average PD rating and increasing PD claim settlement rates as discussed above suggest that these add-ons are no longer significantly increasing average PD ratings. As a result, staff is not recommending any adjustment to the estimated impact of eliminating the PD add-ons. Staff also reviewed the DEU data for potential new add-ons (such as gastrointestinal disorder) and did not find any evidence of new add-ons emerging.

Although SB 863 increased the weekly PD minimums and maximums and the DEU data suggests that the changes to the PD rating formula implemented in 2013 resulted in an increase in promulgated PD ratings, other information such as the speed-up in PD claim settlement rates and relatively flat average costs on PD claims suggest that overall indemnity costs are not increasing as significantly as prospectively estimated. As a result, staff recommends continuing to review the impact of SB 863 on indemnity benefit levels and will discuss with the Committee at the meeting.

Supplemental Job Displacement Benefits (SJDB)

SB 863 made changes to the SJDB to set it at a maximum of $6,000 for all eligible claims and modified the basis upon which the SJDB is paid and the types of expenses that are reimbursed. Payments under

[4] 100% of the sleep disorder and sexual dysfunction add-ons were assumed to be eliminated by SB 863 while only 90% of the psychiatric add-ons were assumed to be eliminated due to exceptions provided by SB 863 to allow some of these add-ons to remain.

the $120 million return-to-work fund established by SB 863 and administered by the Division of Workers' Compensation (DWC) is also triggered by the reception of a SJDB. At the December 6, 2017 meeting, it was noted that the most current information available showed continued increases in SJDB costs subsequent to the implementation of SB 863. The WCIRB's most recent evaluation of the SJDB changes estimates that the increase in SJDB utilization resulted in a 0.6% in indemnity costs.

Exhibit 6 shows updated information on SJDB costs including calendar year SJDB payments based on WCIRB aggregate financial data calls and SJDB utilization and average cost per SJDB based on WCIRB PD Claim Survey data. Utilization of the SDJB and the average cost of an SJDB for the most recent year is generally consistent with the prior year. Although the proportion of calendar year indemnity payments for SJDB costs has increased in 2017, this is likely due to a gradual shift in the proportion of payments coming from more recent accident years that have higher SJDB utilization rates. Given this and the fact that the SJDB is a relatively small proportion of all indemnity benefits, staff is not recommending any adjustment to the estimated cost impact of the SJDB.

Changes to the Physician Fee Schedule

SB 863 provided for changes to the physician fee schedule to be based on the Medicare Resource-Based Relative Value Scale (RBRVS). The new fee schedule became effective beginning in 2014 and was phased in over a four-year period. At the December 6, 2017 meeting, the Committee reviewed the estimated impact of the changes based on WCIRB medical transaction data through the second quarter of 2017, which indicated significant savings in physician costs had emerged for the first two years of the phase-in (2014 and 2015) but physician costs have been generally consistent with prospective estimates for the final two years of the phase-in (2016 and 2017).

Exhibits 7.1 through 7.4 show updated information on physician costs based on WCIRB medical transaction data through the second quarter of 2018. As shown in Exhibits 7.1 and 7.2 for the 2014 and 2015 service years (the first two years of the phase-in), total physician costs per claim continue to show decreases generally consistent with prior estimates reviewed by the Committee. As shown in Exhibits 7.3 and 7.4, average physician costs for the 2016 and 2017 service years (the final two years of the phase-in) increased modestly, which is generally consistent with the WCIRB's prospective estimates for those years. The changes in physician cost trends from the first two years of the phase-in are generally attributable to one-time reductions in the utilization of physician services across most categories, which deepened the reductions in categories receiving fee decreases and partially offset the growth in categories receiving fee increases.

Independent Medical Review and the Utilization of Medical Services

The independent medical review (IMR) process was one of the cornerstone reforms of SB 863. Although the number of IMR filings have been significantly greater than initially projected, the IMR process has been a significant driver of the reductions in average medical severities resulting from SB 863. Exhibit 8 shows updated counts of IMR filings based on information provided by the DWC. Based on data through nine months, the number of eligible IMR filings in 2018 moderately increased.

SB 863's IMR and independent bill review processes and changes to spinal surgery reimbursements, ambulatory surgical center fees, medical provider networks, and the physician fee schedule have significantly reduced average medical costs. At the August 1, 2018 meeting, the Committee reviewed the estimated combined impact of SB 863 on the utilization of medical services. Based on data through March 31, 2018, SB 863 was estimated to have resulted in a total 17% decrease in average medical costs from 2011 through 2015. Table 1 shows how the estimated 17% decrease is distributed across the 2011 through 2015 accident years.[5]

[5] The total impact was distributed by accident year based on the approximate proportion of medical losses paid prior to SB 863 for each year. See Item AC14-08-07 of the March 21, 2017 Actuarial Committee Agenda for more information.

Table 1: SB 863 Medical Utilization Change by Accident Year

Accident Year	Incremental Impact
2011	-3%
2012	-4%
2013	-5%
2014	-3%
2015	-2%
Total	-17%

SB 1160 and AB 1244 Provisions Related to Liens

SB 1160 provided for a number of provisions related to liens. First, all liens filed on or after January 1, 2017 are required to include a declaration under penalty of perjury that the lien is not subject to IMR or independent bill review and that it satisfies one of several criteria. Second, liens must be filed by the original service provider and can no longer be assigned to a third party unless the original provider has ceased doing business and assigned all rights to the third party. Finally, liens from providers indicted for fraud are stayed until the disposition of the criminal proceedings. AB 1244 provides for a special process to consolidate liens from providers convicted of fraud.

The WCIRB's most recent estimate of the impact of these provisions on costs was reviewed by the Committee at the March 19, 2018 meeting and reflected in the July 1, 2018 and January 1, 2019 Pure Premium Rate Filings. The WCIRB assumed a 40% reduction in lien filings resulting from these provisions which resulted in a 2.4% decrease in medical costs and a 6.4% decrease in ALAE costs. The WCIRB also adjusted paid medical loss development for the impact of these provisions, based on the approach adopted by the Committee at the March 19, 2018 meeting.

Lien filings from the first three quarters of 2018 are available from the DWC. Exhibit 9.1 shows lien filings by quarter. As discussed at prior meetings, given SB 863's dual statutes of limitations on lien filings in effect through June 30, 2016 and the enactment of SB 1160 and AB 1244 on September 30, 2016, lien filings in third quarter of 2016 may be the only quarter representative of the post-SB 863 and pre-SB 1160 level. After some volatility in lien filing counts in the fourth quarter of 2016 and first quarter of 2017 shortly before and after the new legislation became effective, lien filings in the last three quarters of 2017 were on average approximately 40% below the pre-SB 1160 and AB 1244 level. Lien filing counts continued to decline in 2018 and through the first three quarters of 2018 are on average 50% below the pre-SB 1160 and AB 1244 level. (In the California Department of Insurance (CDI) decision on the January 1, 2019 Pure Premium Rate Filing, the CDI predicated the approved 2019 advisory pure premium rates on a 50% reduction in lien filings.) Exhibit 9.2 shows recent lien filings by month which shows a steady decrease through 2018. Staff is reviewing additional diagnostic information on recent lien filings and will present it to the Committee at the meeting.

SB 1160 also provides that all outstanding liens must have a declaration under penalty of perjury filed by July 1, 2017 or be dismissed by operation of law. In August of 2017, the DWC advised that approximately 292,000 liens had been dismissed and posted the list of dismissed liens on their website. The Committee reviewed information related to the potential impact of these lien dismissals on paid medical loss development at the December 6, 2017 and March 19, 2018 meetings. Staff is in the process of obtaining additional information from the DWC on these lien dismissals and will provide an update to the Committee at the meeting.

SB 1160 Provisions Related to Utilization Review

SB 1160 provided that, on most injuries occurring on or after January 1, 2018, most medical treatment requested within the first 30 days from the date of injury is exempted from prospective utilization review

(UR) and automatically authorized.[6] The WCIRB's prospective estimate of the impact of these provisions of SB 1160 was included in the Amended January 1, 2017 Pure Premium Rate Filing. The WCIRB estimated that the modest decrease in UR costs resulting from these provisions would be approximately offset by a modest increase in medical costs for the additional authorized treatment. As a result, the WCIRB has not reflected any impact on pure premium rates from these provisions.

A preliminary retrospective analysis of these provisions based on accident year 2018 through the first six months will be presented at the meeting.

Drug Formulary

In late 2017, the DWC adopted a new drug formulary linked to California's Medical Treatment Utilization Schedule (MTUS) (pursuant to Assembly Bill No. 1124) to be effective on January 1, 2018. The new drug formulary provides that a prescription is not subject to prospective UR as long as one of the following are met: (a) it is an Exempt Drug in the MTUS drug list dispensed by a pharmacy and the use is consistent with the MTUS treatment guideline, (b) it is a Non-Exempt Drug in the MTUS drug list that is eligible for special fill or perioperative fill policy and prescribed within certain timeframes, (c) it is a physician-dispensed Exempt Drug on a one-time basis within 7 days of the date of injury, or (d) it is a physician-dispensed Non-Exempt Drug meeting requirements of special fill or perioperative fill policy. The WCIRB's prospective estimate of the new drug formulary was included in the July 1, 2018 Pure Premium Rate Filing. The WCIRB estimated a 0.1% reduction in total costs resulting from savings to UR costs and a 0.4% reduction in total costs resulting from changes in prescribing patterns.

A preliminary retrospective analysis of the impact of the new drug formulary based on pharmaceutical transactions through the first six months of 2018 will be presented at the meeting.

[6] Some conditions need to be met for the treatment to be automatically authorized and there are some exempted types of treatment.

Average Permanent Disability Rating Based on Unit Statistical Data

Average Permanent Disability Rating by Accident Year by Report Level

Accident	Report Level									
Year	1	2	3	4	5	6	7	8	9	10
2001	20.3	23.8	26.2	27.0	27.2	27.5	27.4	27.2		
2002	19.6	23.6	25.4	26.0	26.1	26.0	25.8	25.8		
2003	19.1	22.8	24.2	24.5	24.1	23.8	23.8	23.9	23.8	23.8
2004	18.5	20.2	21.1	20.3	20.0	20.1	20.3	20.4	20.5	20.5
2005	13.0	15.1	15.9	16.4	16.8	17.2	17.4	17.6	17.5	17.6
2006	12.0	14.3	15.7	16.5	17.2	17.6	17.7	17.7	17.7	17.8
2007	11.9	14.5	16.2	17.2	17.8	18.1	18.0	18.1	18.2	18.3
2008	11.9	14.8	16.8	17.8	18.1	18.0	18.2	18.4	18.4	
2009	12.4	15.2	16.9	17.7	17.5	17.8	18.1	18.2		
2010	12.6	15.1	16.3	16.5	16.9	17.3	17.5			
2011	12.7	14.6	15.2	15.8	16.4	16.7				
2012	12.1	13.6	14.6	15.4	15.8					
2013	11.3	12.9	14.0	14.6						
2014	11.0	12.5	13.5							
2015	10.4	12.1								
2016	10.1									

Annual Change in Average Permanent Disability Rating

Accident	Report Level									
Year	1	2	3	4	5	6	7	8	9	10
2002	-3.5%	-0.9%	-3.3%	-3.8%	-3.9%	-5.4%	-6.0%	-5.0%	---	---
2003	-2.4%	-3.2%	-4.7%	-5.9%	-7.7%	-8.6%	-7.6%	-7.3%	---	---
2004	-3.4%	-11.4%	-12.6%	-17.3%	-17.1%	-15.5%	-14.8%	-14.6%	-13.7%	-14.1%
2005	-29.8%	-25.1%	-24.6%	-19.2%	-16.0%	-14.2%	-14.2%	-14.1%	-14.8%	-14.3%
2006	-7.8%	-5.7%	-1.5%	1.0%	2.3%	1.8%	1.6%	0.5%	1.2%	1.3%
2007	-0.8%	1.6%	3.2%	4.3%	3.6%	2.9%	1.5%	2.6%	3.0%	2.8%
2008	0.1%	1.8%	3.8%	3.1%	1.9%	-0.3%	1.2%	1.3%	1.1%	
2009	4.5%	3.2%	0.7%	-0.4%	-3.4%	-1.2%	-0.9%	-0.7%		
2010	1.1%	-1.2%	-3.7%	-6.9%	-3.3%	-2.9%	-2.8%			
2011	0.9%	-2.8%	-6.8%	-3.9%	-3.3%	-3.6%				
2012	-4.5%	-7.1%	-3.7%	-2.6%	-3.7%					
2013	-6.7%	-4.9%	-4.4%	-5.3%						
2014	-2.9%	-3.2%	-3.3%							
2015	-5.4%	-3.3%								
2016	-2.3%									

Source: WCIRB unit statistical data.

Distribution of Permanent Disability Ratings Based on Unit Statistical Data

Distribution of Permanent Disability Ratings by Rating Interval by Accident Year for PD Claims at Report Level 1

Rating Interval	Accident Year											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1-10%	55.4%	59.7%	58.2%	57.2%	56.4%	55.7%	55.3%	59.0%	60.2%	62.9%	65.6%	66.5%
10-20%	28.3%	25.7%	27.8%	28.5%	28.1%	27.9%	28.9%	28.5%	28.8%	26.8%	25.4%	24.2%
20-30%	10.2%	8.8%	8.6%	9.2%	9.5%	10.2%	9.8%	8.0%	7.3%	6.5%	5.9%	6.2%
30-40%	3.3%	2.7%	2.6%	2.9%	3.1%	3.0%	3.0%	2.4%	2.0%	2.1%	1.8%	1.7%
40-50%	1.4%	1.5%	1.4%	1.2%	1.6%	1.7%	1.5%	1.1%	0.8%	0.8%	0.8%	0.7%
50-60%	0.7%	0.7%	0.7%	0.5%	0.7%	0.8%	0.7%	0.5%	0.4%	0.4%	0.3%	0.3%
60-70%	0.4%	0.5%	0.4%	0.3%	0.4%	0.5%	0.5%	0.3%	0.2%	0.3%	0.2%	0.2%
70-80%	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
80-90%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%
90-99%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Distribution of Permanent Disability Ratings by Rating Interval by Accident Year for PD Claims at Report Level 2

Rating Interval	Accident Year										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1-10%	50.2%	50.4%	49.0%	48.0%	48.3%	48.7%	48.6%	52.4%	53.6%	56.2%	57.8%
10-20%	27.0%	28.2%	29.5%	29.0%	28.4%	28.3%	30.9%	30.9%	30.1%	28.6%	27.3%
20-30%	12.4%	12.0%	12.0%	12.6%	12.5%	12.5%	12.0%	10.2%	9.9%	9.2%	9.2%
30-40%	5.0%	4.5%	4.8%	5.1%	5.2%	5.0%	4.1%	3.4%	3.5%	3.3%	3.2%
40-50%	2.5%	2.4%	2.5%	2.5%	2.8%	2.6%	2.2%	1.6%	1.6%	1.4%	1.4%
50-60%	1.4%	1.3%	1.2%	1.3%	1.4%	1.4%	1.1%	0.7%	0.7%	0.7%	0.6%
60-70%	0.9%	0.8%	0.7%	0.9%	1.0%	1.0%	0.8%	0.4%	0.4%	0.3%	0.3%
70-80%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.1%	0.1%
80-90%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
90-99%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%

Distribution of Permanent Disability Ratings by Rating Interval by Accident Year for PD Claims at Report Level 3

Rating Interval	Accident Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1-10%	45.4%	46.0%	43.9%	43.8%	44.6%	45.7%	45.6%	48.9%	50.3%	52.8%
10-20%	28.4%	28.7%	28.9%	27.9%	27.5%	28.8%	31.7%	30.8%	29.8%	28.2%
20-30%	13.9%	13.9%	13.7%	14.3%	13.9%	13.9%	13.2%	11.7%	11.5%	11.2%
30-40%	5.7%	5.7%	6.4%	6.5%	6.3%	5.4%	4.6%	4.4%	4.5%	4.2%
40-50%	3.0%	2.8%	3.4%	3.4%	3.5%	3.0%	2.4%	2.2%	2.0%	1.9%
50-60%	1.7%	1.5%	1.8%	1.9%	1.9%	1.5%	1.2%	1.0%	0.9%	0.9%
60-70%	1.1%	0.9%	1.2%	1.4%	1.4%	1.1%	0.8%	0.6%	0.5%	0.5%
70-80%	0.4%	0.3%	0.4%	0.5%	0.5%	0.3%	0.2%	0.2%	0.2%	0.2%
80-90%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
90-99%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%

Source: WCIRB unit statistical data.

Average Permanent Disability Rating Based on Disability Evaluation Unit Data

Average Permanent Disability Rating by Age by Accident Year

Age at Final Rating (Months)		Accident Year													
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
0	6	9.9	11.2	12.6	13.1	9.6	12.5	12.9	13.3	14.5	13.8	12.4	16.4	14.0	16.4
6	9	10.6	11.4	10.8	11.4	11.3	12.1	12.7	12.1	13.1	13.0	14.1	14.2	14.5	
9	12	11.3	11.9	12.4	12.9	12.0	13.1	12.9	13.8	14.9	15.7	15.8	15.4	16.4	
12	15	12.2	12.6	13.0	12.4	13.9	14.4	14.1	14.5	15.7	16.1	17.3	17.0	17.1	
15	18	13.3	13.8	14.4	14.5	14.9	16.3	16.6	16.4	19.1	18.2	19.1	18.0	18.7	
18	21	14.4	14.7	15.7	15.1	16.9	17.7	17.9	18.5	20.2	20.4	20.4	19.8		
21	24	15.0	15.7	15.9	16.9	17.8	18.7	19.7	19.2	21.9	21.8	21.2	21.3		
24	27	16.1	17.0	16.2	18.7	19.3	20.5	20.4	21.1	22.9	23.2	23.4	22.4		
27	30	17.7	18.1	18.2	20.1	21.3	22.1	22.2	23.8	24.0	24.1	24.3	23.7		
30	33	18.2	18.9	21.2	22.7	22.9	23.4	23.7	22.6	26.2	24.7	25.2			
33	36	19.8	20.6	21.6	23.0	23.2	25.0	23.5	25.5	26.5	26.6	25.9			
36	39	20.5	21.3	22.7	25.5	24.0	25.3	25.9	26.8	27.1	27.1	26.3			
39	42	21.3	22.6	24.9	26.6	26.9	26.6	25.1	26.4	28.0	27.8	25.2			
42	45	23.5	23.2	26.0	26.5	27.3	28.4	27.6	27.8	28.5	29.3				
45	48	22.5	24.8	26.3	26.0	30.2	29.5	28.2	29.1	29.7	29.5				
48	51	22.8	25.6	26.9	28.1	29.1	28.9	29.2	29.2	30.9	29.8				
51	54	26.1	27.2	28.8	30.1	30.5	27.2	31.4	29.1	30.4	31.6				
54	60	27.2	29.1	31.5	31.3	31.9	32.7	31.7	29.4	31.1					
60	66	28.3	30.3	31.2	33.3	34.2	30.7	32.3	29.9	32.1					
66	78	30.9	32.6	32.5	33.2	33.8	33.8	33.0	32.6						
78	& Over	35.2	36.4	36.2	35.3	34.7	34.1	32.3							

Annual Change in Average Permanent Disability Rating

Age at Final Rating (Months)		Accident Year												
		2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
0	6	12.6%	12.2%	3.9%	-26.3%	29.8%	3.2%	3.1%	8.8%	-4.3%	-10.5%	32.6%	-15.0%	17.5%
6	9	6.7%	-4.7%	5.1%	-0.5%	7.0%	5.3%	-5.3%	8.6%	-1.0%	8.5%	0.9%	2.1%	
9	12	5.5%	3.6%	4.7%	-7.6%	9.3%	-1.2%	7.0%	8.0%	5.3%	0.6%	-2.5%	6.2%	
12	15	2.7%	3.5%	-5.0%	12.8%	3.1%	-2.1%	3.2%	8.2%	2.7%	7.0%	-1.8%	0.5%	
15	18	3.7%	5.0%	0.5%	2.8%	9.4%	1.4%	-0.7%	16.0%	-4.7%	4.8%	-5.4%	3.4%	
18	21	2.3%	6.5%	-3.5%	11.5%	4.8%	1.0%	3.4%	9.5%	1.1%	-0.4%	-2.6%		
21	24	4.6%	1.4%	6.5%	4.9%	5.2%	5.2%	-2.4%	14.3%	-0.4%	-2.8%	0.2%		
24	27	5.3%	-4.6%	15.5%	3.4%	5.8%	-0.1%	3.4%	8.3%	1.4%	1.1%	-4.5%		
27	30	2.6%	0.5%	10.3%	6.0%	3.8%	0.4%	7.2%	0.9%	0.4%	1.0%	-2.6%		
30	33	4.1%	12.0%	7.1%	1.1%	1.8%	1.7%	-4.7%	15.9%	-5.8%	2.0%			
33	36	4.0%	5.1%	6.4%	0.9%	7.8%	-6.0%	8.3%	4.1%	0.1%	-2.5%			
36	39	3.7%	6.4%	12.6%	-5.9%	5.3%	2.2%	3.5%	1.3%	-0.2%	-2.9%			
39	42	6.4%	10.0%	6.9%	1.2%	-1.2%	-5.9%	5.2%	6.3%	-0.8%	-9.3%			
42	45	-1.1%	12.0%	2.0%	2.8%	4.0%	-2.5%	0.7%	2.3%	2.8%				
45	48	10.2%	5.9%	-1.2%	16.1%	-2.4%	-4.4%	3.2%	2.1%	-0.7%				
48	51	12.4%	4.9%	4.6%	3.7%	-0.7%	1.0%	0.0%	6.0%	-3.5%				
51	54	4.1%	5.8%	4.4%	1.3%	-10.7%	15.3%	-7.2%	4.3%	4.1%				
54	60	7.1%	8.2%	-0.5%	1.8%	2.5%	-3.0%	-7.3%	5.6%					
60	66	7.1%	2.8%	6.6%	2.9%	-10.2%	5.2%	-7.5%	7.6%					
66	78	5.6%	-0.4%	2.1%	2.0%	-0.1%	-2.4%	-1.1%						
78	& Over	3.5%	-0.7%	-2.6%	-1.7%	-1.5%	-5.4%							

Source: DEU data.

Distribution of Permanent Disability Ratings Based on Disability Evaluation Unit Data with Ratings Determined 24 Months or Less from Date of Injury

Distribution of Permanent Disability Ratings by Rating Interval by Accident Year for PD Claims with "**Summary**" Ratings

Rating Interval	Accident Year 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1-10%	64.0%	62.5%	63.9%	60.0%	59.5%	57.0%	56.6%	56.8%	51.0%	50.6%	50.7%	48.9%
10-20%	25.3%	26.2%	24.4%	26.2%	26.6%	28.6%	28.2%	28.7%	30.1%	31.7%	31.7%	32.4%
20-30%	6.7%	7.3%	7.0%	8.2%	8.4%	8.6%	9.6%	8.2%	10.6%	10.4%	10.4%	11.6%
30-40%	2.4%	2.3%	2.6%	3.0%	3.3%	3.5%	3.4%	3.6%	5.0%	3.6%	4.0%	4.2%
40-50%	0.8%	0.9%	1.3%	1.3%	1.2%	1.3%	1.4%	1.5%	2.0%	2.1%	1.7%	1.8%
50-60%	0.4%	0.4%	0.4%	0.7%	0.5%	0.5%	0.5%	0.5%	0.8%	0.9%	0.9%	0.7%
60-70%	0.2%	0.2%	0.2%	0.4%	0.3%	0.3%	0.2%	0.3%	0.4%	0.4%	0.3%	0.3%
70-80%	0.1%	0.0%	0.1%	0.0%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
80-90%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%
90-99%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Summary Proportion of All Ratings	48.9%	48.6%	60.7%	53.9%	55.8%	58.8%	59.6%	59.8%	51.3%	43.5%	43.5%	46.2%

Distribution of Permanent Disability Ratings by Rating Interval by Accident Year for PD Claims with "**Consult**" Ratings

Rating Interval	Accident Year 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1-10%	41.0%	39.8%	40.5%	34.3%	31.1%	28.7%	27.7%	29.7%	25.3%	26.0%	25.9%	27.4%
10-20%	31.5%	32.6%	30.0%	30.1%	29.8%	29.4%	29.3%	29.5%	28.9%	29.7%	30.7%	29.8%
20-30%	14.3%	14.4%	14.6%	17.4%	18.6%	19.3%	18.8%	18.2%	18.8%	19.0%	18.5%	18.8%
30-40%	7.2%	6.8%	6.8%	8.3%	9.9%	11.1%	10.8%	10.2%	11.6%	11.1%	11.0%	10.9%
40-50%	3.4%	3.3%	3.8%	5.6%	5.7%	5.8%	6.4%	5.9%	7.1%	6.5%	6.3%	6.2%
50-60%	1.4%	1.6%	2.3%	2.1%	2.9%	3.3%	3.5%	2.9%	3.6%	4.0%	3.6%	3.3%
60-70%	0.6%	0.8%	1.1%	1.4%	1.1%	1.2%	2.0%	1.9%	2.6%	1.8%	2.1%	2.1%
70-80%	0.3%	0.3%	0.4%	0.6%	0.5%	1.0%	0.9%	0.9%	1.0%	1.1%	1.1%	0.8%
80-90%	0.2%	0.2%	0.2%	0.1%	0.3%	0.2%	0.4%	0.4%	0.5%	0.6%	0.5%	0.4%
90-99%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.2%	0.4%	0.6%	0.3%	0.3%	0.3%
Consult Proportion of All Ratings	50.4%	50.8%	38.9%	45.4%	43.7%	40.9%	40.0%	39.9%	48.5%	56.2%	56.2%	53.6%

Source: DEU data.

"Summary" ratings typically do not involve attorney representation. "Consult" ratings typically involve attorney representation.

Average Paid Indemnity Losses per Closed Permanent Disability Claim

Report Level

AY	1	2	3	4	5	6	7	8	9	10
2001	6,758	19,330	27,026	30,680	32,894	34,535	35,865	36,835		
2002	7,414	20,102	26,936	30,019	31,794	33,271	34,326	35,181		
2003	10,498	21,529	26,499	28,879	30,693	31,807	32,636	33,332	33,704	34,655
2004	10,627	17,257	20,888	23,418	25,016	26,183	27,090	28,087	29,036	29,936
2005	7,660	13,749	18,241	21,141	22,823	24,106	25,196	26,647	27,676	28,591
2006	7,787	14,370	18,958	22,006	24,117	26,002	27,581	29,078	30,148	31,214
2007	8,533	15,316	19,871	23,531	25,886	28,017	29,966	31,446	32,671	33,615
2008	8,874	16,075	21,120	25,079	28,187	30,587	32,407	33,911	34,997	
2009	9,554	16,212	21,589	25,469	28,452	31,054	32,879	34,295		
2010	9,419	15,734	21,321	25,289	28,440	30,842	32,615			
2011	9,604	15,877	21,336	25,347	28,290	30,405				
2012	9,568	16,162	21,570	25,318	27,988					
2013	10,042	16,246	21,481	25,088						
2014	10,735	17,556	23,183							
2015	11,393	18,459								
2016	11,874									

Annual Change

Report Level

AY	1	2	3	4	5	6	7	8	9	10
2002	9.7%	4.0%	-0.3%	-2.2%	-3.3%	-3.7%	-4.3%	-4.5%	---	---
2003	41.6%	7.1%	-1.6%	-3.8%	-3.5%	-4.4%	-4.9%	-5.3%	---	---
2004	1.2%	-19.8%	-21.2%	-18.9%	-18.5%	-17.7%	-17.0%	-15.7%	-13.8%	-13.6%
2005	-27.9%	-20.3%	-12.7%	-9.7%	-8.8%	-7.9%	-7.0%	-5.1%	-4.7%	-4.5%
2006	1.7%	4.5%	3.9%	4.1%	5.7%	7.9%	9.5%	9.1%	8.9%	9.2%
2007	9.6%	6.6%	4.8%	6.9%	7.3%	7.7%	8.6%	8.1%	8.4%	7.7%
2008	4.0%	5.0%	6.3%	6.6%	8.9%	9.2%	8.1%	7.8%	7.1%	
2009	7.7%	0.9%	2.2%	1.6%	0.9%	1.5%	1.5%	1.1%		
2010	-1.4%	-2.9%	-1.2%	-0.7%	0.0%	-0.7%	-0.8%			
2011	2.0%	0.9%	0.1%	0.2%	-0.5%	-1.4%				
2012	-0.4%	1.8%	1.1%	-0.1%	-1.1%					
2013	5.0%	0.5%	-0.4%	-0.9%						
2014	6.9%	8.1%	7.9%							
2015	6.1%	5.1%								
2016	4.2%									

Source: WCIRB unit statistical data.

Average Paid Indemnity Losses per Open Permanent Disability Claim

Report Level

AY	1	2	3	4	5	6	7	8	9	10
2001	8,660	18,548	27,021	33,046	37,778	46,712	52,990	57,293		
2002	8,736	18,463	26,101	32,387	38,114	44,321	49,264	53,598		
2003	8,999	18,132	25,679	32,284	38,721	44,502	50,239	55,372	60,374	68,199
2004	8,656	16,093	22,450	27,743	32,325	37,040	41,586	46,415	52,038	56,536
2005	8,525	16,054	21,793	26,462	31,214	35,853	40,597	44,761	50,171	53,922
2006	9,145	17,322	23,542	29,121	34,579	39,849	45,003	49,725	53,349	55,186
2007	9,827	18,205	25,354	31,546	37,534	43,070	47,895	52,146	56,561	59,348
2008	10,044	19,078	27,304	34,621	40,767	46,512	51,848	55,093	58,243	
2009	9,826	19,374	27,680	34,580	40,700	45,722	49,865	53,940		
2010	9,600	19,142	27,372	34,339	39,812	44,907	48,217			
2011	9,924	19,164	27,136	33,027	38,384	42,421				
2012	9,598	18,767	26,573	32,670	37,575					
2013	9,270	18,579	25,974	31,605						
2014	9,378	18,750	26,718							
2015	9,715	19,388								
2016	10,001									

Annual Change

Report Level

AY	1	2	3	4	5	6	7	8	9	10
2002	0.9%	-0.5%	-3.4%	-2.0%	0.9%	-5.1%	-7.0%	-6.4%	---	---
2003	3.0%	-1.8%	-1.6%	-0.3%	1.6%	0.4%	2.0%	3.3%	---	---
2004	-3.8%	-11.2%	-12.6%	-14.1%	-16.5%	-16.8%	-17.2%	-16.2%	-13.8%	-17.1%
2005	-1.5%	-0.2%	-2.9%	-4.6%	-3.4%	-3.2%	-2.4%	-3.6%	-3.6%	-4.6%
2006	7.3%	7.9%	8.0%	10.0%	10.8%	11.1%	10.9%	11.1%	6.3%	2.3%
2007	7.5%	5.1%	7.7%	8.3%	8.5%	8.1%	6.4%	4.9%	6.0%	7.5%
2008	2.2%	4.8%	7.7%	9.7%	8.6%	8.0%	8.3%	5.7%	3.0%	
2009	-2.2%	1.5%	1.4%	-0.1%	-0.2%	-1.7%	-3.8%	-2.1%		
2010	-2.3%	-1.2%	-1.1%	-0.7%	-2.2%	-1.8%	-3.3%			
2011	3.4%	0.1%	-0.9%	-3.8%	-3.6%	-5.5%				
2012	-3.3%	-2.1%	-2.1%	-1.1%	-2.1%					
2013	-3.4%	-1.0%	-2.3%	-3.3%						
2014	1.2%	0.9%	2.9%							
2015	3.6%	3.4%								
2016	2.9%									

Source: WCIRB unit statistical data.

**Proportion of Permanent Disability Claims with Psychiatric Impairment,
Sleep Disorder, or Sexual Dysfunction Add-On Based on Disability Evaluation Unit Data**

Age at Final Rating (Months)		Accident Year											
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0	6	0.0%	0.0%	0.0%	0.8%	0.0%	0.4%	0.0%	0.4%	1.6%	0.0%	0.0%	0.0%
6	9	0.0%	0.4%	0.1%	0.0%	0.3%	0.3%	1.3%	0.7%	0.8%	0.0%	0.1%	0.6%
9	12	0.0%	0.4%	0.5%	1.2%	0.4%	0.5%	0.5%	1.4%	0.6%	0.0%	0.2%	0.3%
12	15	0.4%	0.4%	0.9%	1.1%	1.0%	0.6%	0.6%	0.5%	0.6%	0.6%	0.4%	0.5%
15	18	0.3%	0.6%	1.2%	0.5%	1.0%	1.5%	0.8%	0.9%	0.9%	0.3%	0.3%	0.3%
18	21	0.6%	0.9%	1.1%	0.7%	1.2%	0.8%	1.3%	1.5%	0.5%	0.6%	0.8%	0.4%
21	24	0.9%	1.4%	0.7%	1.6%	1.9%	1.8%	2.6%	1.5%	0.7%	0.5%	0.4%	0.6%
24	27	1.6%	2.4%	1.8%	1.9%	2.7%	2.6%	2.1%	2.4%	0.9%	0.5%	0.8%	0.5%
27	30	2.0%	2.5%	1.8%	3.5%	2.8%	3.8%	2.7%	2.6%	1.3%	1.1%	1.3%	1.6%
30	33	2.7%	2.2%	4.0%	3.4%	3.5%	4.1%	2.8%	2.2%	1.0%	1.2%	1.4%	
33	36	3.5%	1.3%	3.6%	4.7%	4.0%	5.4%	2.2%	2.9%	1.2%	1.1%	0.7%	
36	39	4.3%	2.6%	4.7%	4.0%	3.9%	4.5%	3.0%	3.7%	1.8%	1.2%	0.8%	
39	42	3.9%	5.5%	5.6%	7.0%	5.6%	5.8%	6.6%	3.2%	2.0%	1.9%	1.4%	
42	45	4.2%	4.2%	3.9%	3.2%	7.7%	6.0%	6.1%	3.6%	1.9%	1.6%		
45	48	4.9%	4.1%	4.9%	5.7%	6.3%	4.8%	4.0%	3.6%	1.8%	0.8%		
48	51	3.0%	6.7%	7.5%	10.9%	6.6%	9.2%	5.5%	5.9%	3.0%	2.1%		
51	54	5.1%	7.1%	8.8%	9.1%	8.4%	7.7%	4.2%	5.1%	3.5%	1.9%		
54	60	7.5%	8.0%	7.7%	9.4%	10.6%	6.1%	5.8%	5.0%	2.5%			
60	66	5.6%	9.1%	12.1%	10.3%	8.1%	5.6%	7.4%	3.3%	3.7%			
66	78	9.0%	10.9%	11.5%	11.8%	8.0%	7.3%	9.1%	6.1%	3.8%			
78	& Over	9.0%	12.4%	10.6%	12.3%	11.7%	8.4%	5.5%	6.7%				

Source: DEU data.

Supplemental Job Displacement Benefit (SJDB) Costs

Calendar Year Paid SJDB Costs

Calendar Year	SJDB Paid ($millions)	% of Total Indemnity Paid
2010	$32.0	1.1%
2011	$32.3	1.1%
2012	$36.2	1.1%
2013	$37.2	1.1%
2014	$30.0	0.9%
2015	$45.8	1.4%
2016	$64.6	1.8%
2017	$82.0	2.2%

SJDB Costs by Accident Year

First Survey Level

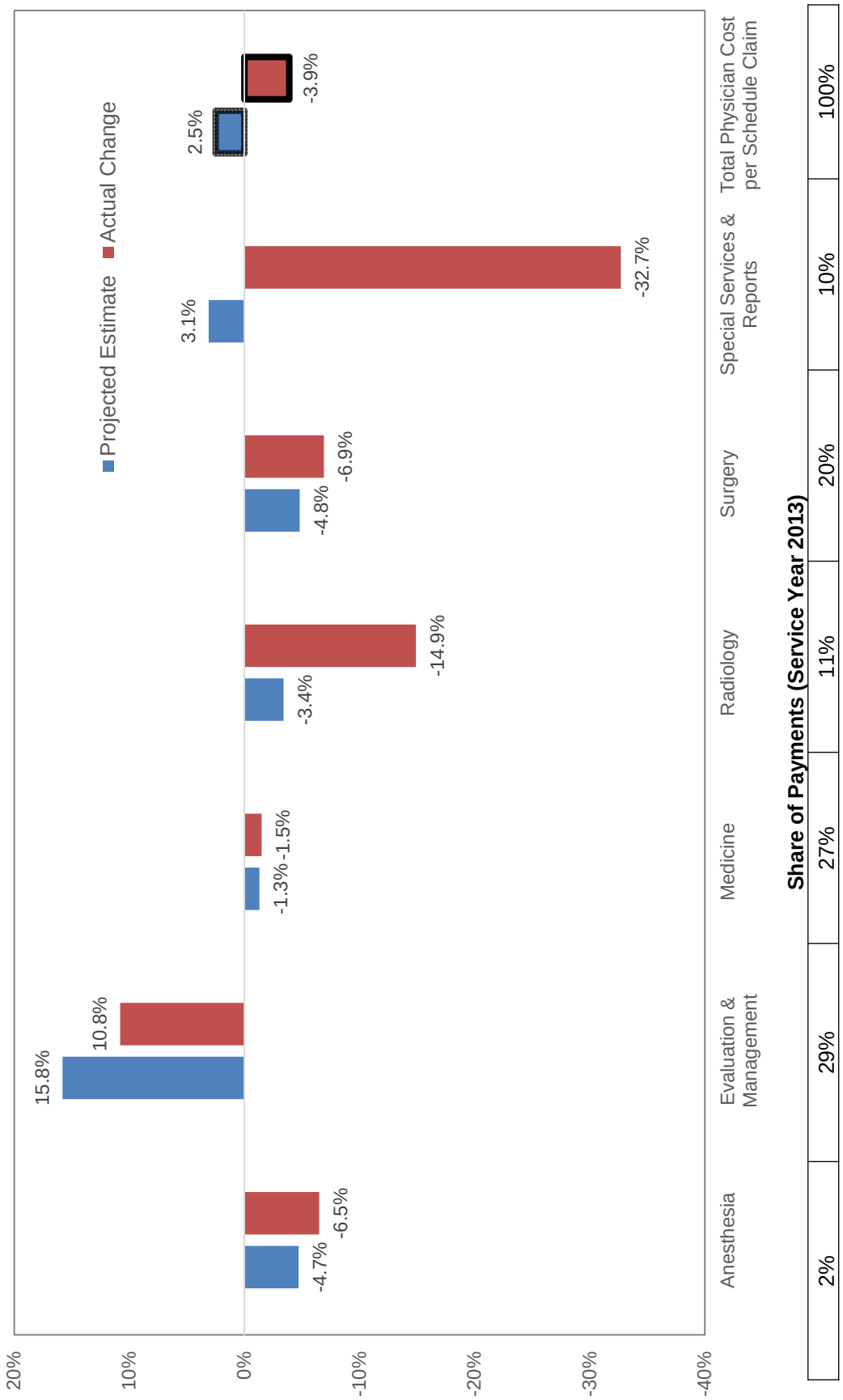
Accident Year	% of Claims w/ Incurred SJDB	% of Claims w/ Paid SJDB	Average Incurred SJDB	% Change	Average Paid SJDB	% Change
2011	11.8%	2.6%	$5,359		$4,058	
2012	9.2%	2.1%	$5,016	-6%	$4,028	-1%
2013	11.7%	3.3%	$5,469	9%	$4,948	23%
2014	15.6%	5.8%	$5,460	0%	$4,836	-2%
2015	15.6%	5.2%	$5,490	1%	$4,484	-7%

Second Survey Level

Accident Year	% of Claims w/ Incurred SJDB	% of Claims w/ Paid SJDB	Average Incurred SJDB	% Change	Average Paid SJDB	% Change
2010	17.7%	2.6%	$5,973		$3,905	
2011	13.7%	1.9%	$5,947	0%	$3,438	-12%
2012	13.2%	2.3%	$5,760	-3%	$3,796	10%
2013	20.1%	6.0%	$5,567	-3%	$4,525	19%
2014	24.1%	7.0%	$5,716	3%	$4,490	-1%

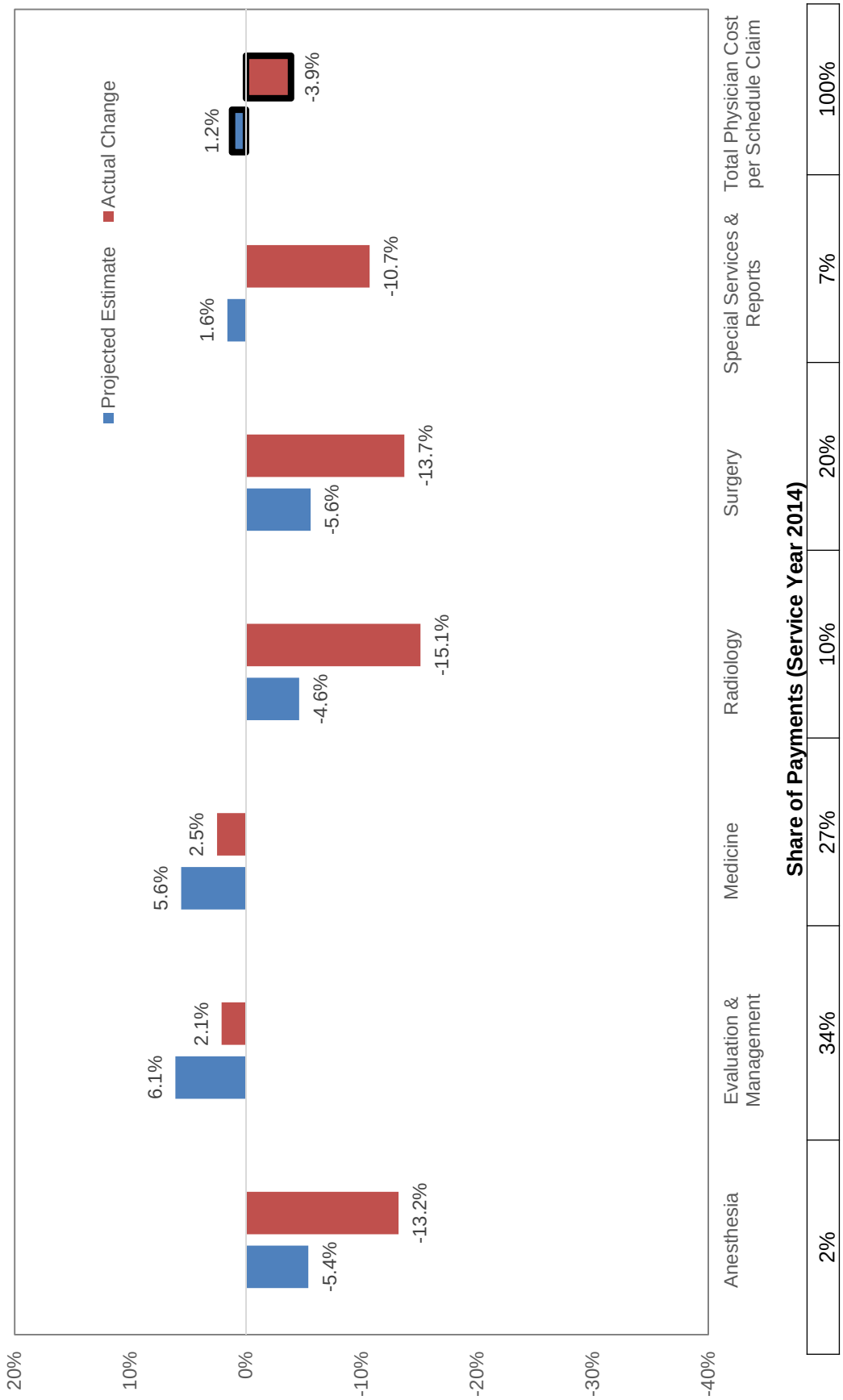
Source: WCIRB aggregate financial data calls and Permanent Disability Claim Survey
Survey data has been reweighted to the unit statistical data proportions.

Projected vs. Actual Change in Physician Fees Schedule Payments per Claim: SY 2013 to SY 2014 Transactions through 2Q2018 (54 months)



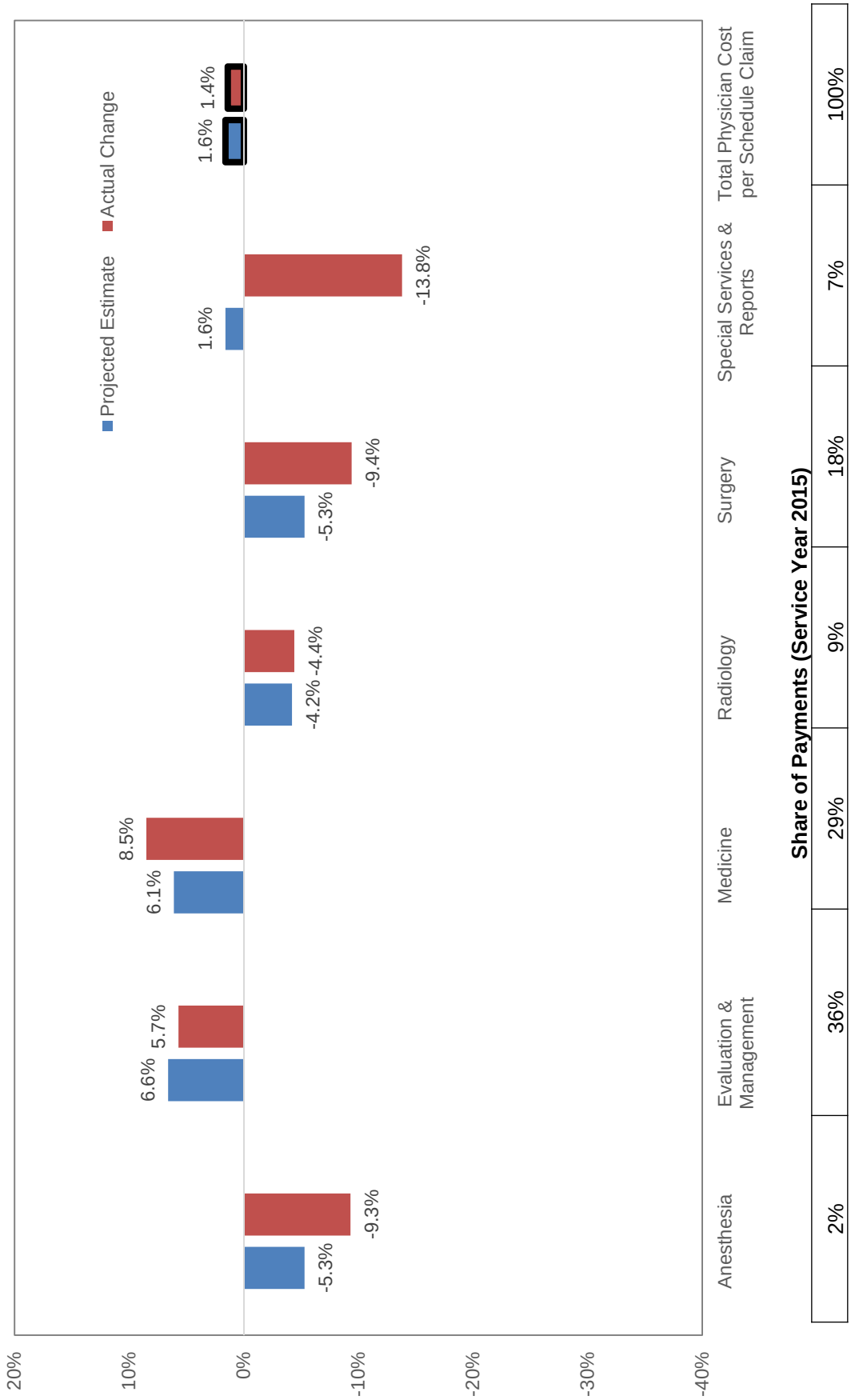
Source: WCIRB Medical Data Call

Projected vs. Actual Change in Physician Fees Schedule Payments per Claim: SY 2014 to SY 2015 Transactions through 2Q2018 (42 months)



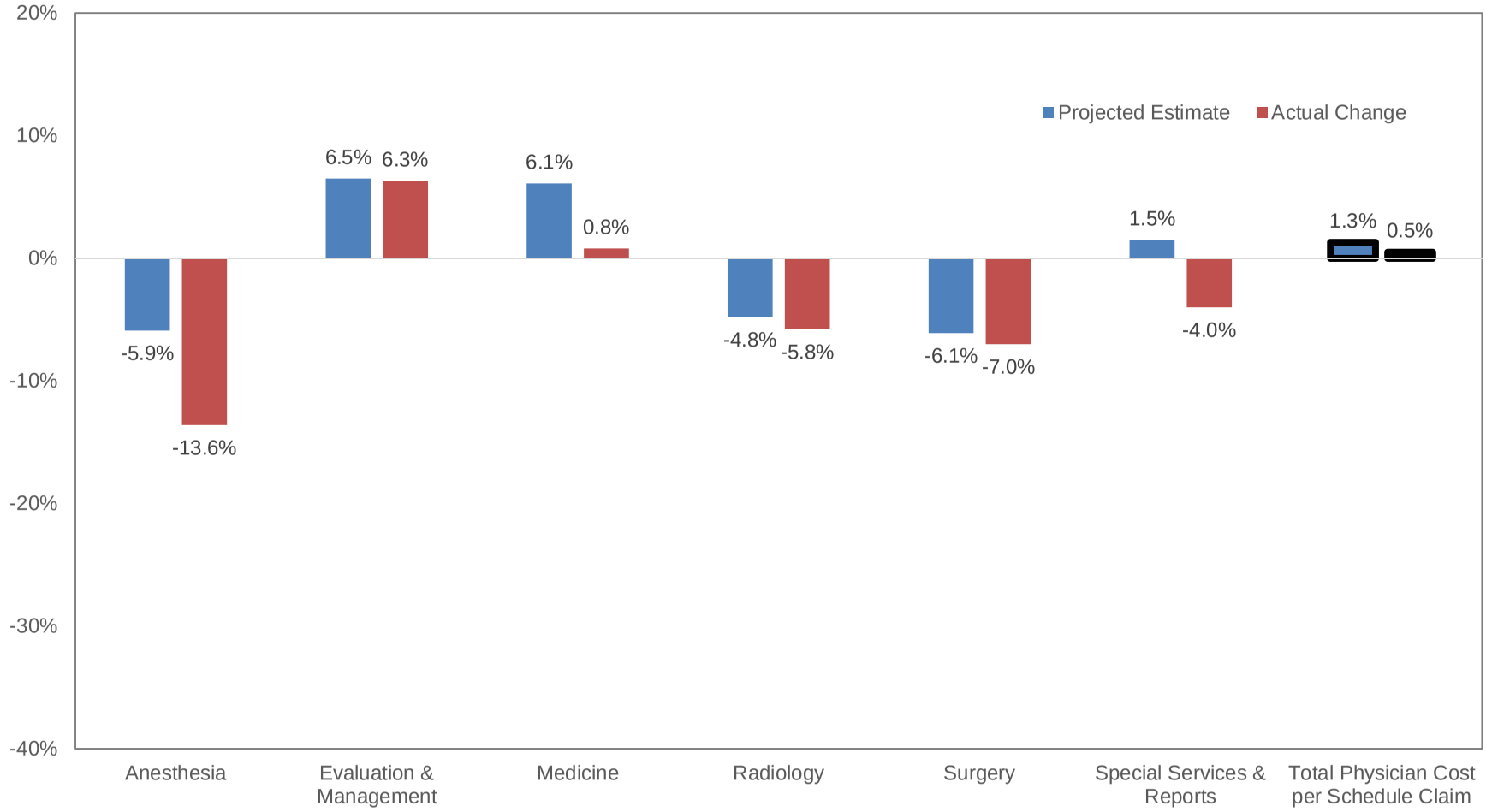
Source: WCIRB Medical Data Call

Projected vs. Actual Change in Physician Fees Schedule Payments per Claim: SY 2015 to SY 2016 Transactions through 2Q2018 (30 months)



Source: WCIRB Medical Data Call

Projected vs. Actual Change in Physician Fees Schedule Payments per Claim: SY 2016 to SY 2017 Transactions through 2Q2018 (18 months)



Share of Payments (Service Year 2016)

2%	38%	31%	8%	15%	6%	100%

Source: WCIRB Medical Data Call

IMR Filed Counts

Quarterly IMRs Filed

Year & Quarter	IMRs Filed	Change from Same Quarter in Prior Year	Eligible IMRs	Change from Same Quarter in Prior Year
2013 1Q & 2Q	878	---	---	---
2013 3Q	31,950	---	---	---
2013 4Q	51,092	---	---	---
2014 1Q	49,929	---	17,421	---
2014 2Q	60,023	---	24,417	---
2014 3Q	59,678	86.8%	54,959	---
2014 4Q	58,577	14.7%	46,512	---
2015 1Q	61,142	22.5%	36,314	108.4%
2015 2Q	65,418	9.0%	48,628	99.2%
2015 3Q	65,889	10.4%	40,603	-26.1%
2015 4Q	61,330	4.7%	39,950	-14.1%
2016 1Q	60,772	-0.6%	41,023	13.0%
2016 2Q	64,852	-0.9%	44,287	-8.9%
2016 3Q	62,411	-5.3%	43,892	8.1%
2016 4Q	61,318	0.0%	43,618	9.2%
2017 1Q	61,973	2.0%	43,480	6.0%
2017 2Q	62,773	-3.2%	44,489	0.5%
2017 3Q	63,380	1.6%	43,822	-0.2%
2017 4Q	60,124	-1.9%	43,370	-0.6%
2018 1Q	64,533	4.1%	47,336	8.9%
2018 2Q	66,647	6.2%	48,175	8.3%
2018 3Q	61,420	-3.1%	46,512	6.1%

Yearly IMR Counts

	Original IMR Applications	Duplicates	Ineligible	Total Rejected	Eligible IMRs	Eligible IMR Yearly Change
2013 IMR Counts	83,920	15,560	15,516	31,076	52,844	---
2014 IMR Counts	228,084	56,503	28,272	84,775	143,309	171.2%
2015 IMR Counts	253,776	58,106	30,175	88,281	165,495	15.5%
2016 IMR Counts	249,353	53,314	23,219	76,533	172,820	4.4%
2017 IMR Counts	248,250	55,670	17,419	73,089	175,161	1.4%

Source: DWC Collected from IMR Vendor
DWC Via Commission on Health and Safety & Workers' Compensation 2017 Annual Report

Liens Filed Counts*

Counts by Region**

Time Period	Bay Area	Central Coast/ Valley	Los Angeles County	Remainder of LA Basin	Remaining CA Zip Codes	Sacramento	San Diego County	**Total**
2011	18,723	24,414	283,774	114,554	2,535	3,934	15,922	**463,856**
1st Qtr 2012	5,490	7,245	97,245	38,034	895	1,248	4,936	**155,093**
2nd Qtr 2012	5,467	8,970	122,040	44,065	1,102	1,322	4,991	**187,957**
3rd Qtr 2012	6,434	15,289	207,639	85,152	698	1,407	6,611	**323,230**
4th Qtr 2012	10,397	25,730	342,549	123,129	1,119	1,557	8,523	**513,004**
1st Qtr 2013	1,232	2,193	46,830	17,032	230	268	1,312	**69,097**
2nd Qtr 2013	1,450	1,562	18,947	6,917	211	339	684	**30,110**
3rd Qtr 2013	1,607	1,795	25,999	9,855	247	410	991	**40,904**
4th Qtr 2013	1,928	2,025	29,537	10,893	276	358	1,136	**46,153**
1st Qtr 2014	1,841	2,029	25,668	10,117	239	384	1,165	**41,443**
2nd Qtr 2014	1,697	2,306	29,417	11,942	265	354	1,263	**47,244**
3rd Qtr 2014	1,941	1,996	29,665	12,198	355	424	1,378	**47,957**
4th Qtr 2014	1,690	2,371	34,772	12,469	374	384	1,488	**53,548**
1st Qtr 2015	2,071	3,058	45,827	18,016	431	488	2,133	**72,024**
2nd Qtr 2015	2,370	4,218	54,147	22,198	501	500	2,787	**86,721**
3rd Qtr 2015	2,428	4,977	61,619	24,827	691	526	3,047	**98,115**
4th Qtr 2015	2,338	4,991	68,843	26,571	686	495	3,085	**107,009**
1st Qtr 2016	2,884	5,410	67,259	27,326	672	538	3,931	**108,020**
2nd Qtr 2016	2,543	5,112	66,511	26,852	536	506	3,912	**105,972**
3rd Qtr 2016	2,243	4,167	45,707	20,136	420	462	3,404	**76,539**
4th Qtr 2016	1,872	4,433	66,169	25,942	506	397	4,400	**103,719**
1st Qtr 2017	1,228	1,872	24,947	9,594	334	312	1,380	**39,667**
2nd Qtr 2017	1,537	2,211	33,194	11,969	349	369	1,764	**51,393**
3rd Qtr 2017	1,700	2,047	29,215	10,487	298	419	1,149	**45,315**
4th Qtr 2017	1,535	1,804	26,566	9,914	313	366	1,176	**41,674**
1st Qtr 2018	1,501	1,575	28,754	10,848	312	406	1,314	**44,710**
2nd Qtr 2018	1,264	1,538	23,697	9,034	312	338	986	**37,169**
3rd Qtr 2018	1,156	1,178	18,596	6,340	241	309	702	**28,522**

Counts by Type

Time Period	Interpreter	Medical	Medical-Legal	Copy Service	Other***	**Total**
2011	28,721	292,982	39,569	539	102,045	**463,856**
1st Qtr 2012	12,937	85,152	22,931	139	33,934	**155,093**
2nd Qtr 2012	17,162	106,336	37,440	65	26,954	**187,957**
3rd Qtr 2012	46,095	182,474	64,912	91	29,658	**323,230**
4th Qtr 2012	47,427	317,241	80,916	62	67,358	**513,004**
1st Qtr 2013	2,397	45,631	11,411	11	9,647	**69,097**
2nd Qtr 2013	831	22,480	587	20	6,192	**30,110**
3rd Qtr 2013	484	32,356	653	23	7,388	**40,904**
4th Qtr 2013	378	37,515	537	8	7,715	**46,153**
1st Qtr 2014	421	33,105	397	16	7,504	**41,443**
2nd Qtr 2014	275	38,534	320	10	8,105	**47,244**
3rd Qtr 2014	140	39,810	179	7	7,821	**47,957**
4th Qtr 2014	156	45,440	160	4	7,788	**53,548**
1st Qtr 2015	143	60,155	216	18	11,492	**72,024**
2nd Qtr 2015	152	74,037	268	7	12,257	**86,721**
3rd Qtr 2015	134	84,290	191	7	13,493	**98,115**
4th Qtr 2015	101	91,820	236	15	14,837	**107,009**
1st Qtr 2016	60	93,393	233	5	14,329	**108,020**
2nd Qtr 2016	90	89,781	467	6	15,628	**105,972**
3rd Qtr 2016	64	64,924	262	11	11,278	**76,539**
4th Qtr 2016	94	91,867	68	4	11,686	**103,719**
1st Qtr 2017	29	33,952	19	3	5,664	**39,667**
2nd Qtr 2017	33	43,470	34	5	7,851	**51,393**
3rd Qtr 2017	77	37,815	31	0	7,392	**45,315**
4th Qtr 2017	65	33,876	18	1	7,714	**41,674**
1st Qtr 2018	64	36,674	29	2	7,941	**44,710**
2nd Qtr 2018	103	29,276	22	0	7,768	**37,169**
3rd Qtr 2018	79	21,334	14	4	7,091	**28,522**

* Lien Counts exclude SDI/EDD Liens

** Regions reflect the following WCAB Office mapping: Bay Area - Oakland, San Jose, San Francisco; Central Coast/Valley - Bakersfield, Fresno, Goleta, Grover Beach, Salinas, Stockton; Los Angeles County - Long Beach, Los Angeles, Marina Del Rey, Pomona, Van Nuys; Remainder of LA Basin - Anaheim, Oxnard, Riverside, San Bernardino, Santa Ana; Remaining CA Zip Codes - Eureka, Redding, San Luis Obispo, Santa Barbara, Santa Rosa; Sacramento - Sacramento; San Diego County - San Diego

***Other includes Attorney Fees, Family Support, Living Expense, PFL, Transport, Wage Replace Liens

Source: EAMS Liens Data

Liens Filed Counts*

Counts by Region**

Month	Bay Area	Central Coast/ Valley	Los Angeles County	Remainder of LA Basin	Remaining CA Zip Codes	Sacramento	San Diego County	**Total**
Jul-16	769	1,332	14,750	6,021	126	138	1,048	**24,184**
Aug-16	829	1,419	16,029	7,267	156	177	1,086	**26,963**
Sep-16	645	1,416	14,928	6,848	138	147	1,270	**25,392**
Oct-16	625	1,312	15,594	6,313	136	157	1,082	**25,219**
Nov-16	528	1,224	17,984	7,190	200	86	1,494	**28,706**
Dec-16	719	1,897	32,591	12,439	170	154	1,824	**49,794**
Jan-17	210	347	5,362	2,380	69	64	316	**8,748**
Feb-17	421	598	8,251	3,112	122	118	453	**13,075**
Mar-17	597	927	11,334	4,102	143	130	611	**17,844**
Apr-17	474	764	11,573	4,118	110	106	640	**17,785**
May-17	519	835	11,395	4,175	121	132	573	**17,750**
Jun-17	544	612	10,226	3,676	118	131	551	**15,858**
Jul-17	530	548	10,092	3,636	101	130	426	**15,463**
Aug-17	594	703	10,712	3,690	109	146	412	**16,366**
Sep-17	576	796	8,411	3,161	88	143	311	**13,486**
Oct-17	514	773	9,856	3,585	100	128	413	**15,369**
Nov-17	451	496	8,506	3,214	110	119	371	**13,267**
Dec-17	570	535	8,204	3,115	103	119	392	**13,038**
Jan-18	473	565	9,986	3,636	98	123	457	**15,338**
Feb-18	490	479	8,982	3,451	101	140	481	**14,124**
Mar-18	538	531	9,786	3,761	113	143	376	**15,248**
Apr-18	387	546	8,851	3,375	97	90	361	**13,707**
May-18	477	513	8,380	3,433	112	126	308	**13,349**
Jun-18	400	479	6,466	2,226	103	122	317	**10,113**
Jul-18	386	414	6,101	2,109	79	124	229	**9,442**
Aug-18	406	422	7,039	2,338	76	91	275	**10,647**
Sep-18	364	342	5,456	1,893	86	94	198	**8,433**

Counts by Type

Month	Interpreter	Medical	Medical-Legal	Copy Service	Other***	**Total**
Jul-16	15	20,525	91	6	3,547	**24,184**
Aug-16	37	22,813	95	5	4,013	**26,963**
Sep-16	12	21,586	76	0	3,718	**25,392**
Oct-16	31	21,123	34	2	4,029	**25,219**
Nov-16	27	25,212	10	1	3,456	**28,706**
Dec-16	36	45,532	24	1	4,201	**49,794**
Jan-17	9	7,460	5	2	1,272	**8,748**
Feb-17	8	11,103	10	1	1,953	**13,075**
Mar-17	12	15,389	4	0	2,439	**17,844**
Apr-17	13	15,188	12	3	2,569	**17,785**
May-17	7	14,838	14	1	2,890	**17,750**
Jun-17	13	13,444	8	1	2,392	**15,858**
Jul-17	37	13,022	9	0	2,395	**15,463**
Aug-17	24	13,599	11	0	2,732	**16,366**
Sep-17	16	11,194	11	0	2,265	**13,486**
Oct-17	13	12,692	5	1	2,658	**15,369**
Nov-17	19	10,666	5	0	2,577	**13,267**
Dec-17	33	10,518	8	0	2,479	**13,038**
Jan-18	41	12,695	12	1	2,589	**15,338**
Feb-18	17	11,551	9	1	2,546	**14,124**
Mar-18	6	12,428	8	0	2,806	**15,248**
Apr-18	18	10,714	11	0	2,964	**13,707**
May-18	25	10,744	8	0	2,572	**13,349**
Jun-18	60	7,818	3	0	2,232	**10,113**
Jul-18	44	7,056	0	3	2,339	**9,442**
Aug-18	23	7,914	8	1	2,701	**10,647**
Sep-18	12	6,364	6	0	2,051	**8,433**

* Lien Counts exclude SDI/EDD Liens
** Regions reflect the following WCAB Office mapping: Bay Area - Oakland, San Jose, San Francisco; Central Coast/Valley - Bakersfield, Fresno, Goleta, Grover Beach, Salinas, Stockton; Los Angeles County - Long Beach, Los Angeles, Marina Del Rey, Pomona, Van Nuys; Remainder of LA Basin - Anaheim, Oxnard, Riverside, San Bernardino, Santa Ana; Remaining CA Zip Codes - Eureka, Redding, San Luis Obispo, Santa Barbara, Santa Rosa; Sacramento - Sacramento; San Diego County - San Diego
***Other includes Attorney Fees, Family Support, Living Expense, PFL, Transport, Wage Replace Liens
Source: EAMS Liens Data

Item AC18-12-01
9/30/2018 Experience – Review of Methodologies

Staff has prepared an analysis of statewide experience through September 30, 2018, which is included in Exhibits 1 through 8. This information reflects insurers writing approximately 100% of the market based on 2017 premium levels. The methodologies used are consistent with those reflected in the January 1, 2019 Pure Premium Rate Filing. Wage and loss levels were projected to January 1, 2020 – the approximate midpoint of experience on policies incepting in 2019, and premiums were adjusted to the industry average filed pure premium rate level as of July 1, 2018.

As shown on Exhibit 8, the projected policy year 2019 loss to the industry average filed pure premium ratio based on September 30, 2018 experience is 0.568. (The comparable ratio projected based on March 31, 2018 experience as reflected in the January 1, 2019 Pure Premium Rate Filing is 0.588. The comparable ratio projected based on June 30, 2018 experience is 0.577.)

Additional supplemental information is included in Exhibits 9 through 12.

California Workers' Compensation

Accident Year Experience as of September 30, 2018

Year	Earned Premium	Paid Indemnity	Indemnity Reserves	Paid Medical**	Medical Reserves	IBNR*	Total Incurred**	Loss Ratio*
1986	3,506,609,097	1,382,686,372	4,785,714	1,139,607,408	35,742,713	10,080,812	2,572,903,019	0.734
1987	4,374,085,383	1,505,380,424	7,195,564	1,330,396,812	41,872,476	56,974,362	2,941,819,638	0.673
1988	5,173,049,472	1,702,522,117	6,424,457	1,536,617,395	37,486,703	43,356,721	3,326,407,393	0.643
1989	5,674,529,942	1,938,192,872	8,284,193	1,791,777,472	51,064,352	41,697,104	3,831,015,993	0.675
1990	5,698,665,461	2,255,991,591	8,463,886	2,035,219,522	52,340,243	61,007,974	4,413,023,216	0.774
1991	5,863,319,243	2,472,359,976	14,815,675	2,188,058,193	59,641,625	63,755,007	4,798,630,476	0.818
1992	5,681,466,382	1,972,189,197	13,701,347	1,751,532,739	61,667,754	63,367,413	3,862,458,450	0.680
1993	5,928,480,359	1,690,096,829	14,204,131	1,501,288,411	78,653,070	46,699,720	3,330,942,161	0.562
1994	5,022,749,028	1,623,064,158	20,441,903	1,457,668,668	92,229,561	45,194,445	3,238,598,735	0.645
1995	3,778,975,599	1,756,741,249	28,914,922	1,604,451,856	106,227,860	62,389,766	3,558,725,653	0.942
1996	3,736,857,547	1,943,310,199	36,088,902	1,697,222,839	114,368,000	74,192,510	3,865,182,450	1.034
1997	3,916,944,392	2,303,337,047	45,188,404	1,991,075,203	144,010,697	110,791,702	4,594,403,053	1.173
1998	4,322,051,270	2,756,234,098	57,061,110	2,609,786,609	234,657,480	207,436,204	5,865,175,501	1.357
1999	4,537,629,086	3,034,646,232	56,381,335	2,999,156,350	201,723,299	265,725,323	6,557,632,539	1.445
2000	5,905,419,052	3,402,568,280	77,579,926	3,519,771,754	245,988,530	418,989,835	7,664,898,325	1.298
2001	10,094,684,192	4,803,402,268	117,821,584	5,288,718,861	404,228,929	646,814,135	11,260,985,777	1.116
2002	13,405,893,679	4,734,113,419	109,983,181	5,406,880,370	375,718,993	894,509,919	11,521,205,882	0.859
2003	19,429,675,115	4,496,243,749	162,762,967	4,969,423,746	393,276,611	1,281,822,341	11,303,529,414	0.582
2004	23,043,963,090	3,167,007,056	139,103,384	3,979,093,356	340,316,221	1,400,304,686	9,025,824,703	0.392
2005	21,350,709,483	2,491,108,399	121,387,032	3,571,253,224	341,453,654	1,138,933,679	7,664,135,988	0.359
2006	17,205,061,787	2,573,729,266	136,978,695	3,673,214,519	359,578,338	939,568,915	7,683,069,733	0.447
2007	13,252,379,499	2,700,775,610	155,154,920	3,929,405,528	407,632,189	772,987,856	7,965,956,103	0.601
2008	10,744,360,124	2,741,243,331	174,749,793	3,915,084,503	420,296,435	565,313,151	7,816,687,213	0.728
2009	8,877,640,496	2,600,421,687	177,400,239	3,705,958,906	415,287,388	576,567,201	7,475,635,421	0.842
2010	9,398,228,398	2,609,459,703	181,899,989	3,780,757,974	391,222,459	683,962,921	7,647,303,046	0.814
2011	10,129,285,077	2,551,256,643	211,913,604	3,401,202,634	450,873,842	899,966,447	7,515,213,170	0.742
2012	11,692,134,220	2,552,347,105	252,035,199	3,244,946,868	498,048,132	1,107,629,206	7,655,006,510	0.655
2013	14,149,827,161	2,541,418,742	286,417,281	3,043,769,204	540,683,184	2,025,310,023	8,437,598,434	0.596
2014	15,997,914,039	2,537,796,255	419,012,576	2,835,470,301	648,556,208	2,873,034,887	9,313,870,227	0.582
2015	17,059,168,432	2,351,103,037	582,431,891	2,554,798,395	898,624,643	3,757,658,713	10,144,616,679	0.595
2016	17,953,201,345	1,848,467,471	781,340,488	2,090,330,390	1,141,378,469	4,447,115,370	10,308,632,188	0.574
2017	17,665,434,423	1,083,614,034	966,375,267	1,450,615,505	1,414,369,928	5,489,415,458	10,404,390,192	0.589
2018	13,083,377,585	236,210,949	569,028,240	426,936,281	1,078,288,260	4,890,829,075	7,201,292,805	0.550

* Shown for informational purposes only.

** Paid medical for accident years 2011 and subsequent exclude the paid cost of medical cost containment programs (MCCP). Paid medical for accident years 2010 and prior include paid MCCP costs.

Source: WCIRB quarterly experience calls

Incurred Indemnity Loss Development Factors

	Age-to-Age (in months)															
Accident Year	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201
1992																0.998
1993															0.999	0.999
1994														1.001	1.000	1.001
1995													1.003	1.003	1.000	1.003
1996												1.000	1.001	1.000	1.002	1.001
1997											1.002	1.002	1.003	1.002	1.001	1.001
1998										1.003	1.002	1.005	1.002	1.001	1.001	1.003
1999									1.006	1.002	1.004	1.003	1.003	1.001	1.001	1.001
2000								1.005	1.003	1.006	1.003	1.002	1.004	1.002	1.000	1.002
2001							1.012	1.006	1.008	1.007	1.005	1.004	1.001	1.001	1.002	1.001
2002						1.015	1.010	1.011	1.007	1.006	1.003	1.003	1.002	1.002	1.003	
2003					1.025	1.017	1.018	1.016	1.011	1.004	1.005	1.003	1.003	1.002		
2004				1.043	1.028	1.029	1.018	1.015	1.010	1.007	1.004	1.001	1.002			
2005			1.076	1.053	1.045	1.033	1.018	1.012	1.005	1.005	1.005	1.003				
2006		1.133	1.080	1.061	1.041	1.027	1.015	1.010	1.007	1.006	1.004					
2007	1.350	1.144	1.075	1.057	1.037	1.028	1.012	1.012	1.006	1.007						
2008	1.369	1.166	1.086	1.048	1.033	1.021	1.014	1.008	1.008							
2009	1.372	1.171	1.086	1.054	1.029	1.019	1.016	1.011								
2010	1.402	1.157	1.083	1.047	1.029	1.020	1.013									
2011	1.366	1.154	1.072	1.042	1.026	1.020										
2012	1.364	1.133	1.074	1.046	1.025											
2013	1.333	1.135	1.063	1.038												
2014	1.363	1.140	1.070													
2015	1.353	1.124														
2016	1.329															
Selected (a)	1.329	1.124	1.070	1.038	1.025	1.020	1.013	1.011	1.008	1.006	1.004	1.003	1.003	1.002	1.001	1.002
Cumulative	1.843	1.387	1.234	1.153	1.111	1.084	1.062	1.049	1.037	1.029	1.023	1.019	1.016	1.014	1.012	1.011

(a) Selections are latest year for the 21-to-33 month through 105-to-117 month factors and six-year average for the subsequent age-to-age factors.

Incurred Indemnity Loss Development Factors (Continued)

	Age-to-Age (in months)																
Accident Year	225/213	237/225	249/237	261/249	273/261	285/273	297/285	309/297	321/309	333/321	345/333	357/345	369/357	381/369	393/381	405/393	ULT/405Inc (b)
1982										1.000	1.001	1.002					
1983									1.000	1.001	1.001	1.001	1.001	1.001	1.000	1.000	
1984								1.001	1.001	1.000	1.000	1.001	1.000	1.000	1.000	1.000	
1985							1.000	1.001	1.001	1.000	1.002	1.001	1.000	1.000	1.000	1.000	
1986						1.001	1.000	1.001	1.002	1.002	1.000	0.999	1.000	1.000	1.000		
1987					1.000	1.000	1.001	1.002	1.000	1.001	1.000	1.001	1.000	1.001			
1988				1.000	1.000	1.002	1.002	1.000	1.000	1.001	1.000	1.000	1.000				
1989			1.001	1.000	1.001	1.000	1.000	1.000	1.001	1.001	1.000	1.000					
1990		1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000						
1991	1.001	1.001	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000							
1992	1.000	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000								
1993	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000									
1994	1.002	1.003	1.000	1.001	1.001	0.999	1.000										
1995	1.001	0.998	1.001	1.000	1.000	1.000											
1996	1.002	1.000	1.001	1.002	1.000												
1997	1.000	1.000	1.000	1.000													
1998	1.000	1.001	1.001														
1999	1.000	1.001															
2000	1.002																
Selected (a)	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
Cumulative	1.009	1.008	1.008	1.007	1.006	1.006	1.006	1.006	1.006	1.006	1.005	1.005	1.005	1.004	1.004	1.004	1.004

(b) The ULT/405Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 117-to-129 through 345-to-357 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Incurred Medical Loss Development Factors

	Age-to-Age (in months) (b)															
Accident Year	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201
1992																1.006
1993															1.006	1.011
1994														1.012	1.018	1.012
1995													1.018	1.006	1.009	1.013
1996												1.019	1.017	1.015	1.005	1.005
1997											1.013	1.017	1.013	1.006	1.007	1.001
1998										1.020	1.019	1.006	1.014	1.010	1.010	1.003
1999									1.020	1.021	1.014	1.009	1.013	1.007	0.999	1.000
2000								1.017	1.026	1.017	1.017	1.014	1.006	1.002	0.996	0.996
2001							1.042	1.031	1.024	1.017	1.017	1.015	1.002	0.995	0.997	0.999
2002						1.038	1.030	1.027	1.024	1.016	1.009	1.003	0.996	1.000	1.000	
2003					1.045	1.038	1.038	1.030	1.022	1.013	1.004	1.000	0.997	1.003		
2004				1.066	1.063	1.045	1.034	1.027	1.019	1.007	1.001	0.997	0.999			
2005			1.073	1.088	1.059	1.047	1.039	1.015	1.011	1.007	1.001	1.003				
2006		1.124	1.085	1.071	1.053	1.043	1.024	1.014	1.002	1.001	1.004					
2007	1.251	1.132	1.090	1.072	1.054	1.037	1.019	1.008	1.005	1.004						
2008	1.241	1.143	1.103	1.068	1.045	1.029	1.013	1.005	1.005							
2009	1.267	1.146	1.105	1.066	1.034	1.020	1.009	1.007								
2010	1.291	1.155	1.085	1.051	1.029	1.015	1.009									
2011	1.271	1.140	1.080	1.039	1.022	1.011										
2012	1.233	1.102	1.062	1.039	1.018											
2013	1.193	1.093	1.050	1.025												
2014	1.189	1.093	1.042													
2015	1.189	1.079														
2016	1.167															
Selected (a)	1.167	1.079	1.042	1.025	1.018	1.011	1.009	1.007	1.011	1.008	1.006	1.005	1.002	1.003	1.002	1.001
Cumulative	1.511	1.295	1.200	1.152	1.124	1.104	1.092	1.082	1.075	1.063	1.055	1.049	1.043	1.041	1.038	1.036

(a) Selections are latest year for the 21-to-33 month through 105-to-117 month factors and six-year average for the subsequent age-to-age factors.
(b) Incurred medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

Incurred Medical Loss Development Factors (Continued)

	Age-to-Age (in months)																
Accident Year	225/213	237/225	249/237	261/249	273/261	285/273	297/285	309/297	321/309	333/321	345/333	357/345	369/357	381/369	393/381	405/393	ULT/405Inc (c)
1982										1.005	1.002	1.008					
1983									1.006	1.003	1.005	1.004	1.002	1.004	0.998	1.000	
1984								1.003	1.001	1.003	1.001	1.003	1.002	0.997	1.000	1.000	
1985							1.003	1.003	1.003	1.005	1.002	1.003	0.999	0.999	0.999	1.000	
1986						1.005	1.004	1.007	1.004	1.005	1.002	1.001	0.998	1.001	1.008		
1987					1.006	1.004	1.006	1.003	1.003	1.005	1.000	1.000	1.001	1.000			
1988				1.005	1.005	1.002	1.004	1.003	1.003	1.002	1.000	1.000	0.998				
1989			1.005	1.006	1.007	1.007	1.002	1.003	1.001	0.998	0.999	0.998					
1990		1.009	1.004	1.004	1.003	1.003	0.998	1.001	1.001	1.000	0.997						
1991	1.007	1.005	1.003	1.002	1.003	1.001	1.001	1.000	0.999	0.999							
1992	1.005	1.000	1.005	1.005	1.005	1.001	0.999	0.999	1.001								
1993	1.004	1.018	1.008	0.998	1.000	0.997	0.996	1.000									
1994	1.006	1.008	1.006	1.001	1.001	0.991	1.002										
1995	0.999	1.007	1.001	1.000	0.997	0.998											
1996	1.009	1.003	0.995	1.004	0.994												
1997	0.996	0.997	0.995	0.999													
1998	1.002	0.993	1.002														
1999	0.996	1.001															
2000	0.999																
Selected (a)	1.000	1.002	1.001	1.001	1.000	0.999	1.000	1.001	1.001	1.002	1.000	1.001	1.000	1.000	1.001	1.000	
Cumulative	1.036	1.035	1.034	1.033	1.031	1.031	1.033	1.033	1.032	1.031	1.029	1.029	1.028	1.028	1.028	1.027	1.027

(c) The ULT/405Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 117-to-129 through 345-to-357 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Paid Indemnity Loss Development Factors

	Age-to-Age (in months)															
Accident Year	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201
1992																1.002
1993															1.003	1.002
1994														1.004	1.002	1.004
1995													1.006	1.005	1.004	1.005
1996												1.007	1.006	1.004	1.005	1.004
1997											1.009	1.007	1.006	1.006	1.005	1.004
1998										1.013	1.009	1.009	1.007	1.006	1.006	1.006
1999									1.016	1.011	1.010	1.008	1.008	1.006	1.004	1.005
2000								1.018	1.013	1.010	1.010	1.008	1.008	1.005	1.004	1.004
2001							1.026	1.018	1.015	1.013	1.012	1.009	1.007	1.006	1.006	1.005
2002						1.035	1.022	1.018	1.016	1.014	1.009	1.008	1.006	1.006	1.005	
2003					1.049	1.033	1.026	1.023	1.022	1.016	1.013	1.009	1.009	1.007		
2004				1.081	1.055	1.043	1.036	1.032	1.020	1.016	1.013	1.010	1.008			
2005			1.143	1.088	1.062	1.049	1.044	1.031	1.022	1.017	1.012	1.012				
2006		1.273	1.152	1.099	1.072	1.054	1.039	1.026	1.022	1.017	1.013					
2007	1.701	1.290	1.160	1.102	1.072	1.051	1.033	1.030	1.022	1.015						
2008	1.724	1.323	1.173	1.103	1.067	1.044	1.030	1.024	1.020							
2009	1.782	1.332	1.178	1.106	1.068	1.046	1.034	1.025								
2010	1.793	1.339	1.172	1.101	1.066	1.043	1.030									
2011	1.796	1.318	1.165	1.098	1.062	1.044										
2012	1.776	1.316	1.157	1.101	1.055											
2013	1.768	1.315	1.155	1.084												
2014	1.816	1.316	1.151													
2015	1.802	1.301														
2016	1.758															
Selected (a)	1.758	1.301	1.151	1.084	1.055	1.044	1.030	1.025	1.021	1.016	1.013	1.010	1.008	1.006	1.005	1.005
Cumulative	3.727	2.120	1.629	1.416	1.306	1.238	1.186	1.151	1.123	1.100	1.082	1.068	1.057	1.049	1.043	1.038

(a) Selections are latest year for the 21-to-33 month through 105-to-117 month factors and three-year average for the subsequent age-to-age factors.

Paid Indemnity Loss Development Factors (Continued)

	Age-to-Age (in months)																	
Accident Year	225/213	237/225	249/237	261/249	273/261	285/273	297/285	309/297	321/309	333/321	345/333	357/345	369/357	381/369	393/381	405/393	405Inc/405Pd (b)	ULT/405Inc (c)
1982										1.000	1.001	1.002					1.004	
1983									1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.005	
1984								1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.004	
1985							1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.000	1.005	
1986						1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.000		1.003	
1987					1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001			1.003	
1988				1.001	1.001	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001					
1989			1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001						
1990		1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001							
1991	1.002	1.002	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001								
1992	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001									
1993	1.002	1.003	1.002	1.002	1.002	1.001	1.001	1.001										
1994	1.003	1.003	1.003	1.002	1.002	1.002	1.001											
1995	1.005	1.003	1.002	1.002	1.002	1.002												
1996	1.004	1.004	1.004	1.003	1.002													
1997	1.003	1.003	1.002	1.003														
1998	1.004	1.004	1.003															
1999	1.003	1.002																
2000	1.004																	
Selected (a)	1.004	1.003	1.003	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	1.004	
Cumulative	1.033	1.029	1.026	1.023	1.020	1.018	1.016	1.015	1.014	1.013	1.013	1.012	1.011	1.010	1.009	1.008		1.004

(b) Three-year averages of the 405Inc/405Pd factors are selected.

(c) The ULT/405Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 117-to-129 through 345-to-357 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Paid Medical Loss Development Factors

Unadjusted (a)

Accident Year	Age-to-Age (in months)															
	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201
1992																1.009
1993															1.012	1.011
1994														1.013	1.012	1.013
1995													1.018	1.019	1.015	1.011
1996												1.021	1.019	1.015	1.014	1.014
1997											1.022	1.020	1.016	1.015	1.013	1.015
1998										1.030	1.023	1.019	1.018	1.017	1.017	1.015
1999									1.033	1.026	1.026	1.016	1.016	1.018	1.016	1.013
2000								1.033	1.027	1.023	1.020	1.020	1.018	1.014	1.011	1.010
2001							1.040	1.035	1.030	1.023	1.023	1.023	1.016	1.014	1.012	1.009
2002						1.047	1.037	1.029	1.025	1.023	1.019	1.017	1.013	1.012	1.010	
2003					1.060	1.050	1.040	1.030	1.030	1.030	1.020	1.016	1.015	1.011		
2004				1.100	1.075	1.059	1.042	1.037	1.034	1.028	1.020	1.014	1.013			
2005			1.153	1.103	1.079	1.053	1.053	1.042	1.033	1.024	1.018	1.015				
2006		1.252	1.156	1.105	1.073	1.058	1.049	1.035	1.028	1.021	1.016					
2007	1.494	1.260	1.157	1.103	1.081	1.063	1.043	1.034	1.024	1.021						
2008	1.500	1.271	1.162	1.113	1.081	1.054	1.039	1.029	1.020							
2009	1.527	1.282	1.180	1.119	1.074	1.051	1.035	1.026								
2010	1.551	1.305	1.176	1.106	1.072	1.049	1.031									
2011	1.566	1.290	1.165	1.106	1.064	1.045										
2012	1.572	1.288	1.158	1.103	1.059											
2013	1.560	1.276	1.154	1.085												
2014	1.554	1.268	1.142													
2015	1.540	1.255														
2016	1.507															

Adjusted (b)

Accident Year	Age-to-Age (in months)															
	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201
1999																1.013
2000															1.011	1.010
2001														1.014	1.012	1.009
2002													1.013	1.012	1.010	
2003												1.016	1.015	1.011		
2004											1.020	1.014	1.013			
2005										1.024	1.018	1.015				
2006									1.028	1.021	1.016					
2007								1.034	1.024	1.021						
2008							1.039	1.029	1.020							
2009						1.051	1.035	1.026								
2010					1.072	1.049	1.031									
2011				1.106	1.065	1.047										
2012			1.158	1.104	1.062											
2013		1.276	1.155	1.088												
2014	1.554	1.270	1.145													
2015	1.542	1.257														
2016	1.508															
Selected (c)	1.508	1.257	1.145	1.088	1.062	1.047	1.031	1.026	1.024	1.022	1.018	1.015	1.014	1.012	1.011	1.011
Cumulative Unadjusted for Impact of SB 1160	3.617	2.399	1.908	1.667	1.532	1.442	1.378	1.336	1.302	1.272	1.245	1.223	1.204	1.188	1.174	1.161
Cumulative Adjusted for Impact of SB 1160(d)	3.491	2.332	1.868	1.645	1.521	1.441	---	---	---	---	---	---	---	---	---	---

(a) Paid medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

(b) These factors are adjusted for the losses paid prior to July 1, 2017 by -3.6%, -3.8%, -3.4%, -2.4%, -0.9%, and -0.1% to accident years 2011 to 2016, respectively, for the SB 1160 lien reforms.

(c) Selections are latest year for the 21-to-33 month through 105-to-117 month factors and three-year average for the subsequent age-to-age factors.

(d) The cumulative factors for 21, 33, 45, 57, 69, and 81 months are adjusted by -3.5%, -2.8%, -2.1%, -1.3%, -0.7%, and -0.1%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Paid Medical Loss Development Factors (Continued)

Unadjusted (a)

Accident Year	225/213	237/225	249/237	261/249	273/261	285/273	297/285	309/297	321/309	333/321	345/333	357/345	369/357	381/369	393/381	405/393	405Inc/405Pd (e)	ULT/405Inc (f)
	Age-to-Age (in months)																	
1982										1.008	1.006	1.006					1.032	
1983									1.005	1.004	1.004	1.004	1.004	1.004	1.003	1.004	1.036	
1984								1.003	1.003	1.004	1.004	1.002	1.003	1.003	1.003	1.002	1.031	
1985							1.004	1.003	1.003	1.004	1.004	1.003	1.002	1.003	1.002	1.002	1.030	
1986						1.005	1.004	1.005	1.005	1.005	1.005	1.006	1.005	1.004	1.004		1.019	
1987					1.005	1.005	1.005	1.005	1.005	1.005	1.004	1.003	1.003	1.003			1.020	
1988				1.005	1.005	1.005	1.005	1.005	1.004	1.003	1.003	1.003	1.004					
1989			1.005	1.005	1.007	1.007	1.006	1.005	1.005	1.003	1.003	1.003						
1990		1.005	1.005	1.005	1.006	1.004	1.004	1.003	1.003	1.002	1.002							
1991	1.006	1.005	1.005	1.006	1.005	1.006	1.005	1.003	1.003	1.003								
1992	1.008	1.002	1.006	1.008	1.007	1.005	1.004	1.004	1.006									
1993	1.011	1.010	1.009	1.013	1.008	1.007	1.006	1.005										
1994	1.009	1.011	1.010	1.010	1.007	1.009	1.004											
1995	1.015	1.014	1.012	1.009	1.013	1.007												
1996	1.013	1.013	1.009	1.007	1.008													
1997	1.011	1.007	1.006	1.007														
1998	1.011	1.009	1.008															
1999	1.010	1.010																
2000	1.008																	

Adjusted (b)

Accident Year	225/213	237/225	249/237	261/249	273/261	285/273	297/285	309/297	321/309	333/321	345/333	357/345	369/357	381/369	393/381	405/393	405Inc/405Pd (e)	ULT/405Inc (f)
	Age-to-Age (in months)																	
1982																	1.032	
1983																1.004	1.036	
1984															1.003	1.002	1.031	
1985														1.003	1.002	1.002	1.030	
1986													1.005	1.004	1.004		1.019	
1987												1.003	1.003	1.003			1.020	
1988											1.003	1.003	1.004					
1989										1.003	1.003	1.003						
1990									1.003	1.002	1.002							
1991								1.003	1.003	1.003								
1992							1.004	1.004	1.006									
1993						1.007	1.006	1.005										
1994					1.007	1.009	1.004											
1995				1.009	1.013	1.007												
1996			1.009	1.007	1.008													
1997		1.007	1.006	1.007														
1998	1.011	1.009	1.008															
1999	1.010	1.010																
2000	1.008																	
Selected (c)	1.010	1.009	1.008	1.008	1.009	1.008	1.005	1.004	1.004	1.003	1.003	1.003	1.004	1.003	1.003	1.003	1.028	
Cumulative	1.149	1.138	1.128	1.119	1.111	1.101	1.092	1.087	1.083	1.078	1.076	1.073	1.070	1.065	1.062	1.059		1.027

(e) Six-year averages of the 405Inc/405Pd factors are selected.

(f) The ULT/405Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 117-to-129 through 345-to-357 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Selected Indemnity Development Factors - Paid to Age 249, Incurred from Age 249 to Ultimate

	Age-to-Age (in months)																			
Accident Year	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201	225/213	237/225	249/237	249Inc/249Pd (b)
1991																	1.002	1.002	1.001	1.012
1992																1.002	1.002	1.002	1.002	1.013
1993															1.003	1.002	1.002	1.003	1.002	1.014
1994														1.004	1.002	1.004	1.003	1.003	1.003	1.018
1995													1.006	1.005	1.004	1.005	1.005	1.003	1.002	1.023
1996												1.007	1.006	1.004	1.005	1.004	1.004	1.004	1.004	1.021
1997											1.009	1.007	1.006	1.006	1.005	1.004	1.003	1.003	1.002	1.022
1998										1.013	1.009	1.009	1.007	1.006	1.006	1.006	1.004	1.004	1.003	1.021
1999									1.016	1.011	1.010	1.008	1.008	1.006	1.004	1.005	1.003	1.002		
2000								1.018	1.013	1.010	1.010	1.008	1.008	1.005	1.004	1.004	1.004			
2001							1.026	1.018	1.015	1.013	1.012	1.009	1.007	1.006	1.006	1.005				
2002						1.035	1.022	1.018	1.016	1.014	1.009	1.008	1.006	1.006	1.005					
2003					1.049	1.033	1.026	1.023	1.022	1.016	1.013	1.009	1.009	1.007						
2004				1.081	1.055	1.043	1.036	1.032	1.020	1.016	1.013	1.010	1.008							
2005			1.143	1.088	1.062	1.049	1.044	1.031	1.022	1.017	1.012	1.012								
2006		1.273	1.152	1.099	1.072	1.054	1.039	1.026	1.022	1.017	1.013									
2007	1.701	1.290	1.160	1.102	1.072	1.051	1.033	1.030	1.022	1.015										
2008	1.724	1.323	1.173	1.103	1.067	1.044	1.030	1.024	1.020											
2009	1.782	1.332	1.178	1.106	1.068	1.046	1.034	1.025												
2010	1.793	1.339	1.172	1.101	1.066	1.043	1.030													
2011	1.796	1.318	1.165	1.098	1.062	1.044														
2012	1.776	1.316	1.157	1.101	1.055															
2013	1.768	1.315	1.155	1.084																
2014	1.816	1.316	1.151																	
2015	1.802	1.301																		
2016	1.758																			
Selected (a)	1.731(c)	1.279(c)	1.132(c)	1.074(c)	1.046(c)	1.044	1.030	1.025	1.021	1.016	1.013	1.010	1.008	1.006	1.005	1.005	1.004	1.003	1.003	1.021
Cumulative	3.506	2.026	1.584	1.399	1.303	1.245	1.192	1.158	1.129	1.106	1.088	1.075	1.064	1.055	1.049	1.044	1.039	1.035	1.032	

(a) Selections are latest year for the 21-to-33 month through 105-to-117 month factors and three-year average for the subsequent paid age-to-age factors. Paid development factors are selected to age 249, where an incurred-to-paid ratio is chosen, and subsequently, six-year average incurred loss development factors are selected until ultimate.

(b) A three-year average of the 249Inc/249Pd factor is selected.

(c) Based on calculations shown on Exhibits 2.5.3 to 2.5.8. Each of these selections is calculated as the latest year paid indemnity age-to-age factor multiplied by an adjustment for changes in claim settlement rates.

Selected Indemnity Development Factors - Paid to Age 249, Incurred from Age 249 to Ultimate (Continued)

	Age-to-Age (in months)													
Accident Year	261/249	273/261	285/273	297/285	309/297	321/309	333/321	345/333	357/345	369/357	381/369	393/381	405/393	ULT/405Inc (d)
1980									1.001					
1981								0.999	1.001					
1982							1.000	1.001	1.002					
1983						1.000	1.001	1.001	1.001	1.001	1.001	1.000	1.000	
1984					1.001	1.001	1.000	1.000	1.001	1.000	1.000	1.000	1.000	
1985				1.000	1.001	1.001	1.000	1.002	1.001	1.000	1.000	1.000	1.000	
1986			1.001	1.000	1.001	1.002	1.002	1.000	0.999	1.000	1.000	1.000		
1987		1.000	1.000	1.001	1.002	1.000	1.001	1.000	1.001	1.000	1.001			
1988	1.000	1.000	1.002	1.002	1.000	1.000	1.001	1.000	1.000	1.000				
1989	1.000	1.001	1.000	1.000	1.000	1.001	1.001	1.000	1.000					
1990	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000						
1991	1.001	1.000	1.000	1.000	1.000	1.000	1.000							
1992	1.001	1.001	1.000	1.000	1.000	1.000								
1993	1.001	1.000	1.000	1.000	1.000									
1994	1.001	1.001	0.999	1.000										
1995	1.000	1.000	1.000											
1996	1.002	1.000												
1997	1.000													
Selected (a)	1.001	1.000	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
Cumulative	1.007	1.006	1.006	1.006	1.006	1.006	1.006	1.005	1.005	1.005	1.004	1.004	1.004	1.004

(d) The ULT/405Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 117-to-129 through 345-to-357 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

A. Total Reported Indemnity Claim Counts

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						113,316
2010					116,929	117,206
2011				117,379	117,798	118,030
2012			123,283	124,173	124,640	124,849
2013		129,936	131,661	132,663	132,888	
2014	130,386	136,372	138,260	138,907		
2015	136,856	142,850	143,817			
2016	139,971	145,552				
2017	140,694					

B. Development of Total Reported Indemnity Claim Counts

Accident	Age-to-Age Development (in months):					
Year	21-33	33-45	45-57	57-69	69-81	81-Ultimate
2010					1.002	
2011				1.004	1.002	
2012			1.007	1.004	1.002	
2013		1.013	1.008	1.002		
2014	1.046	1.014	1.005			
2015	1.044	1.007				
2016	1.040					
Latest Year	1.040	1.007	1.005	1.002	1.002	
Cumulative	1.059	1.018	1.011	1.006	1.005	1.003

Acc. Year	2017	2016	2015	2014	2013	2012
Ult. Claim Counts	148,936	148,171	145,420	139,801	133,517	125,230

C. Closed Indemnity Claim Counts

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						99,534
2010					99,242	104,641
2011				94,013	101,325	106,461
2012			89,423	100,928	108,822	114,081
2013		79,021	97,576	110,125	118,123	
2014	58,623	84,817	104,377	117,676		
2015	62,952	92,202	112,499			
2016	67,520	97,886				
2017	72,055					

Source: Accident year experience of insurers with available claim count data

Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

D. Ultimate Indemnity Claim Settlement Ratio (a)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						87.5%
2010					84.3%	88.9%
2011				79.4%	85.6%	89.9%
2012			71.4%	80.6%	86.9%	91.1%
2013		59.2%	73.1%	82.5%	88.5%	
2014	41.9%	60.7%	74.7%	84.2%		
2015	43.3%	63.4%	77.4%			
2016	45.6%	66.1%				
2017	48.4%					

E. Adjusted Closed Indemnity Claim Counts at Equal Percentiles of Ultimate Claim Counts (b)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						103,642
2010					104,104	107,195
2011				99,654	104,741	107,850
2012			96,880	105,411	110,792	114,081
2013		88,205	103,290	112,386	118,123	
2014	67,635	92,357	108,152	117,676		
2015	70,354	96,069	112,499			
2016	71,685	97,886				
2017	72,055					

F. Average Paid Indemnity per Closed Claim

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						17,711
2010					16,259	17,995
2011				14,310	16,491	18,083
2012			11,843	14,542	16,641	18,029
2013		8,455	12,199	14,917	16,716	
2014	4,549	9,046	12,972	15,792		
2015	5,014	9,845	13,713			
2016	5,393	9,911				
2017	5,399					

(a) Ratio of closed indemnity claim counts (Item C) to the estimated ultimate indemnity claim counts (Item B) for that accident year.

(b) The claim counts for the latest evaluation of each accident year are equal to the reported number of closed indemnity claims. All prior evaluations shown are the product of the latest ultimate indemnity claim settlement ratio (Item D) and the ultimate indemnity claim counts (Item B) for that accident year.

Source: Accident year experience of insurers with available claim count data

Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

G. Adjusted Average Paid Indemnity per Closed Claim (c)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						19,225
2010					17,815	18,890
2011				15,965	17,533	18,531
2012			13,528	15,699	17,148	18,029
2013		10,137	13,369	15,405	16,716	
2014	5,763	10,394	13,717	15,792		
2015	5,948	10,486	13,713			
2016	5,862	9,911				
2017	5,399					
2018						

H. Adjusted Paid Indemnity on Closed Claims (in $000) (d)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						1,992,556
2010					1,854,598	2,024,879
2011				1,590,956	1,836,458	1,998,588
2012			1,310,624	1,654,875	1,899,881	2,056,801
2013		894,148	1,380,932	1,731,327	1,974,486	
2014	389,762	959,999	1,483,536	1,858,327		
2015	418,439	1,007,418	1,542,738			
2016	420,217	970,147				
2017	389,040					

I. Paid Indemnity on Open Claims (in $000)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						594,880
2010					657,472	536,512
2011				708,406	579,029	463,225
2012			804,353	684,892	559,403	442,787
2013		852,844	808,349	664,263	524,239	
2014	648,321	896,100	833,261	660,304		
2015	688,520	901,424	807,931			
2016	688,211	878,750				
2017	694,672					

(c) Adjusted based on ultimate indemnity claim settlement ratios (Item D) and assuming a log-linear relationship between maturities.

(d) Each amount is the product of the adjusted closed indemnity claim counts (Item E) and the adjusted average paid indemnity per closed claim (Item G), and divided by $1,000.

Source: Accident year experience of insurers with available claim count data

Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

J. Average Paid Indemnity per Open Claim for Indemnity Claims in Transition (e)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						43,162
2010					37,173	42,701
2011				30,319	35,151	40,039
2012			23,755	29,463	35,365	41,121
2013		16,750	23,716	29,473	35,506	
2014	9,034	17,381	24,593	31,101		
2015	9,317	17,798	25,798			
2016	9,499	18,436				
2017	10,121					

K. Changes in Paid Indemnity on Open Claims Resulting from the Impact of Changes in Claim Settlement Rates (in $000) (f)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						-177,311
2010					-180,735	-109,015
2011				-170,997	-120,040	-55,614
2012			-177,143	-132,084	-69,633	
2013		-153,836	-135,512	-66,639		
2014	-81,426	-131,056	-92,837			
2015	-68,961	-68,824				
2016	-39,554					

L. Adjusted Paid Indemnity on Open Claims (in $000) (g)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						417,570
2010					476,737	427,497
2011				537,409	458,989	407,611
2012			627,210	552,808	489,770	442,787
2013		699,009	672,836	597,624	524,239	
2014	566,896	765,044	740,423	660,304		
2015	619,559	832,600	807,931			
2016	648,657	878,750				
2017	694,672					

(e) Each amount is equal to the product of [the average monthly indemnity payment per open indemnity claim] and [the number of months for the current evaluation]. For evaluations indicating claim settlement rate decreases, the average monthly indemnity payment per open indemnity claim at the prior evaluation is used. For evaluations indicating claim settlement rate increases, the average monthly indemnity payment per open indemnity claim at the same evaluation is used.

(f) Each amount is equal to [the difference between unadjusted and adjusted closed indemnity claim counts (Items C and E)] multiplied by the corresponding [average paid indemnity per open claim for indemnity claims in transition (Item J)].

(g) Each amount is the sum of [paid indemnity on open claims (Item I)] and the corresponding [incremental changes in paid indemnity on open claims resulting from the impact of changes in claim settlement rates (Item K)].

Source: Accident year experience of insurers with available claim count data

Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

M. Adjusted Total Paid Indemnity (in $000) (h)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						2,410,125
2010					2,331,335	2,452,376
2011				2,128,365	2,295,446	2,406,199
2012			1,937,834	2,207,683	2,389,651	2,499,587
2013		1,593,157	2,053,768	2,328,951	2,498,725	
2014	956,658	1,725,043	2,223,959	2,518,631		
2015	1,037,998	1,840,019	2,350,670			
2016	1,068,874	1,848,897				
2017	1,083,712					

N. Paid Indemnity Loss Development Factors Based on Adjusted Total Paid Indemnity

Accident	Evaluated as of (in months)				
Year	21-33	33-45	45-57	57-69	69-81
2009					
2010					1.052
2011				1.079	1.048
2012			1.139	1.082	1.046
2013		1.289	1.134	1.073	
2014	1.803	1.289	1.132		
2015	1.773	1.278			
2016	1.730				
Latest Year	1.730	1.278	1.132	1.073	1.046
3-Year Average	1.769	1.285	1.135	1.078	1.049

O. Paid Indemnity Loss Development Factors (i)

Accident	Evaluated as of (in months)				
Year	21-33	33-45	45-57	57-69	69-81
2010					1.065
2011				1.096	1.061
2012			1.155	1.101	1.055
2013		1.314	1.154	1.083	
2014	1.818	1.315	1.151		
2015	1.802	1.299			
2016	1.757				

(h) Each amount is the sum of the adjusted paid indemnity on closed claims (Item H) and the adjusted paid indemnity on open claims (Item L).

(i) Development factors are based on paid indemnity losses from the same insurer mix as that used in the adjustment for changes in claim settlement rates and applied in the calculation of the development factors in Item N.

Source: Accident year experience of insurers with available claim count data

Paid Indemnity Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

P. Impact of Adjustment for Changes in Claim Settlement Rates (j)

Accident	Evaluated as of (in months)				
Year	21-33	33-45	45-57	57-69	69-81
2010					-1.26%
2011				-1.56%	-1.25%
2012			-1.38%	-1.70%	-0.81%
2013		-1.90%	-1.76%	-0.94%	
2014	-0.81%	-1.96%	-1.65%		
2015	-1.61%	-1.68%			
2016	-1.55%				

Q. Paid Indemnity Loss Development Factors Adjusted for Changes in Indemnity Claim Settlement Rates (k)

Accident	Evaluated as of (in months)				
Year	21-33	33-45	45-57	57-69	69-81
2010					1.053
2011				1.081	1.049
2012			1.141	1.082	1.046
2013		1.290	1.135	1.074	
2014	1.801	1.290	1.132		
2015	1.773	1.279			
2016	1.731				
Latest Year	1.731	1.279	1.132	1.074	1.046
3-Year Average	1.768	1.286	1.136	1.079	1.049

(j) Each factor represents the change in age-to-age development factors from Item O to those in Item N.

(k) Each factor is the product of [1.0 + the impact of adjustment for changes in claim settlement rates (Item P)] and [the paid indemnity age-to-age development factor from Exhibit 2.5.1].

Source: Accident year experience of insurers with available claim count data

Selected Medical Development Factors - Paid to Age 249, Incurred from Age 249 to Ultimate

	Age-to-Age (in months)																			
Accident Year	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201	225/213	237/225	249/237	249Inc/249Pd (b)
1991																	1.006	1.005	1.005	1.053
1992																1.009	1.008	1.002	1.006	1.060
1993															1.012	1.011	1.011	1.010	1.009	1.103
1994														1.013	1.012	1.013	1.009	1.011	1.010	1.103
1995													1.018	1.019	1.015	1.011	1.015	1.014	1.012	1.104
1996												1.021	1.019	1.015	1.014	1.014	1.013	1.013	1.009	1.086
1997											1.022	1.020	1.016	1.015	1.013	1.015	1.011	1.007	1.006	1.080
1998										1.030	1.023	1.019	1.018	1.017	1.017	1.015	1.011	1.009	1.008	1.089
1999									1.033	1.026	1.026	1.016	1.016	1.018	1.016	1.013	1.010	1.010		
2000								1.033	1.027	1.023	1.020	1.020	1.018	1.014	1.011	1.010	1.008			
2001							1.040	1.035	1.030	1.023	1.023	1.023	1.016	1.014	1.012	1.009				
2002						1.047	1.037	1.029	1.025	1.023	1.019	1.017	1.013	1.012	1.010					
2003					1.060	1.050	1.040	1.030	1.030	1.030	1.020	1.016	1.015	1.011						
2004				1.100	1.075	1.059	1.042	1.037	1.034	1.028	1.020	1.014	1.013							
2005			1.153	1.103	1.079	1.053	1.053	1.042	1.033	1.024	1.018	1.015								
2006		1.252	1.156	1.105	1.073	1.058	1.049	1.035	1.028	1.021	1.016									
2007	1.494	1.260	1.157	1.103	1.081	1.063	1.043	1.034	1.024	1.021										
2008	1.500	1.271	1.162	1.113	1.081	1.054	1.039	1.029	1.020											
2009	1.527	1.282	1.180	1.119	1.074	1.051	1.035	1.026												
2010	1.551	1.305	1.176	1.106	1.072	1.049	1.031													
2011	1.566	1.290	1.165	1.106	1.064	1.045														
2012	1.572	1.288	1.158	1.103	1.059															
2013	1.560	1.276	1.154	1.085																
2014	1.554	1.268	1.142																	
2015	1.540	1.255																		
2016	1.507																			

Adjusted (b)	Age-to-Age (in months)																			
Accident Year	33/21	45/33	57/45	69/57	81/69	93/81	105/93	117/105	129/117	141/129	153/141	165/153	177/165	189/177	201/189	213/201	225/213	237/225	249/237	249Inc/249Pd (b)
1996																			1.009	1.086
1997																		1.007	1.006	1.080
1998																	1.011	1.009	1.008	1.089
1999																1.013	1.010	1.010		
2000															1.011	1.010	1.008			
2001														1.014	1.012	1.009				
2002													1.013	1.012	1.010					
2003												1.016	1.015	1.011						
2004											1.020	1.014	1.013							
2005										1.024	1.018	1.015								
2006									1.028	1.021	1.016									
2007								1.034	1.024	1.021										
2008							1.039	1.029	1.020											
2009						1.051	1.035	1.026												
2010					1.072	1.049	1.031													
2011				1.106	1.064	1.047														
2012			1.158	1.103	1.062															
2013		1.276	1.154	1.088																
2014	1.554	1.268	1.145																	
2015	1.540	1.257																		
2016	1.508																			
Selected (c)	1.498(e)	1.242(e)	1.129(e)	1.078(e)	1.055(e)	1.047	1.031	1.026	1.024	1.022	1.018	1.015	1.014	1.012	1.011	1.011	1.010	1.009	1.008	1.085
Cumulative Unadjusted for Impact of SB 1160	3.448	2.303	1.855	1.642	1.523	1.444	1.379	1.338	1.304	1.273	1.246	1.224	1.206	1.189	1.175	1.162	1.150	1.139	1.129	
Cumulative Adjusted for Impact of SB 1160(f)	3.327	2.238	1.816	1.621	1.513	1.442	---	---	---	---	---	---	---	---	---	---	---	---	---	

(a) Paid medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

(b) These factors are adjusted for the losses paid prior to July 1, 2017 by -3.6%, -3.8%, -3.4%, -2.4%, -0.9%, and -0.1% to accident years 2011 to 2016, respectively, for the SB 1160 lien reforms.

(c) Selections are latest year for the 21-to-33 month through 105-to-117 month factors and three-year average for the subsequent paid age-to-age factors. Paid development factors are selected to age 249, where an incurred-to-paid ratio is chosen, and subsequently, six-year average incurred loss development factors are selected until ultimate.

(d) A three-year average of the 249Inc/249Pd factor is selected.

(e) Based on calculations shown on Exhibits 2.6.3 to 2.6.8. Each of these selections are calculated as the latest year paid medical age-to-age factor multiplied by an adjustment for changes in claim settlement rates.

(f) The cumulative factors for 21, 33, 45, 57, 69, and 81 months are adjusted by -3.5%, -2.8%, -2.1%, -1.3%, -0.7%, and -0.1%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Selected Medical Development Factors - Paid to Age 249, Incurred from Age 249 to Ultimate (Continued)

	Age-to-Age (in months)													
Accident Year	261/249	273/261	285/273	297/285	309/297	321/309	333/321	345/333	357/345	369/357	381/369	393/381	405/393	ULT/405Inc (g)
1983										1.002	1.004	0.998	1.000	
1984									1.003	1.002	0.997	1.000	1.000	
1985								1.002	1.003	0.999	0.999	0.999	1.000	
1986							1.005	1.002	1.001	0.998	1.001	1.008		
1987						1.003	1.005	1.000	1.000	1.001	1.000			
1988					1.003	1.003	1.002	1.000	1.000	0.998				
1989				1.002	1.003	1.001	0.998	0.999	0.998					
1990			1.003	0.998	1.001	1.001	1.000	0.997						
1991		1.003	1.001	1.001	1.000	0.999	0.999							
1992	1.005	1.005	1.001	0.999	0.999	1.001								
1993	0.998	1.000	0.997	0.996	1.000									
1994	1.001	1.001	0.991	1.002										
1995	1.000	0.997	0.998											
1996	1.004	0.994												
1997	0.999													
Selected (c)	1.001	1.000	0.999	1.000	1.001	1.001	1.002	1.000	1.001	1.000	1.000	1.001	1.000	
Cumulative	1.033	1.031	1.031	1.033	1.033	1.032	1.031	1.029	1.029	1.028	1.028	1.028	1.027	1.027

(g) The ULT/405Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 117-to-129 through 345-to-357 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

A. Total Reported Indemnity Claim Counts

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						113,316
2010					116,929	117,206
2011				117,379	117,798	118,030
2012			123,283	124,173	124,640	124,849
2013		129,936	131,661	132,663	132,888	
2014	130,386	136,372	138,260	138,907		
2015	136,856	142,850	143,817			
2016	139,971	145,552				
2017	140,694					

B. Development of Total Reported Indemnity Claim Counts

Accident	Age-to-Age Development (in months):					
Year	21-33	33-45	45-57	57-69	69-81	81-Ultimate
2010					1.002	
2011				1.004	1.002	
2012			1.007	1.004	1.002	
2013		1.013	1.008	1.002		
2014	1.046	1.014	1.005			
2015	1.044	1.007				
2016	1.040					
Latest Year	1.040	1.007	1.005	1.002	1.002	
Cumulative	1.059	1.018	1.011	1.006	1.005	1.003

Acc. Year	2017	2016	2015	2014	2013	2012
Ult. Claim Counts	148,936	148,171	145,420	139,801	133,517	125,230

C. Closed Indemnity Claim Counts

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						99,534
2010					99,242	104,641
2011				94,013	101,325	106,461
2012			89,423	100,928	108,822	114,081
2013		79,021	97,576	110,125	118,123	
2014	58,623	84,817	104,377	117,676		
2015	62,952	92,202	112,499			
2016	67,520	97,886				
2017	72,055					

Source: Accident year experience of insurers with available claim count and paid loss data

Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

D. Ultimate Indemnity Claim Settlement Ratio (a)

Accident Year	Evaluated as of (in months) 21	33	45	57	69	81
2009						87.5%
2010					84.3%	88.9%
2011				79.4%	85.6%	89.9%
2012			71.4%	80.6%	86.9%	91.1%
2013		59.2%	73.1%	82.5%	88.5%	
2014	41.9%	60.7%	74.7%	84.2%		
2015	43.3%	63.4%	77.4%			
2016	45.6%	66.1%				
2017	48.4%					

E. Adjusted Closed Indemnity Claim Counts at Equal Percentiles of Ultimate Claim Counts (b)

Accident Year	Evaluated as of (in months) 21	33	45	57	69	81
2009						103,642
2010					104,104	107,195
2011				99,654	104,741	107,850
2012			96,880	105,411	110,792	114,081
2013		88,205	103,290	112,386	118,123	
2014	67,635	92,357	108,152	117,676		
2015	70,354	96,069	112,499			
2016	71,685	97,886				
2017	72,055					

F. Average Paid Medical per Closed Indemnity Claim

Accident Year	Evaluated as of (in months) 21	33	45	57	69	81
2009						22,068
2010					20,147	22,764
2011				16,495	19,735	21,958
2012			13,022	16,315	18,904	20,696
2013		8,896	12,804	15,983	18,158	
2014	4,859	9,092	12,871	15,807		
2015	5,186	9,528	13,137			
2016	5,483	9,495				
2017	5,591					

(a) Ratio of closed indemnity claim counts (Item C) to the estimated ultimate indemnity claim counts (Item B) for that accident year.
(b) The claim counts for the latest evaluation of each accident year are equal to the reported number of closed indemnity claims. All prior evaluations shown are the product of the latest ultimate indemnity claim settlement ratio (Item D) and the ultimate indemnity claim counts (Item B) for that accident year.

Source: Accident year experience of insurers with available claim count and paid loss data

Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

G. Adjusted Average Paid Medical per Closed Indemnity Claim (c)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						24,295
2010					22,489	24,167
2011				18,943	21,187	22,618
2012			15,071	17,739	19,557	20,696
2013		10,653	14,164	16,570	18,158	
2014	6,028	10,395	13,644	15,807		
2015	6,049	10,129	13,137			
2016	5,912	9,495				
2017	5,591					

H. Adjusted Paid Medical (in $000) on Closed Indemnity Claims (d)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						2,517,965
2010					2,341,241	2,590,562
2011				1,887,752	2,219,152	2,439,365
2012			1,460,089	1,869,870	2,166,713	2,361,059
2013		939,667	1,463,049	1,862,228	2,144,848	
2014	407,713	960,087	1,475,651	1,860,117		
2015	425,599	973,095	1,477,859			
2016	423,788	929,476				
2017	402,837					

I. Paid Medical on Open Indemnity Claims (in $000)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						912,842
2010					971,792	816,736
2011				963,740	806,820	663,524
2012			982,380	863,516	724,241	592,570
2013		960,029	919,022	766,586	611,771	
2014	746,571	939,444	876,547	701,862		
2015	761,343	908,209	822,178			
2016	763,915	897,844				
2017	780,672					

(c) Adjusted based on ultimate indemnity claim settlement ratios (Item D) and assuming a log-linear relationship between maturities.
(d) Each amount is equal to the product of [adjusted closed indemnity claim counts (Item E)] and [adjusted average paid medical per closed indemnity claim (Item G)], and divided by $1,000.

Source: Accident year experience of insurers with available claim count and paid loss data

Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

J. Average Paid Medical per Open Indemnity Claim for Indemnity Claims in Transition (e)

Accident Year	Evaluated as of (in months) 21	33	45	57	69	81
2009						66,232
2010					54,944	65,004
2011				41,246	48,979	57,352
2012			29,013	37,148	45,786	55,031
2013		18,856	26,963	34,013	41,434	
2014	10,403	18,222	25,870	33,058		
2015	10,302	17,932	26,253			
2016	10,544	18,836				
2017	11,374					

K. Changes in Paid Medical on Open Indemnity Claims Resulting from the Impact of Changes in Indemnity Claim Settlement Rates (in $000) (f)

Accident Year	Evaluated as of (in months) 21	33	45	57	69	81
2009						-272,083
2010					-267,139	-165,955
2011				-232,630	-167,264	-79,662
2012			-216,350	-166,533	-90,152	
2013		-173,170	-154,066	-76,904		
2014	-93,765	-137,395	-97,660			
2015	-76,255	-69,342				
2016	-43,905					

L. Adjusted Paid Medical on Open Indemnity Claims (in $000) (g)

Accident Year	Evaluated as of (in months) 21	33	45	57	69	81
2009						640,760
2010					704,653	650,781
2011				731,110	639,556	583,862
2012			766,030	696,983	634,089	592,570
2013		786,859	764,956	689,682	611,771	
2014	652,805	802,049	778,887	701,862		
2015	685,089	838,867	822,178			
2016	720,010	897,844				
2017	780,672					

(e) Each amount is equal to the product of [the average monthly medical payment per open indemnity claim] and [the number of months for the current evaluation]. For evaluations indicating claim settlement rate decreases, the average monthly medical payment per open indemnity claim at the prior evaluation is used. For evaluations indicating claim settlement rate increases, the average monthly medical payment per open indemnity claim at the same evaluation is used.

(f) Each amount is equal to [the difference between unadjusted and adjusted closed indemnity claim counts (Items C and E)] multiplied by [the corresponding average paid medical per open indemnity claim for indemnity claims in transition (Item J)].

(g) Each amount is the sum of [paid medical on open indemnity claims (Item I)] and the corresponding [incremental changes in paid medical on open indemnity claims resulting from the impact of changes in indemnity claim settlement rates (Item K)].

Source: Accident year experience of insurers with available claim count and paid loss data

Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

M. Paid Medical on Medical-Only Claims (in $000)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						227,006
2010					222,880	225,441
2011				210,288	213,777	217,472
2012			212,503	217,547	222,552	225,899
2013		209,932	217,578	224,912	228,862	
2014	219,801	233,104	241,937	247,665		
2015	231,502	245,668	254,226			
2016	246,162	263,397				
2017	267,178					

N. Adjusted Total Paid Medical (in $000) (h)

Accident	Evaluated as of (in months)					
Year	21	33	45	57	69	81
2009						3,385,731
2010					3,311,664	3,511,679
2011				3,065,461	3,324,444	3,503,536
2012			2,438,623	2,784,400	3,023,355	3,179,528
2013		1,936,459	2,445,583	2,776,822	2,985,480	
2014	1,280,320	1,995,240	2,496,474	2,809,644		
2015	1,342,190	2,057,630	2,554,263			
2016	1,389,960	2,090,717				
2017	1,450,686					

O. Paid Medical Loss Development Factors Based on Adjusted Total Paid Medical

Accident	Evaluated as of (in months)				
Year	21-33	33-45	45-57	57-69	69-81
2010					1.060
2011				1.084	1.054
2012			1.142	1.086	1.052
2013		1.263	1.135	1.075	
2014	1.558	1.251	1.125		
2015	1.533	1.241			
2016	1.504				
Latest Year	1.504	1.241	1.125	1.075	1.052

(h) Each amount is the sum of [adjusted paid medical on closed indemnity claims (Item H)], [adjusted paid medical on open indemnity claims (Item L)] and [paid medical on medical-only claims (Item M)]. The effect of the paid cost of medical cost containment programs are only present for accident years 2011 and prior.

Source: Accident year experience of insurers with available claim count and paid loss data

Paid Medical Loss Development Factors
With Separate Adjustments on Open and Closed Claims
for Changes in Claim Settlement Rates

P. Paid Medical Loss Development Factors (i)

Accident Year	Evaluated as of (in months) 21-33	33-45	45-57	57-69	69-81
2010					1.072
2011				1.105	1.064
2012			1.156	1.101	1.058
2013		1.274	1.153	1.085	
2014	1.553	1.267	1.141		
2015	1.540	1.257			
2016	1.515				

Q. Impact of Adjustment for Changes in Indemnity Claim Settlement Rates (j)

Accident Year	Evaluated as of (in months) 21-33	33-45	45-57	57-69	69-81
2010					-1.06%
2011				-1.86%	-0.95%
2012			-1.24%	-1.40%	-0.64%
2013		-0.86%	-1.54%	-0.91%	
2014	0.32%	-1.22%	-1.38%		
2015	-0.48%	-1.23%			
2016	-0.70%				

R. Paid Medical Loss Development Factors Adjusted for Changes in Indemnity Claim Settlement Rates (k)

Accident Year	Evaluated as of (in months) 21-33	33-45	45-57	57-69	69-81
2010					1.061
2011				1.085	1.055
2012			1.144	1.089	1.055
2013		1.265	1.137	1.078	
2014	1.559	1.255	1.129		
2015	1.535	1.242			
2016	1.498				
Latest Year	1.498	1.242	1.129	1.078	1.055
3-Year Average	1.530	1.254	1.137	1.084	1.057

(i) Development factors are based on paid medical losses from the same insurer mix as that used in the adjustment for changes in claim settlement rates and applied in the calculation of the development factors in Item O.

(j) Each factor represents the change in age-to-age development factors from Item P to those in Item O.

(k) Each factor is the product of [1.0 + the impact of adjustment for changes in claim settlement rates (Item Q)] and [the adjusted paid medical age-to-age development factor from Exhibit 2.6.1].

Source: Accident year experience of insurers with available claim count and paid loss data

Developed Indemnity Loss Ratios Using Selected Loss Development Factors
Adjusted for Changes in Claim Settlement Rates
Based on Experience as of September 30, 2018

		Development Factors		
	(1)	(2)	(3)	(4)
Accident Year	Paid or Incurred Loss Ratio(a)	Annual(b)	Cumulative	Projected Ultimate Loss Ratio (4) = (1) x (3)
1986	0.396	1.000	1.004	0.397
1987	0.346	1.000	1.004	0.347
1988	0.330	1.000	1.004	0.332
1989	0.343	1.000	1.005	0.345
1990	0.397	1.000	1.005	0.399
1991	0.424	1.000	1.005	0.426
1992	0.350	1.001	1.006	0.352
1993	0.287	1.000	1.006	0.289
1994	0.327	1.000	1.006	0.329
1995	0.473	1.000	1.006	0.475
1996	0.530	1.000	1.006	0.533
1997	0.600	1.000	1.006	0.603
1998	0.651	1.001	1.007	0.656
1999	0.669	1.003	1.032	0.690
2000	0.576	1.003	1.035	0.596
2001	0.476	1.004	1.039	0.494
2002	0.353	1.005	1.044	0.369
2003	0.231	1.005	1.049	0.243
2004	0.137	1.006	1.055	0.145
2005	0.117	1.008	1.064	0.124
2006	0.150	1.010	1.075	0.161
2007	0.204	1.013	1.088	0.222
2008	0.255	1.016	1.106	0.282
2009	0.293	1.021	1.129	0.331
2010	0.278	1.025	1.158	0.321
2011	0.252	1.030	1.192	0.300
2012	0.218	1.044	1.245	0.272
2013	0.180	1.046	1.303	0.234
2014	0.159	1.074	1.399	0.222
2015	0.138	1.132	1.584	0.218
2016	0.103	1.279	2.026	0.209
2017	0.061	1.731	3.506	0.215

(a) Based on Exhibit 1. To reflect the selected loss development methodology, reported loss ratios displayed prior to 1999 are on an incurred basis. Subsequent reported loss ratios are on a paid basis.

(b) See Exhibits 2.5.1 and 2.5.2.

Developed Medical Loss Ratios Using Selected Loss Development Factors
Adjusted for Changes in Claim Settlement Rates
Based on Experience as of September 30, 2018

	(1)	(2)	(3)	(4)	(5)
		Reform Adjusted			
		Development Factors			
			Cumulative		Projected
Accident Year	Paid or Incurred Loss Ratio(a)	Annual(b)	Unadjusted for Reforms(b)	Adjusted for Reforms(b)	Ultimate Loss Ratio (1) x (4)
1986	0.335	1.000	1.027	1.027	0.344
1987	0.314	1.001	1.028	1.028	0.323
1988	0.304	1.000	1.028	1.028	0.313
1989	0.325	1.000	1.028	1.028	0.334
1990	0.366	1.001	1.029	1.029	0.377
1991	0.383	1.000	1.029	1.029	0.395
1992	0.319	1.002	1.031	1.031	0.329
1993	0.267	1.001	1.032	1.032	0.275
1994	0.309	1.001	1.033	1.033	0.319
1995	0.453	1.000	1.033	1.033	0.468
1996	0.485	0.999	1.031	1.031	0.500
1997	0.545	1.000	1.031	1.031	0.562
1998	0.658	1.001	1.033	1.033	0.680
1999	0.661	1.008	1.129	1.129	0.746
2000	0.596	1.009	1.139	1.139	0.679
2001	0.524	1.010	1.150	1.150	0.602
2002	0.403	1.011	1.162	1.162	0.469
2003	0.256	1.011	1.175	1.175	0.300
2004	0.173	1.012	1.189	1.189	0.205
2005	0.167	1.014	1.206	1.206	0.202
2006	0.213	1.015	1.224	1.224	0.261
2007	0.297	1.018	1.246	1.246	0.369
2008	0.364	1.022	1.273	1.273	0.464
2009	0.417	1.024	1.304	1.304	0.544
2010	0.402	1.026	1.338	1.338	0.538
2011	0.336	1.031	1.379	1.379	0.463
2012	0.278	1.047	1.444	1.442	0.400
2013	0.215	1.055	1.523	1.513	0.325
2014	0.177	1.078	1.642	1.621	0.287
2015	0.150	1.129	1.855	1.816	0.272
2016	0.116	1.242	2.303	2.238	0.261
2017	0.082	1.498	3.448	3.327	0.273

(a) Based on Exhibit 1. Paid MCCP costs are excluded from accident years 2011 and subsequent. To reflect the selected loss development methodology, reported loss ratios displayed prior to 1999 are on an incurred basis. Subsequent reported loss ratios are on a paid basis.

(b) See Exhibits 2.6.1 and 2.6.2.

Indemnity Benefit Level Factors

Accident Year	(1) Annual Benefit Change Prior to Frequency Adjustments (a)		(2) Frequency Adjustments (a)	(3) Annual Impact on Indemnity Benefits Due to Wage Inflation (b)		(4a) Annual Cost Impact on Indemnity (c)	(5a) Composite Indemnity Adjustment Factor (d)	
1986	0.0		0.0	1.6		1.6	1.531	
1987	0.0		0.0	1.9		1.9	1.503	
1988	0.0		0.0	1.5		1.5	1.480	
1989	0.0		0.0	1.5		1.5	1.459	
1990	2.3		19.9	1.7		24.7	1.169	
1991	4.9		14.8	0.8		21.4	0.963	
1992	1.8		-8.3	1.6		-5.2	1.016	
1993	0.2		-18.1	0.4		-17.6	1.233	
1994	-5.1		0.2	0.6		-4.3	1.289	
1995	6.3		0.6	1.0		8.0	1.193	
1996	5.3		0.4	1.2		7.0	1.115	
1997	9.7		0.2	1.6		11.7	0.998	
1998	6.5		0.0	1.8		8.4	0.921	
1999	5.7		0.0	2.1		7.9	0.853	
2000	3.9		0.0	3.1		7.1	0.797	
2001	-0.3		0.0	0.2		-0.1	0.797	
2002	-0.7		0.0	0.4		-0.3	0.817	(e)
2003	7.3		0.0	1.2		8.6	0.816	(e)
2004	-6.0		-13.7	1.7		-17.5	1.123	(e)
2005	-31.6		-15.3	1.1		-41.5	1.524	
2006	5.6		-5.7	1.6		1.2	1.506	
2007	1.6		0.0	1.6		3.2	1.459	
2008	4.8		0.6	0.7		6.2	1.375	
2009	0.4		1.4	0.2		2.0	1.348	
2010	0.4		0.0	1.0		1.4	1.329	
2011	0.0		0.0	1.6		1.6	1.308	
2012	0.3		0.0	2.2		2.5	1.276	
2013	2.6		0.2	0.4		3.2	1.236	
2014	7.0		1.5	1.7		10.4	1.119	
2015	0.3		0.0	2.3		2.6	1.091	
2016	0.3		0.0	1.1		1.4	1.076	
2017	0.5		0.0	1.5		2.0	1.055	
2018	0.4		0.0	1.9		2.3		
2019	0.4		0.0	1.6		2.0		
1/1/2020	0.2	(Annual 0.5)	0.0	0.9	(Annual 1.8)	1.1		

(a) Based on WCIRB evaluations of the average impact of legislative changes on the cost of indemnity benefits. These annual changes in benefits reflect the WCIRB's retrospective estimates of the cost impact of recent legislation as reflected in emerging post-reform costs. The annual cost impacts have been segregated between claim severity and claim frequency impacts.

(b) These impacts are based on the weekly wages (See Exhibit 5.1) of injured workers and the legislatively scheduled benefits for that year.

(c) { [Column (1) /100 + 1.0] x [Column (2) /100 + 1.0] x [Column (3) /100 + 1.0] - 1.0 } x 100.

(d) These factors represent the combined impact of the annual benefit changes on claim severity shown in Column (1), claim frequencies shown in Column (2) and wage inflation impact on benefits shown in Column (3), adjusted to the 1/1/2020 level.

(e) On-level factors for accident years 2002, 2003 and 2004 adjust the portion of permanent disability claims that are estimated to not be subject to the January 1, 2005 PDRS (95% for accident year 2002, 75% for accident year 2003 and 40% for accident year 2004) to the January 1, 2005 PDRS level, and adjust for the corresponding utilization impacts on all 2002, 2003 and 2004 indemnity claims.

Annual Medical Cost Level Change - Non-Legislative

Accident Year	(1) Proportion of Medical Subject to Fee Schedule (a)	(2) Proportion of Medical Not Subject to Fee Schedule (a)	(3) Impact of Fee Schedule Change on Total Medical (b)		(4) Change in Medical CPI (c)		(5) Impact of CPI Change on Total Medical (d)		(6) Annual Non-Legislative Cost Impact on Total Medical (e)
1986	0.604	0.396	0.0%		9.1%		3.0%		3.0%
1987	0.610	0.390	0.9%		7.4%		2.9%		3.8%
1988	0.649	0.351	0.8%		7.7%		3.0%		3.8%
1989	0.647	0.353	0.0%		8.6%		3.0%		3.0%
1990	0.661	0.339	0.0%		10.4%		3.7%		3.7%
1991	0.631	0.369	0.0%		10.6%		3.6%		3.6%
1992	0.628	0.372	0.0%		8.1%		3.0%		3.0%
1993	0.565	0.435	0.0%		7.3%		2.7%		2.7%
1994	0.691	0.309	-3.6%		4.3%		1.3%	(i)	-2.3%
1995	0.681	0.319	0.0%		3.0%		0.9%		0.9%
1996	0.663	0.337	0.0%		3.0%		1.0%		1.0%
1997	0.643	0.357	0.0%		2.2%		0.7%		0.7%
1998	0.658	0.342	0.0%		2.2%		0.8%		0.8%
1999	0.728	0.272	1.6%		3.3%		0.9%	(ii)	2.5%
2000	0.715	0.285	0.5%		4.3%		1.2%		1.7%
2001	0.722	0.278	1.5%		4.8%		1.4%		2.9%
2002	0.635	0.365	0.6%		5.1%		1.4%		2.0%
2003	0.786	0.214	0.0%		4.8%		1.4%	(iii)	1.4%
2004	0.952	0.048	0.0%		5.0%		0.0%	(iv),(v)	0.0%
2005	0.936	0.064	0.0%		4.8%		0.0%	(v)	0.0%
2006	0.926	0.074	0.0%		4.1%		0.3%		0.3%
2007	0.923	0.077	1.4%		5.3%		0.4%		1.8%
2008	0.896	0.104	-0.1%		4.2%		0.3%		0.2%
2009	0.894	0.106	0.0%		3.6%		0.4%		0.4%
2010	0.895	0.105	0.0%		2.8%		0.3%		0.3%
2011	0.969	0.031	0.0%		3.2%		0.3%		0.3%
2012	0.969	0.031	0.0%		2.7%		0.1%		0.1%
2013	0.938	0.062	0.0%		2.6%		0.1%		0.1%
2014	0.928	0.072	0.0%		4.2%		0.3%		0.3%
2015	0.933	0.067	0.0%		3.1%		0.2%		0.2%
2016	0.918	0.082	0.0%		5.4%		0.4%		0.4%
2017	0.906	0.094	0.0%		2.2%		0.2%		0.2%
2018	0.906	0.094	0.0%		2.6%		0.2%		0.2%
2019	0.906	0.094	0.0%		3.0%		0.3%		0.3%
1/1/2020	0.906	0.094	0.0%	(Annual 0.0%)	1.3%	(Annual 2.6%)	0.1%		0.1%

(a) From a Special Carrier Study through 1990. Based on WCIRB's Aggregate Indemnity and Medical Costs Calls for years 1991 through 2012. Based on WCIRB medical transaction data from 2013 onwards. Accident years 2011 and subsequent do not include MCCP costs.

(b) Based on the WCIRB's evaluation of the cost impact of changes in the medical fee schedules.

(c) Based on a component of the Consumer Price Index. Projections furnished by the California Department of Finance.

(d) Adjusted CPI on workers' compensation medical costs that are not subject to fee schedules. The current year impact is the weighted average of 0% and Column (4), with Columns (1) and (2) from prior years as weights. (i) 1993's non-fee proportion is reduced by 13.8% due to the new medical-legal fee schedule enacted in 1994. (ii) 1998's non-fee proportion is reduced by 7.7% due to the Inpatient Hospital Fee Schedule (IHFS) effective 4/1/1999. (iii) 2002's non-fee proportion is reduced by 7.6% due to the new pharmaceutical fee schedule effective 1/1/2003. (iv) 2003's non-fee proportion is reduced by 17.2% due to the outpatient fee schedule effective 1/1/2004. (v) Given the anticipated impact of legislative reform, a 0% inflation rate has been assumed for 2004 and 2005.

(e) Column (6) = Column (3) + Column (5).

Annual Medical Cost Level Change - Legislative

Accident Year	(1) Annual Legislative Cost Impact on Medical Severity(a)	(2) Annual Legislative Cost Impact on Medical Due to Frequency Changes(b)	(3) Annual Total Legislative Cost Impact on Medical(c)
1986	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%
1990	-0.7%	19.9%	19.1%
1991	-1.6%	14.7%	12.9%
1992	0.5%	-8.4%	-7.9%
1993	-0.7%	-18.1%	-18.7%
1994	-2.6%	0.3%	-2.3%
1995	0.0%	0.5%	0.5%
1996	0.0%	0.4%	0.4%
1997	0.0%	0.2%	0.2%
1998	12.6%	0.0%	12.6%
1999	12.6%	0.0%	12.6%
2000	7.0%	0.0%	7.0%
2001	6.6%	0.0%	6.6%
2002	-5.6%	0.0%	-5.6%
2003	-6.0%	0.0%	-6.0%
2004	-24.4%	-12.5%	-33.9%
2005	0.0%	-13.9%	-13.9%
2006	0.1%	-5.2%	-5.1%
2007	0.1%	0.0%	0.1%
2008	0.2%	0.3%	0.5%
2009	0.0%	1.0%	1.0%
2010	0.0%	0.0%	0.0%
2011	-3.0%	0.0%	-3.0%
2012	-4.9%	0.0%	-4.9%
2013	-9.1%	0.2%	-8.9%
2014	-6.2%	1.3%	-5.0%
2015	-2.4%	0.0%	-2.4%
2016	-0.3%	0.0%	-0.3%
2017	-0.2%	0.0%	-0.2%
2018	0.0%	0.0%	0.0%
2019	0.0%	0.0%	0.0%
1/1/2020	0.0%	0.0%	0.0%

(a) Reflects the WCIRB's most recent estimates of the cost impact of legislation including SB 863 provisions effective 1/1/2013 and 1/1/2014. Does not include the impact of the SB 1160 lien provisions on future medical costs, which are reflected in the medical loss development projections.

(b) This reflects the annual percentage impact on medical costs due to changes in the frequency of indemnity claims as a result of benefit changes.

(c) [Column (1) + 1.0] x [Column (2) + 1.0] - 1.0

Total Medical Cost Level Factors

Accident Year	(1) Annual Non-Legislative Cost Impact on Medical (a)	(2) Annual Legislative Cost Impact on Medical(b)	(3) Total Annual Cost Impact on Medical(c)	(4) Composite Medical On-level Factor(d)
1986	3.0%	0.0%	3.0%	0.809
1987	3.8%	0.0%	3.8%	0.779
1988	3.8%	0.0%	3.8%	0.750
1989	3.0%	0.0%	3.0%	0.729
1990	3.7%	19.1%	23.5%	0.590
1991	3.6%	12.9%	16.9%	0.505
1992	3.0%	-7.9%	-5.2%	0.532
1993	2.7%	-18.7%	-16.5%	0.637
1994	-2.3%	-2.3%	-4.6%	0.668
1995	0.9%	0.5%	1.4%	0.658
1996	1.0%	0.4%	1.4%	0.649
1997	0.7%	0.2%	0.9%	0.643
1998	0.8%	12.6%	13.5%	0.567
1999	2.5%	12.6%	15.4%	0.491
2000	1.7%	7.0%	8.8%	0.451
2001	2.9%	6.6%	9.7%	0.412
2002	2.0%	-5.6%	-3.7%	0.427
2003	1.4%	-6.0%	-4.7%	0.448
2004	0.0%	-33.9%	-33.9%	0.678
2005	0.0%	-13.9%	-13.9%	0.787
2006	0.3%	-5.1%	-4.8%	0.827
2007	1.8%	0.1%	1.9%	0.812
2008	0.2%	0.5%	0.7%	0.806
2009	0.4%	1.0%	1.4%	0.795
2010	0.3%	0.0%	0.3%	0.793
2011	0.3%	-3.0%	-2.7%	0.815
2012	0.1%	-4.9%	-4.8%	0.856
2013	0.1%	-8.9%	-8.8%	0.939
2014	0.3%	-5.0%	-4.7%	0.985
2015	0.2%	-2.4%	-2.2%	1.007
2016	0.4%	-0.3%	0.1%	1.006
2017	0.2%	-0.2%	0.0%	1.006
2018	0.2%	0.0%	0.2%	
2019	0.3%	0.0%	0.3%	
1/1/2020	0.1%	0.0%	0.1%	

(a) See Exhibit 4.2, Column (6).
(b) See Exhibit 4.3, Column (3).
(c) Column (3) = [1.0 + Column (1)] x [1.0 + Column (2)] - 1.0.
(d) These factors adjust the annual impact shown in Column (3) to the 1/1/2020 level.

Annual Wage Level Changes

Year	Annual Wage Level Change(a)		Factor to a 1/1/2020 Wage Level
1986	4.7		3.164
1987	5.6		2.997
1988	4.4		2.870
1989	4.3		2.752
1990	5.0		2.621
1991	2.3		2.562
1992	4.7		2.447
1993	1.2		2.418
1994	1.8		2.375
1995	2.9		2.308
1996	3.4		2.232
1997	4.7		2.132
1998	5.2		2.027
1999	6.2		1.908
2000	9.0		1.751
2001	0.6		1.740
2002	1.1		1.722
2003	3.6		1.662
2004	4.9		1.584
2005	3.1		1.536
2006	4.7		1.467
2007	4.5		1.404
2008	2.0		1.377
2009	0.5		1.370
2010	3.0		1.330
2011	3.1		1.290
2012	4.2		1.238
2013	0.7		1.229
2014	3.3		1.190
2015	4.4		1.140
2016	2.0		1.118
2017	2.9		1.086
Projected:			
2018	3.7		
2019	3.0		
1/1/2020	1.7	(Annual = 3.4)	

(a) Historical wage changes through 2017 are based on Bureau of Labor Statistics data. Forecasts for 2018 to 2020 are based on the average of wage level projections made by the UCLA Anderson School of Business as of September 2018 and those made by the California Department of Finance as of April 2018.

Premium Adjustment Factors

Calendar Year	(1) Factor to a 1/1/2020 Wage Level (a)	(2a) Ratio of Industry Average Charged Rates to Advisory Pure Premium Rates (b)	(2b) Factor to Industry Average Filed Pure Premium Rate Level as of July 1, 2018 (c)	(2c) Factor to Adjust Insurer Premium to an Industry Average Filed Pure Premium Rate Level as of July 1, 2018 (d)	(3) Adjustment to Remove Surcharge Premium (e)	(4) Average Experience Modification (f)	(5) Off-Balance Correction in Advisory July 1, 2018 Pure Premium Rates	(6) Factor to Adjust for Impact of Premium Resulting from Audits (g)	(7) Composite Premium Adjustment Factor (h)
1986	3.164	---	---	0.792	0.991	0.983	1.015	---	2.488
1987	2.997	---	---	0.696	0.992	0.983	1.015	---	2.074
1988	2.870	---	---	0.622	0.993	0.963	1.015	---	1.815
1989	2.752	---	---	0.613	0.993	0.945	1.015	---	1.746
1990	2.621	---	---	0.598	0.991	0.942	1.015	---	1.623
1991	2.562	---	---	0.553	0.987	0.939	1.015	---	1.468
1992	2.447	---	---	0.531	0.982	0.940	1.015	---	1.337
1993	2.418	---	---	0.524	0.981	0.949	1.015	---	1.291
1994	2.375	---	---	0.600	0.986	0.948	1.015	---	1.461
1995	2.308	---	---	0.812	0.995	0.958	1.015	---	1.919
1996	2.232	1.023	0.863	0.844	1.000	0.935	1.015	---	1.984
1997	2.132	0.989	0.861	0.871	1.000	0.949	1.015	---	1.927
1998	2.027	0.965	0.897	0.930	1.000	0.959	1.015	---	1.935
1999	1.908	0.972	0.907	0.933	1.000	0.954	1.015	---	1.839
2000	1.751	1.005	0.822	0.818	1.000	0.970	1.015	---	1.455
2001	1.740	1.029	0.724	0.704	1.000	0.969	1.015	---	1.245
2002	1.722	1.157	0.648	0.560	1.000	0.991	1.015	---	0.959
2003	1.662	1.267	0.530	0.418	1.000	1.005	1.015	---	0.681
2004	1.584	1.397	0.539	0.386	1.000	0.981	1.015	---	0.614
2005	1.536	1.470	0.649	0.441	1.000	0.982	1.015	---	0.681
2006	1.467	1.447	0.836	0.578	1.000	0.956	1.015	---	0.874
2007	1.404	1.493	1.139	0.763	1.000	0.931	1.015	0.985	1.117
2008	1.377	1.426	1.356	0.951	1.000	0.946	1.015	0.991	1.351
2009	1.370	1.366	1.337	0.979	1.000	0.937	1.015	1.034	1.458
2010	1.330	1.384	1.310	0.947	1.000	0.941	1.015	1.005	1.325
2011	1.290	1.401	1.309	0.934	1.000	0.982	1.015	---	1.209
2012	1.238	1.223	1.079	0.882	1.000	1.000	1.015	---	1.076
2013	1.229	1.138	0.869	0.764	1.000	0.983	1.015	---	0.941
2014	1.190	1.126	0.800	0.710	1.000	0.961	1.015	---	0.867
2015	1.140	1.109	0.778	0.702	1.000	0.951	1.015	---	0.829
2016	1.118	1.148	0.838	0.730	1.000	0.950	1.015	---	0.846
2017	1.086	1.156	0.925	0.800	1.000	0.959	1.015	---	0.893

(a) See Exhibit 5.1.

(b) Based on WCIRB calendar year experience calls. The industry average charged rates reflect most rating plan adjustments but do not reflect the application of deductible credits or retrospective rating plan adjustments.

(c) Reflects (1) advisory pure premium rate level changes to bring premium to the advisory July 1, 2018 pure premium rate level and (2) an additional adjustment factor, which is the ratio of the average advisory July 1, 2018 pure premium rate ($1.78) to the industry average filed pure premium rate as of July 1, 2018 ($2.13).

(d) (2b) ÷ (2a). This column adjusts premiums at the industry average charged rate level to the industry average filed pure premium rate level as of July 1, 2018.

(e) Based on unit statistical data.

(f) Based on average promulgated experience modifications. Calendar years 1996 through 2000 include adjustments for the impacts of AB 1913 and SB 1217 (1998).

(g) Based on a comparison of premium reported on a calendar year basis to premium reported on an estimated ultimate policy year basis over the course of two accident years. The factor is applied only for calendar years 2007 to 2010, during which reported premiums were impacted by recessionary economic forces.

(h) (1)x(2c)x(3)x(6) ÷ [(4)x(5)] for calendar years 2007 to 2010. (1)x(2c)x(3) ÷ [(4)x(5)] for all other calendar years.

2017 Accident Year Indemnity Claim Frequency Model
As of PY 2015 1st Set & June 2018 UCLA

	Annual %	Annual Log Differences						
	Changes Intra-	Intra-Class Indemnity Frequency			AY+1		Economic	CalOSHA
	Class Ind Freq	per $M Exposure at PY 2016 Level			Indemnity	Cumulative	Variables	Dummy
AY	Total	Total	Cumulative	Non-cum.	Benefit Level	Injury Index	(1st Prin. Comp.)	Variable
1962	-----	-----	-----	-----	-----	-----	-----	-----
1963	2.0%	0.020	-----	-----	0.000	-----	-0.029	0.000
1964	0.3%	0.003	-----	-----	0.000	-----	0.004	0.000
1965	-0.3%	-0.003	-----	-----	0.000	-----	0.020	0.000
1966	1.7%	0.017	-----	-----	0.000	-----	0.191	0.000
1967	1.8%	0.017	-----	-----	0.000	-----	-0.146	0.000
1968	1.4%	0.014	-----	-----	0.049	-----	0.059	0.000
1969	2.7%	0.026	-----	-----	0.000	-----	0.044	0.000
1970	1.8%	0.018	-----	-----	0.000	-----	-0.337	0.000
1971	1.5%	0.015	-----	-----	0.162	-----	-0.190	0.000
1972	-4.3%	-0.044	-----	-----	0.040	-----	0.161	0.000
1973	7.0%	0.067	-----	-----	0.049	-----	0.090	0.000
1974	19.2%	0.176	-----	-----	0.058	-----	-0.035	0.000
1975	12.5%	0.118	-----	-----	0.000	-----	-0.298	0.000
1976	0.8%	0.008	-----	-----	0.063	-----	0.085	0.000
1977	4.3%	0.042	-----	-----	0.001	-----	0.112	0.000
1978	-8.7%	-0.091	-----	-----	0.000	-----	0.172	0.000
1979	0.5%	0.005	-0.053	0.007	0.000	-0.060	0.134	0.000
1980	-6.5%	-0.068	-0.132	-0.066	0.033	-0.066	-0.080	0.000
1981	-3.5%	-0.036	-0.028	-0.036	0.000	0.008	-0.078	0.000
1982	-1.6%	-0.016	0.153	-0.022	0.352	0.175	-0.292	0.000
1983	6.2%	0.060	0.214	0.054	0.081	0.160	0.029	0.000
1984	9.5%	0.091	0.235	0.084	0.000	0.151	0.221	0.000
1985	2.0%	0.020	0.138	0.014	0.000	0.124	0.080	0.000
1986	-2.4%	-0.024	0.039	-0.028	0.000	0.067	0.077	0.000
1987	1.5%	0.015	0.053	0.013	0.000	0.041	0.150	0.000
1988	0.7%	0.007	0.104	0.000	0.000	0.104	0.088	0.000
1989	2.5%	0.024	0.212	0.009	0.046	0.203	0.045	0.000
1990	9.0%	0.087	0.337	0.061	0.071	0.276	-0.120	0.000
1991	0.3%	0.003	0.166	-0.018	0.023	0.184	-0.291	0.000
1992	-11.1%	-0.118	-0.272	-0.098	0.013	-0.174	-0.185	0.068
1993	-14.9%	-0.162	-0.240	-0.153	-0.057	-0.088	-0.022	0.464
1994	-12.8%	-0.136	-0.462	-0.107	0.061	-0.355	0.106	0.173
1995	-4.6%	-0.048	-0.016	-0.050	0.053	0.034	0.092	0.295
1996	-6.8%	-0.070	-0.136	-0.065	0.096	-0.071	0.074	0.000
1997	-3.3%	-0.033	-0.023	-0.034	0.066	0.011	0.137	0.000
1998	-3.8%	-0.038	-0.040	-0.038	0.058	-0.002	0.078	0.000
1999	1.5%	0.014	0.100	0.008	0.040	0.092	0.127	0.000
2000	4.0%	0.039	0.071	0.037	-0.003	0.034	0.066	0.000
2001	-8.0%	-0.083	-0.029	-0.088	-0.007	0.059	-0.091	0.000
2002	-2.3%	-0.023	0.007	-0.026	0.060	0.033	-0.203	0.000
2003	-2.9%	-0.029	-0.005	-0.031	-0.065	0.026	-0.024	0.000
2004	-16.7%	-0.182	-0.209	-0.180	-0.398	-0.030	0.093	0.000
2005	-13.6%	-0.146	-0.298	-0.133	0.051	-0.165	0.141	0.000
2006	-5.7%	-0.059	-0.050	-0.059	0.016	0.009	0.095	0.000
2007	-1.6%	-0.017	0.021	-0.020	0.049	0.040	-0.084	0.000
2008	-2.7%	-0.027	0.038	-0.033	0.006	0.071	-0.308	0.000
2009	-0.2%	-0.002	0.168	-0.018	0.066	0.186	-0.427	0.000
2010	8.9%	0.085	0.139	0.079	0.012	0.060	-0.092	0.000
2011	1.3%	0.013	0.032	0.010	0.003	0.022	0.043	0.000
2012	4.6%	0.045	0.129	0.035	0.022	0.093	0.123	0.000
2013	0.5%	0.005	0.155	-0.015	0.071	0.170	0.151	0.000
2014	0.5%	0.005	0.093	-0.009	0.003	0.102	0.178	0.000
2015	-0.8%	-0.008	0.074	-0.022	0.002	0.096	0.194	0.000
2016*	-2.4%	-0.025	0.012	-0.032	0.004	0.044	0.124	0.000
2017	*-0.6%*	*-0.006*	*-0.006*	*-0.006*	*0.004*	*0.000*	0.140	0.000
2018	*-0.6%*	*-0.006*	*-0.006*	*-0.006*	*0.004*	*0.000*	0.142	0.000
2019	*-1.2%*	*-0.012*	*-0.012*	*-0.012*	*0.004*	*0.000*	0.083	0.000
2020	*-2.5%*	*-0.025*	*-0.025*	*-0.025*	*0.004*	*0.000*	-0.062	0.000

Y = Hazardousness-Adjusted Noncumulative Indemnity Claim Frequency

Constant	-0.020			
Std Err of Y Est	0.040			
R Squared	0.575			
No. of Observations	38			
Degrees of Freedom	33			
X Coefficient(s)		0.174	0.282	0.092	-0.132
Std Err of Coef.		0.073	0.062	0.044	0.078

Notes:
Indemnity Benefit Level variable is leading. The benefit level change for AY 2004 is related to the AY 2003 change in non-cumulative frequency.
The Indemnity Benefit Level change for Ogilvie & Almaraz / Guzman in 2009-2010 is not leading.
The Indemnity Benefit Level variable excludes indemnity benefit utilization, and changes in the death and permanent total benefits.
The Indemnity Benefit Level variable has been revised due to on-leveling reassessments. See Actuarial Committee item AC09-03-03.
For 1993 on, cumulative claims include both cumulative trauma and occupational disease claims. See March 19, 2014 Actuarial Committee Agenda Item III.
Economic variables are historical through 2017; June 2018 UCLA Anderson Forecasts for 2018 on.
Regression is over AY 1979 through AY 2016. AY 2017 through AY 2020 are projections.
The constant term, -0.020, consists of measured offsets that recognize annual changes in real benefit levels relative to nominal benefit levels and long-term economic growth. Without these offsets, the indemnity benefit level and economic variables would project frequency to increase without bound.
*AY 2016 change is based on a comparison of 2016 accidents on 2015 policies to 2015 accidents on 2014 policies.

Projection of Indemnity Severity Trends by Accident Year
Based on Experience as of September 30, 2018

Accident Year	(1) Estimated Ultimate Severity	(2) Annual % Change	(3) Indemnity Adjustment Factor (a)	(4) Ultimate On-level Severity (1) x (3)	(5) Annual % Change
1990	9,973	---	1.870	18,651	---
1991	10,902	9.3%	1.769	19,282	3.4%
1992	11,009	1.0%	1.710	18,826	-2.4%
1993	11,992	8.9%	1.700	20,384	8.3%
1994	12,953	8.0%	1.781	23,064	13.1%
1995	14,526	12.1%	1.658	24,090	4.4%
1996	16,277	12.1%	1.556	25,331	5.2%
1997	19,334	18.8%	1.396	26,996	6.6%
1998	21,185	9.6%	1.288	27,285	1.1%
1999	23,233	9.7%	1.193	27,726	1.6%
2000	24,659	6.1%	1.114	27,472	-0.9%
2001	27,150	10.1%	1.115	30,277	10.2%
2002	26,252	-3.3%	1.143	29,997	-0.9%
2003	25,865	-1.5%	1.141	29,500	-1.7%
2004	21,091	-18.5%	1.355	28,580	-3.1%
2005	19,052	-9.7%	1.558	29,684	3.9%
2006	20,774	9.0%	1.452	30,166	1.6%
2007	22,580	8.7%	1.407	31,765	5.3%
2008	24,695	9.4%	1.333	32,919	3.6%
2009	25,917	4.9%	1.325	34,341	4.3%
2010	25,499	-1.6%	1.307	33,319	-3.0%
2011	25,175	-1.3%	1.286	32,378	-2.8%
2012	24,832	-1.4%	1.255	31,156	-3.8%
2013	24,344	-2.0%	1.218	29,651	-4.8%
2014	25,112	3.2%	1.119	28,111	-5.2%
2015	25,480	1.5%	1.091	27,801	-1.1%
2016	25,078	-1.6%	1.076	26,993	-2.9%
2017	25,137	0.2%	1.055	26,531	-1.7%

(6) Estimated Annual Exponential Trend Based on 1990 to 2017:	1.5%
(7) Estimated Annual Exponential Trend Based on 2005 to 2017:	-1.4%
(8) Estimated Annual Exponential Trend Based on 2013 to 2017:	-2.6%
Selected Indemnity Severity Trend:	-0.5%

(a) These adjustment factors are based on Exhibit 4.1, excluding the impact of frequency.

Source: WCIRB experience calls.

Projection of Medical Severity Trends by Accident Year
Based on Experience as of September 30, 2018

Accident Year	(1) Estimated Ultimate Severity (a)	(2) Annual % Change	(3) Medical Adjustment Factor (b)	(4) Ultimate On-level Severity (1) x (3)	(5) Annual % Change
1990	8,778	---	0.921	8,084	---
1991	9,419	7.3%	0.903	8,508	5.2%
1992	9,528	1.2%	0.873	8,314	-2.3%
1993	10,559	10.8%	0.856	9,035	8.7%
1994	11,671	10.5%	0.899	10,495	16.2%
1995	13,331	14.2%	0.891	11,881	13.2%
1996	14,281	7.1%	0.882	12,601	6.1%
1997	17,001	19.0%	0.876	14,897	18.2%
1998	20,849	22.6%	0.772	16,096	8.0%
1999	23,906	14.7%	0.669	15,991	-0.7%
2000	26,775	12.0%	0.615	16,458	2.9%
2001	31,832	18.9%	0.560	17,838	8.4%
2002	32,129	0.9%	0.582	18,699	4.8%
2003	30,661	-4.6%	0.611	18,721	0.1%
2004	28,348	-7.5%	0.808	22,895	22.3%
2005	29,184	2.9%	0.808	23,570	2.9%
2006	31,843	9.1%	0.804	25,616	8.7%
2007	35,559	11.7%	0.789	28,071	9.6%
2008	38,476	8.2%	0.786	30,253	7.8%
2009	40,543	5.4%	0.783	31,751	5.0%
2010	40,670	0.3%	0.781	31,755	0.0%
2011	36,894 (c)	---	0.803	29,609 (c)	---
2012	34,697	-6.0%	0.843	29,251	-1.2%
2013	32,040	-7.7%	0.927	29,685	1.5%
2014	30,604	-4.5%	0.985	30,139	1.5%
2015	29,816	-2.6%	1.007	30,024	-0.4%
2016	29,311	-1.7%	1.006	29,487	-1.8%
2017	29,767	1.6%	1.006	29,946	1.6%
			Selected Medical Severity Trend:		2.5%

(a) Estimated ultimate severities for all accident years are derived by dividing ultimate medical losses on indemnity claims by ultimate indemnity claim counts. The estimated ultimate medical severities were derived from the projected ultimate loss ratios shown in Exhibit 3.2, column (5).

(b) These adjustment factors are based on Exhibit 4.4, excluding the impact of frequency, and including the impact of SB 1160 provisions applicable to outstanding medical losses.

(c) Severities for accident years 2011 and subsequent do not reflect the cost of medical cost containment programs (MCCP). Severities for accident years 2010 and prior do reflect MCCP costs.

Source: WCIRB experience calls.

Projection of Medical Severity Trends by Accident Year
Adjusted to Remove the Cost of Medical Cost Containment Programs (MCCP)
Based on Experience as of September 30, 2018

	MCCP Included				MCCP Removed Based on WCIRB Aggregate Calendar Year Data Calls (b)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Accident Year	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change
2005	29,183	---	23,570	---	27,642	---	22,325	---
2006	31,843	9.1%	25,616	8.7%	29,844	8.0%	24,008	7.5%
2007	35,559	11.7%	28,071	9.6%	33,185	11.2%	26,197	9.1%
2008	38,476	8.2%	30,253	7.8%	35,102	5.8%	27,599	5.4%
2009	40,543	5.4%	31,751	5.0%	37,149	5.8%	29,093	5.4%
2010	40,670	0.3%	31,755	0.0%	37,228	0.2%	29,068	-0.1%
2011	40,441	-0.6%	32,455	2.2%	36,894	-0.9%	29,609	1.9%
2012	37,993	-6.1%	32,029	-1.3%	34,697	-6.0%	29,251	-1.2%
2013	35,148	-7.5%	32,565	1.7%	32,040	-7.7%	29,685	1.5%
2014	33,546	-4.6%	33,036	1.4%	30,604	-4.5%	30,139	1.5%
2015	32,570	-2.9%	32,798	-0.7%	29,816	-2.6%	30,024	-0.4%
2016	31,971	-1.8%	32,163	-1.9%	29,311	-1.7%	29,487	-1.8%
2017	32,548	1.8%	32,744	1.8%	29,767	1.6%	29,946	1.6%
Estimated Annual Exponential Trend								
Trend Based on 1990 to 2017:				6.0%				N/A
Trend Based on 2005 to 2017:				2.3%				2.0%
Trend Based on 2013 to 2017:				-0.2%				0.0%
						Selected Medical Severity Trend:		2.5%

(a) Estimated ultimate severities for all accident years were derived by dividing ultimate medical losses on indemnity claims by ultimate indemnity claim counts.

(b) Adjustments to accident years 2005 through 2010 based on WCIRB's Annual Calls for Direct California Workers' Compensation Aggregate Indemnity and Medical Costs.

(c) Ultimate severities are on-leveled based on adjustment factors shown on Exhibit 6.3.

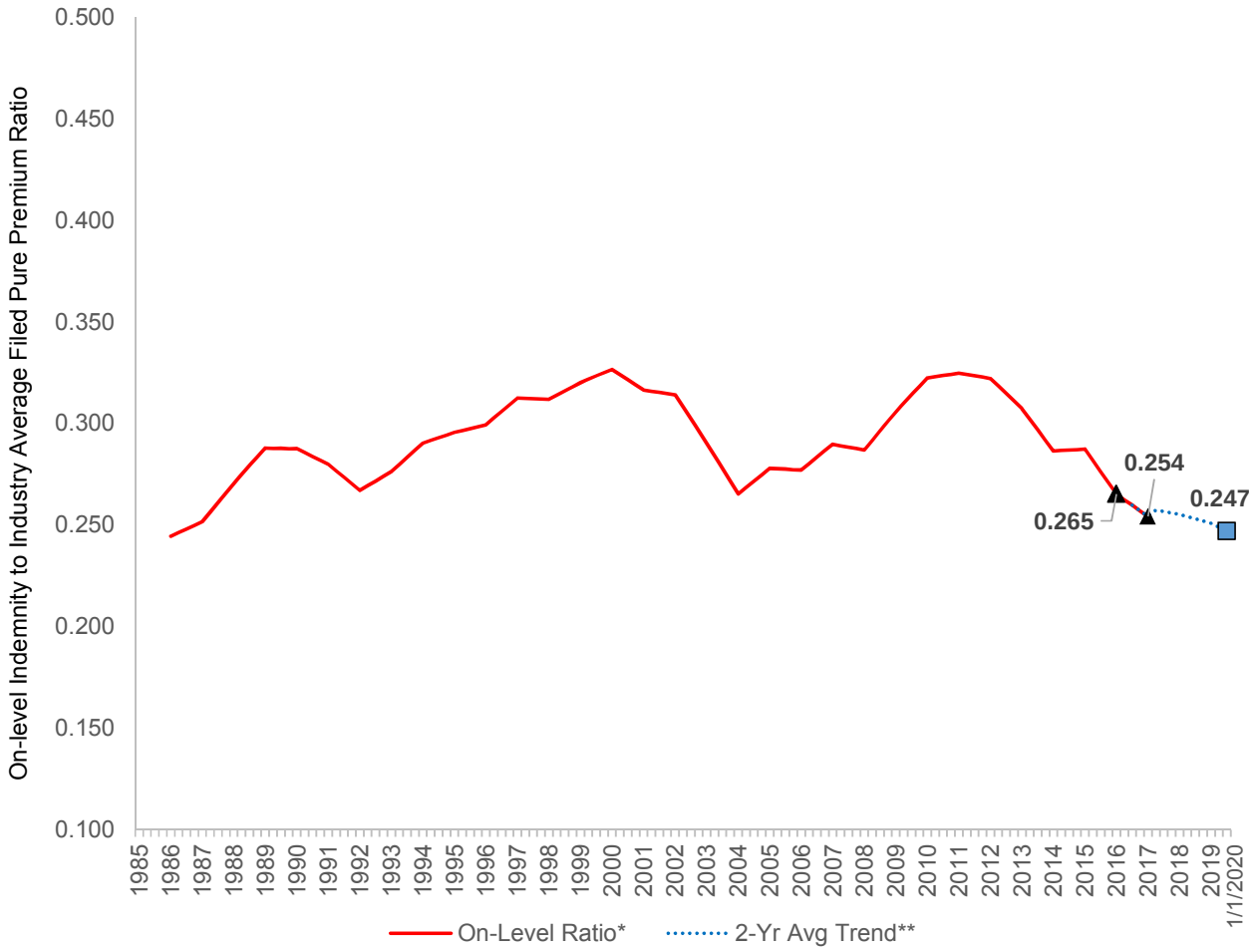
Source: WCIRB experience calls.

Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of September 30, 2018

Accident Year	(1) Developed Indemnity Loss Ratio(a)	(2) Composite Indemnity Adjustment Factor(b)	(3) Composite Premium Adjustment Factor(c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1)×(2)÷(3)
1986	0.397	1.531	2.488	0.244
1987	0.347	1.503	2.074	0.252
1988	0.332	1.480	1.815	0.271
1989	0.345	1.459	1.746	0.288
1990	0.399	1.169	1.623	0.288
1991	0.426	0.963	1.468	0.280
1992	0.352	1.016	1.337	0.267
1993	0.289	1.233	1.291	0.276
1994	0.329	1.289	1.461	0.290
1995	0.475	1.193	1.919	0.296
1996	0.533	1.115	1.984	0.299
1997	0.603	0.998	1.927	0.313
1998	0.656	0.921	1.935	0.312
1999	0.690	0.853	1.839	0.320
2000	0.596	0.797	1.455	0.327
2001	0.494	0.797	1.245	0.317
2002	0.369	0.817	0.959	0.314
2003	0.243	0.816	0.681	0.290
2004	0.145	1.123	0.614	0.265
2005	0.124	1.524	0.681	0.278
2006	0.161	1.506	0.874	0.277
2007	0.222	1.459	1.117	0.290
2008	0.282	1.375	1.351	0.287
2009	0.331	1.348	1.458	0.306
2010	0.321	1.329	1.325	0.322
2011	0.300	1.308	1.209	0.325
2012	0.272	1.276	1.076	0.322
2013	0.234	1.236	0.941	0.307
2014	0.222	1.119	0.867	0.287
2015	0.218	1.091	0.829	0.287
2016	0.209	1.076	0.846	0.265
2017	0.215	1.055	0.893	0.254
				Projections (d)
2018				0.255
2019				0.251
1/1/2020				0.247

(a) See Exhibit 3.1.
(b) See Exhibit 4.1.
(c) See Exhibit 5.2.
(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from Exhibit 6.2, the actual frequency trend for accident year 2017 from Exhibit 12, and projected frequency trends for accident years 2018 through 2020 from Exhibit 6.1; these trends were then separately applied to the 2016 and 2017 on-level ratios.

On-Level Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of September 30, 2018



* On-level indemnity to industry average filed pure premium ratios (see Exhibit 7.1)

** The 1/1/2020 indemnity to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2016 and 2017 years.

Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of September 30, 2018

Accident Year	(1) Developed Medical Loss Ratio(a)	(2) Composite Medical On-Level Factor(b)	(3) Composite Premium Adjustment Factor(c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1)×(2)÷(3)
1986	0.344	0.809	2.488	0.112
1987	0.323	0.779	2.074	0.121
1988	0.313	0.750	1.815	0.129
1989	0.334	0.729	1.746	0.139
1990	0.377	0.590	1.623	0.137
1991	0.395	0.505	1.468	0.136
1992	0.329	0.532	1.337	0.131
1993	0.275	0.637	1.291	0.136
1994	0.319	0.668	1.461	0.146
1995	0.468	0.658	1.919	0.160
1996	0.500	0.649	1.984	0.164
1997	0.562	0.643	1.927	0.188
1998	0.680	0.567	1.935	0.199
1999	0.746	0.491	1.839	0.199
2000	0.679	0.451	1.455	0.211
2001	0.602	0.412	1.245	0.199
2002	0.469	0.427	0.959	0.209
2003	0.300	0.448	0.681	0.198
2004	0.205	0.678	0.614	0.227
2005	0.202	0.787	0.681	0.233
2006	0.261	0.827	0.874	0.247
2007	0.369	0.812	1.117	0.268
2008	0.464	0.806	1.351	0.277
2009	0.544	0.795	1.458	0.297
2010	0.538	0.793	1.325	0.322
2011	0.463	0.815	1.209	0.312
2012	0.400	0.856	1.076	0.318
2013	0.325	0.939	0.941	0.325
2014	0.287	0.985	0.867	0.326
2015	0.272	1.007	0.829	0.330
2016	0.261	1.006	0.846	0.310
2017	0.273	1.006	0.893	0.308
				Projections (d)
2018				0.317
2019				0.321
1/1/2020				0.321

(a) See Exhibit 3.2. Medical loss ratios for accident years 2011 and subsequent do not reflect the cost of medical cost containment programs (MCCP). Ratios for accident years 2010 and prior do reflect MCCP costs.

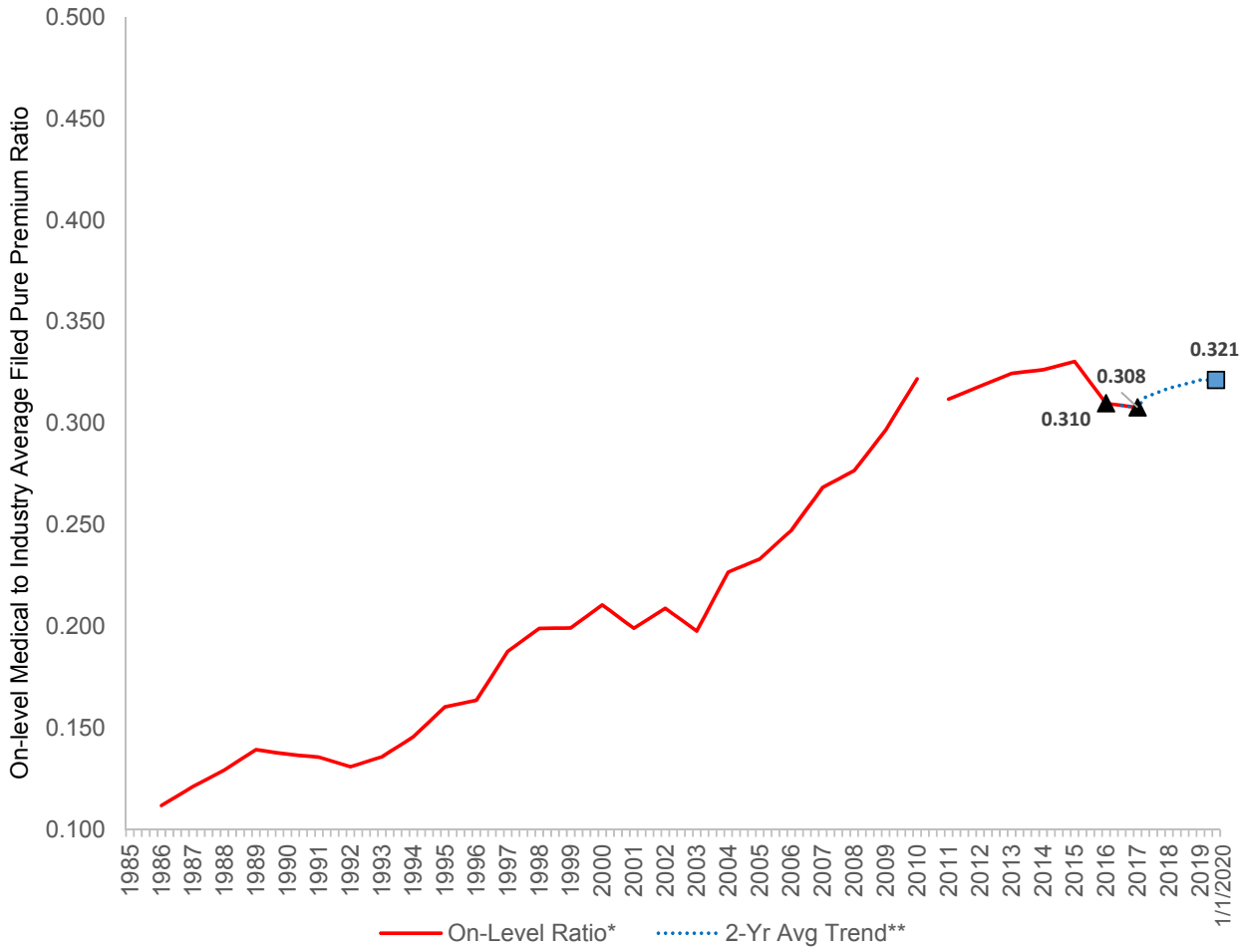
(b) See Exhibit 4.4.

(c) See Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual medical severity trend from Exhibit 6.4, the actual frequency trend for accident year 2017 from Exhibit 12, and projected frequency trends for accident years 2018 through 2020 from Exhibit 6.1; these trends were then separately applied to the 2016 and 2017 on-level ratios.

(e) Accident years 2011 and subsequent do not reflect the paid cost of medical cost containment programs (MCCP). Accident years 2010 and prior do reflect paid MCCP costs.

On-Level Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of September 30, 2018



* On-level medical to industry average filed pure premium ratios (see Exhibit 7.3)
** The 1/1/2020 medical to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2016 and 2017 years.

Indicated Loss to Industry Average Filed Pure Premium Ratios
For Policies with Effective Dates between January 1, 2019 and December 31, 2019
Based on Experience as of September 30, 2018

	Indemnity	Medical	Total
1. Projected Loss to Industry Average Filed Pure Premium Ratio (See Exhibits 7.1 and 7.3)	0.247	0.321	0.568

Quarterly Incurred Indemnity Loss Development Factors

Through September 30, 2018

Age in	Accident Year																				
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
6/3									2.417	2.724	2.785	3.031	3.116	3.052	3.238	3.344	3.303	3.209	3.201	3.356	3.206
9/6									**1.656**	**1.776**	**1.820**	**1.848**	**1.904**	**2.001**	**1.966**	**1.940**	**1.960**	**1.948**	**1.945**	**1.874**	**2.003**
12/9									1.448	1.511	1.510	1.530	1.564	1.632	1.587	1.585	1.570	1.578	1.578	1.580	
15/12	1.229	1.260	1.268	1.250	1.257	1.238	1.180	1.149	1.189	1.234	1.248	1.293	1.306	1.306	1.303	1.301	1.301	1.313	1.309	1.298	
18/15	1.172	1.202	1.188	1.184	1.206	1.167	1.101	1.103	1.140	1.158	1.182	1.194	1.197	1.195	1.206	1.178	1.190	1.187	1.189	1.177	
21/18	**1.145**	**1.140**	**1.150**	**1.148**	**1.153**	**1.127**	**1.066**	**1.096**	**1.117**	**1.128**	**1.139**	**1.153**	**1.140**	**1.146**	**1.141**	**1.141**	**1.132**	**1.137**	**1.134**	**1.139**	
24/21	1.126	1.112	1.121	1.111	1.117	1.094	1.045	1.082	1.098	1.106	1.106	1.114	1.119	1.117	1.111	1.104	1.114	1.111	1.104		
27/24	1.074	1.096	1.093	1.100	1.094	1.073	1.045	1.070	1.082	1.081	1.088	1.089	1.091	1.085	1.087	1.081	1.082	1.087	1.079		
30/27	1.078	1.069	1.074	1.082	1.064	1.051	1.040	1.054	1.057	1.072	1.075	1.075	1.080	1.071	1.068	1.067	1.074	1.066	1.064		
33/30	**1.045**	**1.058**	**1.048**	**1.062**	**1.047**	**1.032**	**1.036**	**1.042**	**1.049**	**1.053**	**1.059**	**1.052**	**1.064**	**1.053**	**1.060**	**1.047**	**1.055**	**1.050**	**1.048**		
36/33	1.043	1.046	1.039	1.046	1.035	1.020	1.029	1.033	1.039	1.043	1.051	1.049	1.049	1.043	1.041	1.043	1.042	1.035			
39/36	1.038	1.041	1.035	1.038	1.028	1.017	1.027	1.029	1.031	1.033	1.040	1.039	1.039	1.041	1.035	1.031	1.036	1.031			
42/39	1.027	1.028	1.034	1.030	1.023	1.018	1.020	1.020	1.031	1.033	1.036	1.038	1.035	1.032	1.028	1.031	1.030	1.027			
45/42	**1.024**	**1.026**	**1.026**	**1.020**	**1.009**	**1.019**	**1.018**	**1.024**	**1.026**	**1.028**	**1.030**	**1.035**	**1.027**	**1.033**	**1.022**	**1.024**	**1.024**	**1.025**			
48/45	1.025	1.020	1.022	1.013	1.008	1.013	1.013	1.021	1.019	1.021	1.024	1.024	1.026	1.023	1.024	1.020	1.020				
51/48	1.022	1.017	1.018	1.015	1.010	1.016	1.010	1.018	1.021	1.018	1.022	1.023	1.021	1.018	1.017	1.015	1.019				
54/51	1.019	1.018	1.013	1.009	1.007	1.017	1.009	1.017	1.021	1.020	1.021	1.020	1.020	1.016	1.019	1.015	1.015				
57/54	**1.014**	**1.017**	**1.012**	**1.006**	**1.008**	**1.011**	**1.011**	**1.018**	**1.017**	**1.014**	**1.018**	**1.017**	**1.015**	**1.014**	**1.013**	**1.011**	**1.014**				
60/57	1.013	1.014	1.007	1.005	1.008	1.009	1.011	1.013	1.019	1.016	1.013	1.015	1.012	1.014	1.012	1.012					
63/60	1.012	1.012	1.007	1.007	1.008	1.008	1.010	1.014	1.013	1.015	1.011	1.014	1.014	1.009	1.012	1.009					
66/63	1.014	1.009	1.005	1.006	1.011	1.008	1.010	1.013	1.016	1.014	1.015	1.013	1.013	1.009	1.010	1.009					
69/66	**1.010**	**1.007**	**1.003**	**1.005**	**1.008**	**1.007**	**1.011**	**1.012**	**1.011**	**1.010**	**1.009**	**1.012**	**1.007**	**1.010**	**1.010**	**1.007**					
72/69	1.009	1.006	1.005	1.005	1.005	1.009	1.009	1.013	1.011	1.009	1.009	1.009	1.010	1.008	1.007						
75/72	1.006	1.004	1.004	1.005	1.003	1.005	1.007	1.010	1.011	1.010	1.010	1.008	1.007	1.004	1.006						
78/75	1.007	1.004	1.003	1.007	1.005	1.006	1.006	1.012	1.009	1.010	1.006	1.006	1.006	1.006	1.006						
81/78	**1.005**	**1.002**	**1.003**	**1.004**	**1.004**	**1.005**	**1.006**	**1.010**	**1.009**	**1.007**	**1.007**	**1.006**	**1.006**	**1.007**	**1.006**						
84/81	1.003	1.003	1.005	1.003	1.006	1.006	1.007	1.008	1.005	1.009	1.006	1.004	1.007	1.004							
87/84	1.003	1.003	1.002	1.003	1.004	1.002	1.007	1.010	1.007	1.004	1.005	1.006	1.004	1.006							
90/87	1.001	1.003	1.003	1.003	1.003	1.004	1.008	1.008	1.008	1.008	1.004	1.005	1.005	1.005							
93/90	**1.001**	**1.002**	**1.004**	**1.003**	**1.002**	**1.005**	**1.006**	**1.008**	**1.006**	**1.007**	**1.006**	**1.003**	**1.004**	**1.005**							
96/93	1.002	1.003	1.001	1.004	1.002	1.006	1.006	1.003	1.002	1.003	1.004	1.004	1.003								

Source: WCIRB accident year experience calls

Quarterly Incurred Medical Loss Development Factors *

Through September 30, 2018

Age in	Accident Year																			
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
6/3									2.584	2.662	2.782	2.892	2.992	2.757	2.853	2.843	2.921	2.863	3.019	3.199	2.894
9/6									**1.650**	**1.744**	**1.717**	**1.807**	**1.800**	**1.827**	**1.833**	**1.819**	**1.840**	**1.884**	**1.755**	**1.741**	**1.821**
12/9									1.453	1.443	1.466	1.454	1.488	1.521	1.484	1.500	1.482	1.451	1.487	1.448	
15/12	1.144	1.168	1.201	1.207	1.203	1.197	1.132	1.145	1.138	1.182	1.167	1.199	1.206	1.228	1.211	1.207	1.199	1.206	1.215	1.185	
18/15	1.093	1.116	1.123	1.144	1.151	1.126	1.086	1.087	1.103	1.106	1.126	1.135	1.129	1.141	1.136	1.117	1.114	1.094	1.095	1.088	
21/18	**1.078**	**1.086**	**1.101**	**1.122**	**1.116**	**1.093**	**1.055**	**1.061**	**1.073**	**1.081**	**1.090**	**1.097**	**1.101**	**1.103**	**1.085**	**1.088**	**1.077**	**1.082**	**1.069**	**1.068**	
24/21	1.074	1.072	1.080	1.083	1.082	1.060	1.040	1.052	1.070	1.074	1.067	1.074	1.080	1.080	1.067	1.064	1.055	1.059	1.057		
27/24	1.044	1.061	1.070	1.080	1.075	1.042	1.034	1.048	1.055	1.058	1.053	1.071	1.066	1.072	1.058	1.048	1.046	1.048	1.041		
30/27	1.044	1.052	1.058	1.070	1.051	1.038	1.039	1.049	1.046	1.054	1.057	1.048	1.063	1.052	1.046	1.037	1.044	1.037	1.033		
33/30	**1.035**	**1.047**	**1.051**	**1.059**	**1.035**	**1.018**	**1.032**	**1.030**	**1.041**	**1.045**	**1.045**	**1.051**	**1.055**	**1.045**	**1.046**	**1.031**	**1.033**	**1.033**	**1.027**		
36/33	1.037	1.042	1.035	1.040	1.029	1.016	1.024	1.034	1.042	1.033	1.042	1.040	1.041	1.037	1.028	1.026	1.027	1.021			
39/36	1.029	1.032	1.034	1.037	1.018	1.012	1.028	1.025	1.027	1.029	1.033	1.031	1.040	1.039	1.027	1.021	1.023	1.022			
42/39	1.025	1.031	1.036	1.026	1.019	1.013	1.017	1.020	1.025	1.035	1.036	1.037	1.037	1.031	1.022	1.026	1.022	1.018			
45/42	**1.025**	**1.033**	**1.032**	**1.023**	**1.012**	**1.019**	**1.033**	**1.021**	**1.025**	**1.029**	**1.026**	**1.030**	**1.028**	**1.027**	**1.021**	**1.018**	**1.017**	**1.015**			
48/45	1.028	1.023	1.026	1.017	1.008	1.013	1.025	1.018	1.022	1.025	1.029	1.034	1.022	1.023	1.020	1.018	1.014				
51/48	1.019	1.020	1.024	1.014	1.009	1.013	1.018	1.015	1.020	1.021	1.021	1.026	1.024	1.019	1.014	1.013	1.010				
54/51	1.025	1.027	1.017	1.016	1.010	1.012	1.021	1.019	1.022	1.022	1.027	1.023	1.019	1.018	1.015	1.011	1.009				
57/54	**1.027**	**1.024**	**1.014**	**1.007**	**1.011**	**1.017**	**1.020**	**1.018**	**1.019**	**1.019**	**1.023**	**1.020**	**1.017**	**1.018**	**1.013**	**1.007**	**1.009**				
60/57	1.021	1.021	1.015	1.009	1.008	1.014	1.020	1.019	1.018	1.017	1.019	1.016	1.015	1.014	1.012	1.007					
63/60	1.014	1.020	1.013	1.012	1.008	1.016	1.015	1.021	1.015	1.018	1.016	1.020	1.015	1.009	1.009	1.005					
66/63	1.023	1.016	1.010	1.012	1.015	1.013	1.015	1.022	1.019	1.018	1.017	1.015	1.010	1.008	1.008	1.007					
69/66	**1.025**	**1.013**	**1.006**	**1.008**	**1.016**	**1.018**	**1.015**	**1.023**	**1.017**	**1.017**	**1.015**	**1.014**	**1.010**	**1.008**	**1.008**	**1.005**					
72/69	1.020	1.009	1.007	1.009	1.015	1.010	1.014	1.015	1.013	1.014	1.012	1.011	1.010	1.007	1.005						
75/72	1.015	1.008	1.006	1.008	1.010	1.009	1.012	1.012	1.011	1.018	1.013	1.008	1.006	1.001	1.003						
78/75	1.012	1.012	1.008	1.012	1.010	1.011	1.018	1.013	1.012	1.012	1.010	1.008	1.008	1.006	1.005						
81/78	**1.006**	**1.006**	**1.006**	**1.009**	**1.010**	**1.014**	**1.018**	**1.017**	**1.016**	**1.009**	**1.009**	**1.005**	**1.006**	**1.006**	**1.005**						
84/81	1.008	1.006	1.009	1.014	1.009	1.007	1.012	1.011	1.008	1.010	1.008	1.007	1.005	1.001							
87/84	1.005	1.008	1.008	1.010	1.009	1.010	1.012	1.014	1.012	1.008	1.007	1.004	1.003	1.001							
90/87	1.002	1.005	1.008	1.008	1.009	1.012	1.009	1.009	1.013	1.008	1.006	1.006	1.003	1.006							
93/90	**1.006**	**1.007**	**1.015**	**1.009**	**1.011**	**1.010**	**1.011**	**1.012**	**1.009**	**1.009**	**1.007**	**1.002**	**1.003**	**1.002**							
96/93	1.007	1.007	1.010	1.012	1.008	1.010	1.011	1.009	1.005	1.006	1.005	1.003	1.002								

Source: WCIRB acident year experience calls

* Incurred medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

Quarterly Paid Indemnity Loss Development Factors

Through September 30, 2018

Age in	Accident Year																				
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
6/3									4.376	4.495	4.553	4.807	4.911	4.722	4.854	5.099	5.076	5.056	5.087	5.060	4.993
9/6									**2.259**	**2.375**	**2.377**	**2.398**	**2.452**	**2.432**	**2.484**	**2.462**	**2.462**	**2.484**	**2.456**	**2.445**	**2.538**
12/9									1.812	1.834	1.810	1.825	1.861	1.869	1.877	1.866	1.879	1.910	1.882	1.892	
15/12	1.499	1.536	1.538	1.552	1.550	1.516	1.491	1.456	1.482	1.488	1.481	1.507	1.532	1.539	1.506	1.539	1.540	1.559	1.571	1.544	
18/15	1.380	1.399	1.395	1.401	1.403	1.379	1.331	1.306	1.306	1.327	1.332	1.343	1.355	1.361	1.361	1.353	1.364	1.372	1.366	1.358	
21/18	**1.323**	**1.298**	**1.303**	**1.303**	**1.311**	**1.297**	**1.241**	**1.217**	**1.233**	**1.235**	**1.243**	**1.259**	**1.257**	**1.261**	**1.261**	**1.263**	**1.267**	**1.264**	**1.256**	**1.260**	
24/21	1.259	1.257	1.256	1.258	1.260	1.244	1.183	1.181	1.195	1.191	1.194	1.206	1.209	1.215	1.213	1.204	1.216	1.211	1.206		
27/24	1.186	1.199	1.203	1.200	1.205	1.186	1.140	1.142	1.151	1.149	1.153	1.162	1.165	1.168	1.164	1.159	1.170	1.176	1.161		
30/27	1.157	1.161	1.165	1.175	1.172	1.161	1.122	1.117	1.126	1.129	1.130	1.141	1.141	1.137	1.134	1.141	1.147	1.142	1.137		
33/30	**1.118**	**1.125**	**1.130**	**1.142**	**1.136**	**1.123**	**1.097**	**1.096**	**1.100**	**1.101**	**1.108**	**1.114**	**1.116**	**1.112**	**1.111**	**1.111**	**1.115**	**1.107**	**1.105**		
36/33	1.102	1.103	1.103	1.115	1.111	1.097	1.085	1.081	1.080	1.084	1.092	1.094	1.098	1.091	1.091	1.096	1.092	1.089			
39/36	1.074	1.081	1.081	1.092	1.087	1.072	1.070	1.066	1.064	1.067	1.074	1.078	1.077	1.073	1.075	1.074	1.075	1.071			
42/39	1.067	1.071	1.077	1.080	1.073	1.063	1.059	1.058	1.058	1.062	1.067	1.067	1.071	1.070	1.065	1.064	1.066	1.062			
45/42	**1.057**	**1.054**	**1.063**	**1.064**	**1.056**	**1.049**	**1.047**	**1.049**	**1.047**	**1.051**	**1.058**	**1.059**	**1.057**	**1.055**	**1.054**	**1.052**	**1.050**	**1.050**			
48/45	1.049	1.050	1.055	1.053	1.046	1.044	1.041	1.044	1.043	1.047	1.049	1.051	1.050	1.048	1.048	1.048	1.045				
51/48	1.039	1.038	1.043	1.044	1.036	1.035	1.033	1.036	1.036	1.037	1.042	1.042	1.043	1.039	1.038	1.038	1.039				
54/51	1.035	1.038	1.036	1.037	1.034	1.035	1.030	1.028	1.035	1.036	1.038	1.041	1.038	1.036	1.036	1.033	1.032				
57/54	**1.029**	**1.033**	**1.037**	**1.030**	**1.028**	**1.026**	**1.025**	**1.028**	**1.030**	**1.032**	**1.033**	**1.033**	**1.032**	**1.033**	**1.028**	**1.027**	**1.028**				
60/57	1.025	1.030	1.027	1.026	1.024	1.024	1.024	1.024	1.028	1.029	1.029	1.032	1.027	1.030	1.028	1.025					
63/60	1.023	1.026	1.024	1.021	1.022	1.019	1.019	1.021	1.023	1.025	1.025	1.024	1.026	1.025	1.025	1.021					
66/63	1.023	1.023	1.023	1.021	1.019	1.019	1.019	1.020	1.025	1.025	1.025	1.025	1.023	1.022	1.022	1.018					
69/66	**1.019**	**1.021**	**1.020**	**1.017**	**1.016**	**1.017**	**1.016**	**1.021**	**1.020**	**1.020**	**1.020**	**1.022**	**1.020**	**1.019**	**1.022**	**1.017**					
72/69	1.018	1.016	1.018	1.016	1.016	1.015	1.017	1.015	1.020	1.019	1.019	1.019	1.019	1.019	1.016						
75/72	1.015	1.016	1.015	1.014	1.012	1.012	1.013	1.015	1.019	1.018	1.016	1.016	1.017	1.015	1.014						
78/75	1.014	1.014	1.012	1.013	1.012	1.011	1.012	1.015	1.017	1.016	1.015	1.016	1.016	1.015	1.013						
81/78	**1.013**	**1.013**	**1.011**	**1.012**	**1.011**	**1.010**	**1.012**	**1.015**	**1.015**	**1.016**	**1.015**	**1.015**	**1.013**	**1.012**	**1.011**						
84/81	1.011	1.011	1.013	1.010	1.010	1.009	1.011	1.013	1.015	1.014	1.013	1.012	1.013	1.013							
87/84	1.012	1.010	1.008	1.010	1.009	1.008	1.009	1.012	1.014	1.013	1.010	1.012	1.010	1.011							
90/87	1.008	1.009	1.010	1.009	1.008	1.008	1.011	1.012	1.013	1.012	1.011	1.010	1.010	1.010							
93/90	**1.009**	**1.009**	**1.008**	**1.008**	**1.007**	**1.008**	**1.012**	**1.011**	**1.011**	**1.012**	**1.010**	**1.010**	**1.009**	**1.009**							
96/93	1.008	1.009	1.006	1.007	1.007	1.007	1.008	1.011	1.011	1.008	1.010	1.010	1.009								

Source: WCIRB acident year experience calls

Quarterly Paid Medical Loss Development Factors *

Through September 30, 2018

Age in	Accident Year																			
Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
6/3									5.308	5.615	6.579	6.101	6.048	5.854	5.989	6.284	5.604	5.720	5.897	5.238	5.462
9/6									**2.348**	**2.381**	**2.348**	**2.375**	**2.361**	**2.327**	**2.398**	**2.498**	**2.428**	**2.287**	**2.326**	**2.249**	**2.351**
12/9									1.716	1.765	1.731	1.723	1.756	1.746	1.763	1.736	1.750	1.705	1.752	1.737	
15/12	1.453	1.490	1.514	1.547	1.554	1.510	1.437	1.423	1.429	1.444	1.413	1.429	1.445	1.472	1.446	1.443	1.460	1.454	1.479	1.434	
18/15	1.241	1.267	1.286	1.310	1.330	1.295	1.243	1.230	1.227	1.259	1.243	1.259	1.268	1.282	1.284	1.263	1.265	1.278	1.262	1.250	
21/18	**1.164**	**1.168**	**1.192**	**1.219**	**1.211**	**1.179**	**1.153**	**1.151**	**1.163**	**1.173**	**1.170**	**1.178**	**1.182**	**1.187**	**1.192**	**1.193**	**1.192**	**1.189**	**1.173**	**1.170**	
24/21	1.132	1.124	1.149	1.159	1.154	1.125	1.115	1.118	1.127	1.133	1.132	1.137	1.144	1.153	1.154	1.148	1.146	1.146	1.141		
27/24	1.096	1.108	1.121	1.128	1.123	1.093	1.090	1.093	1.106	1.107	1.110	1.112	1.119	1.120	1.123	1.122	1.122	1.124	1.111		
30/27	1.077	1.088	1.101	1.108	1.103	1.077	1.084	1.087	1.097	1.100	1.100	1.106	1.107	1.111	1.109	1.111	1.111	1.105	1.100		
33/30	**1.065**	**1.072**	**1.086**	**1.089**	**1.077**	**1.063**	**1.071**	**1.065**	**1.081**	**1.083**	**1.086**	**1.092**	**1.094**	**1.093**	**1.094**	**1.090**	**1.089**	**1.082**	**1.082**		
36/33	1.055	1.066	1.069	1.076	1.061	1.055	1.062	1.062	1.071	1.072	1.072	1.077	1.083	1.082	1.078	1.080	1.076	1.071			
39/36	1.051	1.059	1.060	1.061	1.049	1.044	1.053	1.056	1.057	1.059	1.061	1.066	1.071	1.066	1.069	1.065	1.064	1.061			
42/39	1.044	1.049	1.055	1.054	1.041	1.044	1.049	1.054	1.055	1.058	1.059	1.061	1.068	1.063	1.062	1.057	1.059	1.057			
45/42	**1.039**	**1.045**	**1.047**	**1.044**	**1.036**	**1.037**	**1.040**	**1.047**	**1.048**	**1.049**	**1.054**	**1.053**	**1.056**	**1.056**	**1.053**	**1.051**	**1.045**	**1.044**			
48/45	1.035	1.039	1.044	1.037	1.032	1.035	1.037	1.043	1.043	1.046	1.047	1.050	1.051	1.046	1.045	1.046	1.041				
51/48	1.030	1.035	1.037	1.034	1.031	1.030	1.033	1.037	1.036	1.036	1.039	1.041	1.043	1.040	1.039	1.038	1.037				
54/51	1.031	1.036	1.032	1.027	1.030	1.029	1.034	1.034	1.035	1.035	1.036	1.042	1.038	1.035	1.035	1.034	1.032				
57/54	**1.026**	**1.030**	**1.027**	**1.024**	**1.024**	**1.024**	**1.029**	**1.031**	**1.034**	**1.031**	**1.033**	**1.038**	**1.034**	**1.034**	**1.031**	**1.028**	**1.026**				
60/57	1.026	1.028	1.026	1.021	1.023	1.026	1.028	1.029	1.028	1.032	1.032	1.035	1.030	1.030	1.030	1.023					
63/60	1.023	1.025	1.022	1.019	1.019	1.020	1.024	1.024	1.024	1.024	1.027	1.027	1.026	1.027	1.025	1.022					
66/63	1.026	1.021	1.020	1.020	1.018	1.021	1.023	1.024	1.026	1.026	1.029	1.029	1.024	1.028	1.023	1.021					
69/66	**1.021**	**1.022**	**1.019**	**1.018**	**1.016**	**1.019**	**1.021**	**1.023**	**1.023**	**1.021**	**1.024**	**1.024**	**1.022**	**1.020**	**1.020**	**1.017**					
72/69	1.022	1.018	1.016	1.017	1.018	1.016	1.021	1.021	1.022	1.022	1.023	1.021	1.020	1.019	1.016						
75/72	1.017	1.016	1.014	1.015	1.015	1.014	1.018	1.020	1.019	1.019	1.018	1.018	1.018	1.015	1.015						
78/75	1.018	1.015	1.014	1.015	1.016	1.015	1.016	1.018	1.017	1.022	1.019	1.018	1.017	1.016	1.015						
81/78	**1.015**	**1.014**	**1.013**	**1.014**	**1.013**	**1.014**	**1.018**	**1.018**	**1.015**	**1.019**	**1.018**	**1.015**	**1.015**	**1.013**	**1.012**						
84/81	1.013	1.012	1.013	1.012	1.012	1.013	1.016	1.016	1.015	1.018	1.015	1.015	1.015	1.013							
87/84	1.013	1.011	1.010	1.012	1.012	1.012	1.014	1.013	1.015	1.017	1.013	1.013	1.011	1.012							
90/87	1.013	1.012	1.011	1.013	1.012	1.013	1.015	1.013	1.015	1.013	1.013	1.012	1.011	1.012							
93/90	**1.011**	**1.010**	**1.011**	**1.012**	**1.011**	**1.013**	**1.013**	**1.012**	**1.014**	**1.014**	**1.013**	**1.011**	**1.010**	**1.009**							
96/93	1.010	1.010	1.008	1.010	1.010	1.009	1.013	1.015	1.016	1.011	1.012	1.010	1.009								

Source: WCIRB acident year experience calls

* Paid medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

Reported Indemnity Claim Count Development

Accident Year	Development 9-21	21-33	33-45	45-57	57-69	69-81	81-93	93-105	105-117	117-129	129-141	141-153	153-165	165-177	177-189	189-201
1993																1.000
1994															1.000	1.000
1995														1.000	1.001	1.000
1996													1.000	1.000	1.000	1.000
1997												1.000	1.000	1.000	1.000	1.000
1998											1.000	1.000	1.000	1.000	1.000	1.000
1999										1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000									1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000
2001								0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002							1.000	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2003						0.998	0.999	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	
2004					0.999	1.000	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000		
2005				1.000	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
2006			1.005	1.002	1.001	1.000	1.001	1.000	1.001	1.000	1.000	1.000				
2007		1.016	1.008	1.004	1.002	1.001	1.000	1.000	1.001	1.000	1.000					
2008	1.527	1.029	1.012	1.006	1.003	1.002	1.001	1.001	1.001	1.000						
2009	1.627	1.035	1.014	1.007	1.004	1.002	1.002	1.001	1.000							
2010	1.687	1.040	1.015	1.007	1.003	1.002	1.002	1.000								
2011	1.713	1.046	1.015	1.007	1.004	1.002	1.001									
2012	1.735	1.050	1.015	1.007	1.004	1.002										
2013	1.752	1.043	1.013	1.008	1.002											
2014	1.731	1.046	1.014	1.005												
2015	1.743	1.044	1.007													
2016	1.747	1.040														
2017	1.691															

	Latest Year															
Age-to-Age																
	1.691	1.040	1.007	1.005	1.002	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Age-to-Ultimate																
	1.790	1.059	1.018	1.011	1.006	1.005	1.003	1.002	1.001	1.001	1.001	1.000	1.001	1.001	1.001	1.001

Quarterly Reported Indemnity Claim Count Development Factors

Accident Year	Development 3-6	6-9	9-12	12-15	15-18	18-21	21-24	24-27	27-30	30-33	33-36	36-39	39-42	42-45	45-48
2008	2.539	1.651	1.336	1.093	1.025	1.015	1.010	1.008	1.006	1.004	1.003	1.003	1.002	1.003	1.002
2009	2.681	1.683	1.382	1.109	1.036	1.021	1.012	1.009	1.007	1.007	1.005	1.004	1.003	1.002	1.002
2010	2.688	1.708	1.407	1.124	1.037	1.021	1.015	1.011	1.008	1.005	1.005	1.003	1.004	1.003	1.001
2011	2.691	1.738	1.424	1.123	1.041	1.026	1.018	1.010	1.010	1.006	1.005	1.004	1.004	1.003	1.002
2012	2.749	1.727	1.420	1.123	1.050	1.028	1.018	1.012	1.010	1.007	1.004	1.004	1.003	1.003	1.002
2013	2.821	1.739	1.421	1.138	1.045	1.027	1.016	1.010	1.009	1.007	1.004	1.004	1.003	1.002	1.002
2014	2.778	1.723	1.421	1.130	1.045	1.025	1.017	1.012	1.010	1.005	1.004	1.004	1.003	1.002	1.002
2015	2.794	1.744	1.414	1.136	1.047	1.024	1.016	1.013	1.008	1.005	1.003	1.003	1.002	1.002	
2016	2.731	1.720	1.412	1.141	1.046	1.027	1.017	1.013	1.010	1.005					
2017	2.824	1.691	1.414	1.130	1.043	1.025									
2018	2.812	1.736													

Reported Indemnity Claim Settlement Ratios

Accident	Evaluated as of (in months):																
Year	9	21	33	45	57	69	81	93	105	117	129	141	153	165	177	189	201
1993																	99.0%
1994																98.7%	98.8%
1995															98.4%	98.5%	98.7%
1996														98.0%	98.2%	98.4%	98.6%
1997													97.4%	97.7%	97.9%	98.1%	98.4%
1998												96.6%	97.0%	97.4%	97.7%	98.0%	98.2%
1999											95.8%	96.4%	96.9%	97.2%	97.6%	97.9%	98.1%
2000										94.4%	95.3%	96.0%	96.5%	97.1%	97.4%	97.7%	98.0%
2001									91.8%	93.3%	94.3%	95.1%	95.9%	96.4%	96.9%	97.3%	97.6%
2002								90.2%	92.1%	93.4%	94.6%	95.6%	96.3%	96.8%	97.3%	97.7%	98.0%
2003							87.6%	90.1%	92.0%	93.5%	94.9%	95.7%	96.3%	96.9%	97.4%	97.8%	
2004						84.3%	87.5%	90.1%	92.1%	93.9%	95.1%	95.9%	96.6%	97.2%	97.7%		
2005					80.0%	84.5%	87.9%	90.3%	92.6%	94.2%	95.3%	96.2%	96.9%	97.5%			
2006				72.2%	79.5%	84.3%	87.6%	90.6%	92.7%	94.1%	95.3%	96.3%	97.0%				
2007			60.0%	71.3%	78.9%	83.6%	87.8%	90.9%	92.9%	94.6%	95.8%	96.6%					
2008		44.6%	58.5%	69.8%	77.7%	83.7%	88.1%	91.0%	93.3%	94.8%	96.0%						
2009	21.3%	42.6%	56.7%	68.4%	77.2%	83.4%	87.8%	91.2%	93.4%	95.0%							
2010	21.3%	42.9%	57.4%	69.8%	78.9%	84.9%	89.3%	92.3%	94.4%								
2011	22.1%	43.4%	58.5%	71.2%	80.1%	86.0%	90.2%	93.2%									
2012	22.4%	43.8%	59.8%	72.5%	81.3%	87.3%	91.4%										
2013	21.6%	43.9%	60.8%	74.1%	83.0%	88.9%											
2014	21.6%	45.0%	62.2%	75.5%	84.7%												
2015	22.1%	46.0%	64.5%	78.2%													
2016	22.6%	48.2%	67.3%														
2017	24.1%	51.2%															
2018	25.3%																

Estimated Ultimate Indemnity Claim Settlement Ratios

Accident	Evaluated as of (in months):																
Year	9	21	33	45	57	69	81	93	105	117	129	141	153	165	177	189	201
1993																	98.9%
1994																98.5%	98.6%
1995															98.0%	98.3%	98.5%
1996														97.7%	98.0%	98.2%	98.4%
1997													97.1%	97.5%	97.7%	97.9%	98.2%
1998												96.3%	96.8%	97.2%	97.5%	97.8%	98.0%
1999											95.6%	96.2%	96.7%	97.0%	97.5%	97.8%	98.0%
2000										94.2%	95.1%	95.8%	96.3%	96.9%	97.3%	97.6%	97.9%
2001									91.7%	93.1%	94.1%	94.9%	95.7%	96.3%	96.7%	97.1%	97.5%
2002								90.2%	92.0%	93.3%	94.4%	95.5%	96.2%	96.7%	97.2%	97.6%	97.9%
2003							87.8%	90.2%	92.0%	93.5%	94.8%	95.7%	96.2%	96.8%	97.3%	97.7%	
2004						84.5%	87.7%	90.2%	92.1%	93.9%	95.1%	95.9%	96.6%	97.1%	97.6%		
2005					79.8%	84.4%	87.9%	90.3%	92.5%	94.1%	95.3%	96.2%	96.9%	97.4%			
2006				71.8%	79.2%	84.1%	87.4%	90.4%	92.6%	94.0%	95.3%	96.2%	96.9%				
2007			58.9%	70.6%	78.4%	83.3%	87.6%	90.7%	92.7%	94.5%	95.7%	96.6%					
2008		42.2%	56.9%	68.8%	76.9%	83.1%	87.7%	90.7%	93.1%	94.7%	95.9%						
2009	12.3%	40.0%	55.0%	67.3%	76.4%	82.9%	87.5%	91.0%	93.3%	94.9%							
2010	11.8%	40.0%	55.7%	68.7%	78.1%	84.3%	88.9%	92.2%	94.2%								
2011	12.0%	40.3%	56.7%	70.1%	79.4%	85.6%	89.9%	93.0%									
2012	11.9%	40.4%	58.0%	71.4%	80.6%	86.9%	91.1%										
2013	11.5%	41.0%	59.2%	73.1%	82.5%	88.5%											
2014	11.6%	41.9%	60.7%	74.7%	84.2%												
2015	11.9%	43.3%	63.4%	77.4%													
2016	12.2%	45.6%	66.1%														
2017	13.5%	48.4%															
2018	14.1%																

Quarterly Ultimate Settlement Ratios

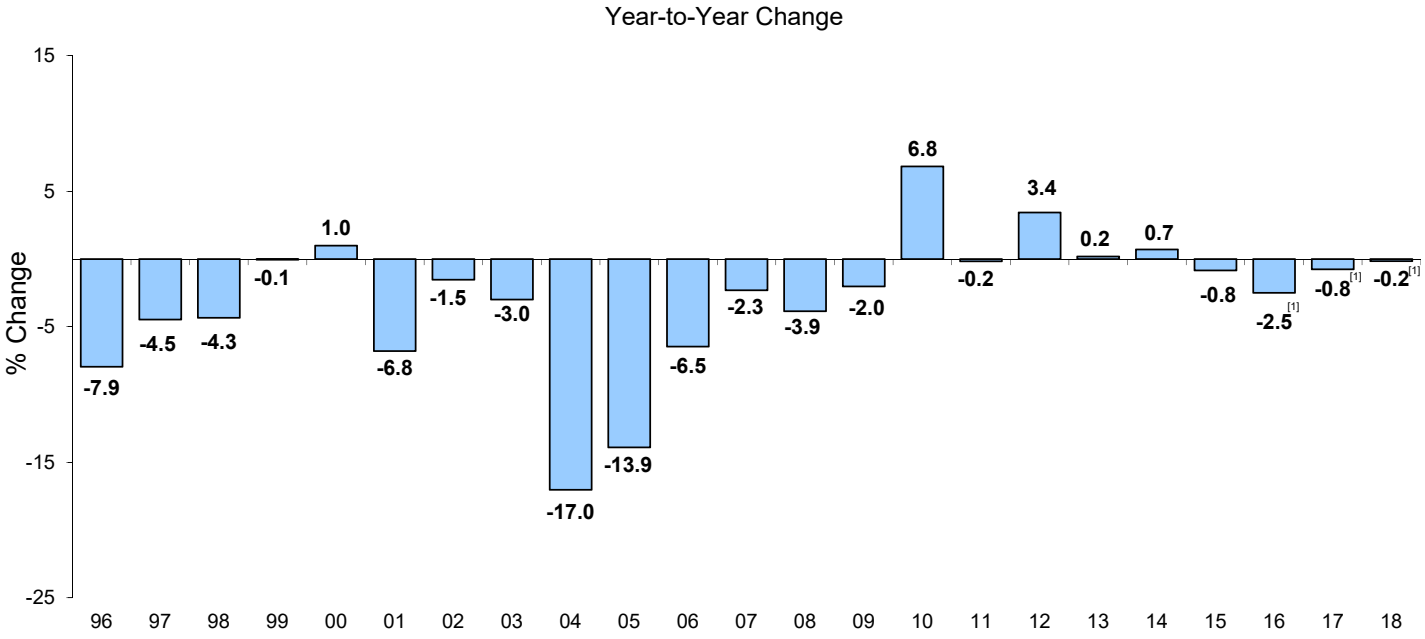
Accident Year	Evaluated as of (in months): 3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
2009	0.7%	4.7%	12.2%	21.3%	29.6%	35.7%	40.0%	44.0%	47.6%	51.3%	55.0%	58.5%	61.5%	64.6%	67.1%	69.6%
2010	0.6%	4.7%	11.9%	21.1%	29.9%	35.9%	40.3%	44.5%	48.3%	52.3%	55.8%	59.3%	62.5%	65.9%	68.9%	71.8%
2011	0.8%	5.1%	12.0%	21.3%	29.7%	35.9%	40.4%	44.7%	48.6%	52.9%	56.8%	60.8%	64.1%	67.1%	70.2%	72.9%
2012	0.8%	5.1%	12.1%	21.2%	29.5%	35.9%	40.7%	45.6%	49.7%	54.0%	58.3%	62.1%	65.5%	68.7%	71.6%	74.3%
2013	0.9%	5.1%	11.8%	20.9%	29.3%	35.9%	41.3%	46.3%	50.9%	55.3%	59.4%	63.4%	66.9%	70.2%	73.1%	75.9%
2014	0.7%	4.8%	11.7%	20.7%	29.5%	36.2%	41.9%	47.0%	51.8%	56.3%	60.5%	64.5%	67.8%	71.4%	74.3%	77.1%
2015	0.8%	4.8%	12.1%	21.0%	30.2%	37.5%	43.1%	48.4%	53.5%	58.6%	62.9%	66.9%	70.5%	73.8%	76.8%	
2016	0.8%	5.1%	12.3%	21.8%	31.6%	39.3%	45.3%	51.1%	56.1%	61.2%	65.6%					
2017	0.8%	5.6%	13.3%	23.8%	33.7%	41.4%	47.6%									
2018	1.0%	5.9%	14.1%													

Accident Year	Quarterly Incremental Change 3-6	6-9	9-12	12-15	15-18	18-21	21-24	24-27	27-30	30-33	33-36	36-39	39-42	42-45	45-48
2009	4.0%	7.5%	9.1%	8.3%	6.0%	4.4%	4.0%	3.7%	3.6%	3.7%	3.5%	3.0%	3.0%	2.5%	2.5%
2010	4.1%	7.2%	9.2%	8.8%	6.0%	4.3%	4.3%	3.8%	4.0%	3.5%	3.5%	3.2%	3.4%	3.0%	2.9%
2011	4.3%	6.9%	9.3%	8.5%	6.1%	4.5%	4.3%	3.9%	4.4%	3.9%	4.0%	3.3%	3.1%	3.0%	2.7%
2012	4.2%	7.1%	9.1%	8.3%	6.4%	4.8%	4.9%	4.1%	4.3%	4.2%	3.9%	3.4%	3.2%	2.9%	2.7%
2013	4.2%	6.7%	9.1%	8.4%	6.6%	5.4%	5.0%	4.5%	4.5%	4.1%	3.9%	3.5%	3.3%	2.9%	2.7%
2014	4.0%	6.9%	9.0%	8.8%	6.7%	5.7%	5.1%	4.7%	4.5%	4.2%	4.0%	3.4%	3.5%	2.9%	2.8%
2015	3.9%	7.3%	8.9%	9.2%	7.3%	5.6%	5.3%	5.1%	5.1%	4.3%	4.0%	3.6%	3.3%	3.1%	
2016	4.2%	7.2%	9.5%	9.7%	7.8%	5.9%	5.8%	5.0%	5.1%	4.4%					
2017	4.7%	7.7%	10.6%	9.8%	7.7%	6.2%									
2018	4.9%	8.2%													

Notes All figures in each accident year contain information from the same combination of insurers, all of whom submitted complete data for all evaluations for that accident year. Therefore, each accident year may contain a different mix of insurers (ranging from 77% to 93% of the total California workers' compensation insured market measured using 2017 earned premium levels).

Source: WCIRB quarterly calls for experience

California Workers' Compensation
Estimated Indemnity Claim Frequency by Accident Year



[1] The 2015-2016 estimate is based on partial year unit statistical data. The 2016-2017 and 2017-2018 estimates are based on comparison of claim counts based on WCIRB accident year experience as of September 30, 2018 relative to the estimated change in statewide employment. Prior years are based on unit statistical data.

Item AC18-12-02
Review of Medical On-level Adjustments

In order to review projected loss ratios on a common basis in pure premium ratemaking, losses are on-leveled for regulatory, legislative, or judicial changes that have occurred in the past or are expected to occur in the near future. The WCIRB has, for a number of years, reflected these changes in adjustments to each historical accident year's losses based on the estimated impact of these changes to claim costs by accident year. This approach is generally appropriate for indemnity losses, as most legislative, regulatory, or judicial changes that impact indemnity losses are implemented on a date-of-injury basis. However, for medical losses, most changes are implemented on a date-of-service basis and affect medical services that occur on open claims regardless of the date of injury. As a result, estimating their impact by accident year is challenging and often approximated. In addition, the majority of medical services are now subject to fee schedules that receive annual inflation updates based on changes to Medicare or Medi-Cal fees. While the WCIRB estimates the impact of medical inflation on services not subject to fee schedules in the current on-leveling approach, annual inflationary updates to fee schedule values are currently not explicitly reflected.

Staff has conducted a review of the medical on-level approach to address the longstanding issues discussed above. The WCIRB now collects medical transaction data that includes information on medical services by accident year, payment year, and the type of service (fee schedule). Using the medical transaction data, aggregate financial data, and published information on changes in medical fees by fee schedule component, staff has developed a framework that would convert the current "accident year" approach to on-leveling medical losses to an "accident-payment year" matrix-like approach. This approach is outlined in detail below. Feedback and Committee input on the approach will be solicited at the meeting.

Distributing Accident Year Losses by Medical Service Component and Payment Year
While the current approach does contemplate the distribution of medical services by component, the estimate for each accident year is based on a single (the most current) calendar year's distribution of payments.[1] However, each accident year's payments will span many calendar years. In addition, the distribution of medical services differs by maturity, in which pharmaceuticals and liens are typically paid to a greater extent at later maturities while physician services are to larger extent typically paid earlier.

Exhibit 1.1 shows the cumulative medical payment pattern by accident year and maturity based on December 31 evaluations. The yellow highlighted section of Exhibit 1.1 is projected based on the selected medical development factors from the July 1, 2018 Pure Premium Rate Filing, which is based on December 31, 2017 experience. Exhibit 1.2 shows the incremental medical payment pattern, derived from the information shown in Exhibit 1.1, which forms the basis for computing the medical on-level factor by accident-payment year.

Exhibits 2.1 through 2.6 show distributions of total medical payments in an accident/calendar year for each type of medical service subject to a fee schedule. The middle red-colored sections of Exhibits 2.1 through 2.6 is based on WCIRB medical transaction data, and contemplate maturity of the accident year.[2] This information is available for calendar years 2013 through 2017. For prior calendar years (upper-left black-colored sections of Exhibit 2.1 through 2.6), the data is based on calendar year data calls which only includes the payments for the entire calendar year rather than broken out by maturity. Estimating the historical data by maturity is a potential future enhancement to this approach. The lower-right blue-

[1] For example, the distribution of services for accident year 1999 is based on calendar year 1999 medical payments.

[2] For example, for accident year 2013 medical payments made between 12 and 24 months, 50.3% were for physician services (see Exhibit 2.1).

colored sections of Exhibits 2.1 through 2.6 are projections based on the most recent year of medical transaction data available (2017).

Exhibit 2.7 shows the proportion of medical services subject to a fee schedule by accident year and maturity, which is the sum of the information shown in Exhibits 2.1 through 2.6. Exhibit 2.8 shows the proportion of medical services not subject to a fee schedule. For many years, the vast majority of medical payments have been subject to a fee schedule (over 90%) but this proportion was much smaller in the 1990s, before the implementation of fee schedules for hospitals and pharmaceuticals.

Estimating Medical Inflation by Component

After distributing medical payments by payment period and service type (as shown on Exhibits 2.1 through 2.8), the next step is to incorporate the annual changes by each service type into the model. Each medical fee schedule differs in the timing and source of the updates. For example, physician fees are based on changes in Medicare rates (the Physician Medical Economic Index), while pharmaceutical fees are based on Medi-Cal rates. Staff is in the process of researching the source of each fee schedule update and plans to review this with the Committee at a later date.

To illustrate the updated medical on-leveling approach, staff simplified the model to contemplate the medical services subject to fee schedules in total (see Exhibit 2.7) as well as the medical services not subject to fee schedules (see Exhibit 2.8). Exhibit 3.1 shows the estimated incremental impact of changes in fee schedules in total,[3] which is generally based on prior WCIRB cost analyses. The data in Exhibit 3.1 has been converted from an accident year basis to an accident/calendar year basis, in which the estimate for the calendar year is assumed to impact each accident year in the calendar year similarly.[4] Exhibit 3.2 shows these changes on a cumulative "on-level" basis, in which each value is the product of all future changes impacting that accident year up to the projected policy period (policy year 2019). For example, the value for accident year 1985 at 24 months shown in Exhibit 3.2 (1.036) is the product of the incremental changes impacting 1985 claims that occurred after 24 months as shown in Exhibit 3.1 (1.009, 1.008, 1.000, etc.) up through the projected average accident date on policy year 2019 claims (1/1/2020).

Exhibits 3.3 and 3.4 show similar information to Exhibits 3.1 and 3.2 for medical services not subject to fee schedules. The figures shown on Exhibit 3.3 is based on calendar year changes in the Medical Care component of the Consumer Price Index, which has been the WCIRB's basis for these changes for many years.[5]

Exhibit 4 combines the information shown on Exhibits 1 through 3 to compute an on-level factor for each accident-payment year. Each figure shown in Exhibit 4 starts with the product of the proportion of medical services subject to fee schedules from Exhibit 2.7 and the on-level factor for medical services subject to fee schedules from Exhibit 3.2, added to the product of the proportion of medical services not subject to fee schedules from Exhibit 2.8 and the on-level factor for medical services not subject to fee schedules from Exhibit 3.4. This result is then multiplied by the estimated proportion of accident year medical costs paid in that development period from Exhibit 1.2. In summary, the figures from the exhibits are combined as follows:

Exhibit 4 = ([Exhibit 2.7] x [Exhibit 3.2] + [Exhibit 2.8] x [Exhibit 3.4]) x Exhibit 1.2

[3] See column 3 of Exhibit 4.2 of Item AC18-12-01, restated to be a percentage of medical services subject to fee schedules (rather than all medical services).

[4] The estimated impact of SB 863 provisions effective in 2013 as well as the impact of the transition of the physician fee schedule to a resource-based relative value scale (RBRVS) basis beginning in 2014 are not included in Exhibit 3.1. These factors are included in column (2) of Exhibit 5.

[5] See column 4 of Exhibit 4.2 of Item AC18-12-01.

The last column of Exhibit 4 shows the total on-level factor for each accident year, which is equal to the sum of each of the accident-payment year components from the preceding columns. These factors are also shown in the first column of Exhibit 5. A number of legislative reforms are not directly related to changes in fee schedules. For example, the WCIRB currently applies a -17% total adjustment (distributed over accident years 2011 to 2015) for reductions in medical utilization resulting from Senate Bill No. 863 (SB 863). Many of these factors (such as the SB 863 adjustments) already contemplate the relationship between the accident year and payment year effects of reforms, though some may not. Staff is in the process of determining the best way to reflect these adjustments in this refined on-leveling approach. For simplicity in this example, the second column of Exhibit 5 is based on the same factors currently used for pure premium ratemaking.[6] The last column of Exhibit 5 shows the total composite medical on-level factor (to a policy year 2019 level) based on this approach.

Impact on Analysis of Medical Trends and Next Steps

Exhibit 6 shows the impact of the refined medical on-leveling approach (based on the simplified example described above) on projected medical severity trends. Exhibit 7 shows, graphically, the impact of the new approach on the on-level medical loss ratios. Since the simplified approach only significantly contemplates changes to medical services not subject to fee schedules, there is not a significant impact to short-term medical cost trends, as the vast majority of recent medical costs are subject to fee schedules. However, the long-term on-level medical severity trend since 1990 is modestly lower under the new approach (5.5% compared to 6.1% as shown in Exhibit 6) as a larger proportion of medical inflation since 1990 is explained by the model. As shown in Exhibit 7, the new approach also significantly "flattens out" the on-level medical loss ratio curve in the early 1990s. Staff envisions that the fully realized approach would explain a larger proportion of historical medical cost trends.

Staff's planned next steps for this approach (after considering Committee input and feedback) is to continue researching the source of medical inflation updates for individual fee schedules and reflecting these in the model. Once these components are fully realized, staff plans to review how the model can be leveraged to be more predictive of future medical cost trends in addition to explaining past trends. Staff plans to have a fully realized approach ready for the Committee's review by the time of the next annual pure premium rate filing.

[6] See Exhibit 4.3 of Item AC18-12-01.

Cumulative Payment Pattern for Medical As of December 31, 2017

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985	22.9%	52.1%	64.6%	71.8%	76.0%	78.8%	80.8%	82.3%	83.6%	84.4%	85.3%	86.0%	86.9%	87.5%	88.1%	88.5%	89.0%	89.5%	90.0%	90.4%	90.9%	91.3%	91.9%	92.2%	92.6%	92.9%	93.2%	93.6%	94.0%	94.3%	94.5%	94.7%	94.9%	95.0%	95.2%	4.8%
1986	22.5%	51.0%	63.3%	70.4%	74.5%	77.5%	79.6%	81.0%	82.1%	83.0%	83.9%	84.6%	85.3%	85.8%	86.4%	86.9%	87.5%	88.1%	88.6%	89.1%	89.5%	89.9%	90.3%	90.7%	91.2%	91.7%	92.1%	92.6%	93.0%	93.4%	94.0%	94.4%	94.6%	94.7%	94.9%	5.1%
1987	22.1%	50.3%	62.4%	69.4%	74.0%	76.8%	78.6%	80.1%	81.2%	82.2%	83.2%	83.9%	84.8%	85.4%	86.0%	86.6%	87.3%	88.0%	88.6%	89.1%	89.7%	90.3%	90.7%	91.2%	91.6%	92.1%	92.5%	93.0%	93.3%	93.6%	93.8%	94.2%	94.4%	94.6%	94.8%	5.2%
1988	22.6%	51.3%	63.7%	71.1%	75.5%	78.3%	80.3%	81.8%	83.2%	84.1%	84.9%	85.7%	86.3%	87.0%	87.7%	88.3%	88.7%	89.2%	89.7%	90.3%	90.9%	91.3%	91.8%	92.3%	92.8%	93.2%	93.6%	93.9%	94.2%	94.4%	94.6%	95.0%	95.2%	95.3%	95.5%	4.5%
1989	22.0%	50.0%	63.7%	70.9%	75.0%	77.5%	79.6%	81.1%	82.2%	83.3%	83.9%	84.6%	85.3%	85.9%	86.6%	87.3%	88.0%	88.4%	88.9%	89.5%	90.0%	90.5%	91.3%	91.8%	92.5%	93.0%	93.3%	93.6%	93.9%	94.2%	94.4%	94.8%	94.9%	95.1%	95.3%	4.7%
1990	21.1%	52.2%	65.6%	72.5%	76.5%	79.3%	81.4%	83.0%	84.1%	85.0%	85.8%	86.6%	87.5%	88.3%	88.9%	89.3%	89.8%	90.3%	90.7%	91.2%	91.7%	92.1%	92.7%	93.0%	93.4%	93.7%	93.9%	94.2%	94.4%	94.7%	94.9%	95.2%	95.4%	95.5%	95.7%	4.3%
1991	22.5%	51.7%	63.6%	70.2%	74.6%	77.8%	80.0%	81.6%	82.8%	83.8%	84.8%	85.7%	86.5%	87.2%	87.8%	88.6%	89.2%	89.8%	90.4%	90.9%	91.4%	91.9%	92.4%	92.9%	93.2%	93.5%	93.8%	94.1%	94.3%	94.6%	94.8%	95.2%	95.3%	95.4%	95.6%	4.4%
1992	24.1%	49.7%	60.4%	67.1%	71.4%	74.5%	76.5%	78.1%	79.4%	80.6%	81.9%	82.9%	83.9%	84.9%	85.8%	86.7%	88.1%	88.8%	89.5%	89.6%	90.2%	90.9%	91.4%	91.9%	92.3%	92.9%	93.2%	93.4%	93.7%	94.0%	94.2%	94.6%	94.8%	95.0%	95.2%	4.8%
1993	23.9%	46.8%	56.5%	62.2%	66.0%	68.7%	71.1%	72.8%	74.7%	76.2%	77.8%	79.3%	80.4%	81.4%	82.5%	83.6%	84.5%	85.5%	86.4%	87.3%	88.4%	89.4%	90.0%	90.6%	91.1%	91.8%	92.1%	92.5%	92.8%	93.1%	93.4%	93.8%	94.0%	94.2%	94.4%	5.6%
1994	21.3%	43.4%	53.6%	59.3%	63.3%	66.4%	68.9%	71.3%	73.3%	75.4%	77.3%	78.6%	80.0%	81.1%	82.5%	83.6%	84.6%	85.7%	86.5%	87.3%	88.2%	89.0%	89.7%	90.3%	90.9%	91.6%	91.9%	92.3%	92.6%	92.9%	93.2%	93.7%	93.9%	94.0%	94.3%	5.7%
1995	18.2%	38.7%	48.6%	54.6%	59.0%	62.5%	65.6%	68.3%	70.8%	73.0%	74.5%	76.2%	77.8%	79.3%	80.8%	82.2%	83.4%	84.4%	85.7%	86.8%	87.8%	88.6%	89.7%	90.3%	90.9%	91.6%	91.9%	92.3%	92.6%	93.0%	93.2%	93.7%	93.9%	94.0%	94.3%	5.7%
1996	16.8%	36.7%	46.4%	53.0%	58.1%	62.2%	65.6%	68.9%	71.5%	73.6%	75.4%	77.4%	79.2%	80.8%	82.2%	83.6%	84.6%	85.8%	86.9%	87.9%	88.7%	89.3%	90.3%	90.9%	91.5%	92.1%	92.4%	92.8%	93.1%	93.4%	93.6%	94.1%	94.3%	94.4%	94.6%	5.4%
1997	15.4%	35.0%	45.0%	52.2%	57.7%	62.3%	66.4%	69.8%	72.3%	74.7%	76.8%	78.8%	80.5%	82.1%	83.4%	84.5%	85.7%	86.9%	87.9%	88.4%	89.0%	89.6%	90.6%	91.2%	91.7%	92.3%	92.7%	93.0%	93.3%	93.6%	93.8%	94.3%	94.4%	94.6%	94.8%	5.2%
1998	13.6%	31.8%	42.3%	49.9%	55.8%	61.0%	65.0%	68.1%	70.7%	73.1%	75.4%	77.7%	79.3%	80.8%	82.3%	83.6%	85.0%	86.1%	86.9%	87.7%	88.3%	88.9%	90.0%	90.6%	91.2%	91.8%	92.2%	92.5%	92.8%	93.2%	93.4%	93.9%	94.1%	94.2%	94.4%	5.6%
1999	12.3%	30.5%	42.0%	50.7%	57.5%	62.6%	66.3%	69.2%	71.6%	73.9%	76.3%	78.2%	80.1%	81.4%	82.7%	84.2%	85.5%	86.5%	87.3%	88.0%	88.6%	89.2%	90.3%	90.9%	91.4%	92.1%	92.4%	92.7%	93.0%	93.3%	93.6%	94.0%	94.2%	94.4%	94.6%	5.4%
2000	11.3%	30.1%	43.1%	52.6%	59.3%	64.0%	67.6%	70.4%	73.1%	75.4%	77.4%	79.2%	80.8%	82.4%	83.8%	84.9%	85.7%	86.5%	87.3%	88.0%	88.6%	89.2%	90.2%	90.8%	91.4%	92.0%	92.4%	92.7%	93.0%	93.3%	93.6%	94.0%	94.2%	94.4%	94.6%	5.4%
2001	10.4%	29.6%	43.6%	52.8%	58.6%	63.0%	66.6%	69.6%	72.3%	74.7%	77.0%	78.7%	80.4%	82.2%	83.6%	84.6%	85.5%	86.3%	87.0%	87.8%	88.4%	89.0%	90.1%	90.7%	91.3%	91.9%	92.2%	92.5%	92.9%	93.2%	93.5%	93.9%	94.1%	94.3%	94.5%	5.5%
2002	11.4%	32.9%	46.5%	54.3%	60.4%	64.8%	68.3%	71.4%	73.8%	76.2%	78.0%	79.8%	81.3%	82.6%	83.6%	84.5%	85.4%	86.2%	87.0%	87.7%	88.3%	88.9%	90.0%	90.6%	91.2%	91.9%	92.2%	92.5%	92.8%	93.2%	93.4%	93.9%	94.1%	94.2%	94.5%	5.5%
2003	13.3%	34.4%	45.4%	53.1%	59.1%	63.4%	67.0%	70.3%	73.1%	75.3%	77.6%	79.6%	81.1%	82.4%	83.5%	84.4%	85.4%	86.1%	86.9%	87.7%	88.3%	88.9%	90.0%	90.6%	91.2%	91.8%	92.1%	92.5%	92.8%	93.1%	93.4%	93.8%	94.1%	94.2%	94.4%	5.6%
2004	13.7%	31.6%	42.5%	50.5%	56.7%	61.9%	66.2%	69.9%	72.7%	75.3%	77.9%	79.7%	81.1%	82.4%	83.4%	84.4%	85.3%	86.1%	86.9%	87.6%	88.2%	88.8%	89.9%	90.6%	91.1%	91.8%	92.1%	92.4%	92.8%	93.1%	93.4%	93.8%	94.0%	94.2%	94.4%	5.6%
2005	13.5%	30.3%	40.8%	49.3%	56.1%	61.4%	65.9%	69.5%	72.9%	75.6%	78.0%	79.6%	81.1%	82.4%	83.4%	84.4%	85.3%	86.1%	86.9%	87.6%	88.2%	88.9%	89.9%	90.6%	91.1%	91.8%	92.1%	92.4%	92.8%	93.1%	93.4%	93.8%	94.0%	94.2%	94.4%	5.6%
2006	12.5%	29.3%	41.1%	50.1%	57.1%	62.8%	67.0%	70.8%	73.7%	76.2%	78.1%	79.7%	81.2%	82.4%	83.5%	84.4%	85.4%	86.1%	86.9%	87.7%	88.3%	88.9%	90.0%	90.6%	91.2%	91.8%	92.2%	92.5%	92.8%	93.1%	93.4%	93.9%	94.1%	94.2%	94.4%	5.6%
2007	11.9%	28.8%	40.7%	50.0%	57.1%	62.7%	67.4%	71.2%	74.2%	76.5%	78.1%	79.7%	81.2%	82.4%	83.5%	84.4%	85.4%	86.1%	86.9%	87.7%	88.3%	88.9%	90.0%	90.6%	91.2%	91.8%	92.2%	92.5%	92.8%	93.1%	93.4%	93.9%	94.1%	94.2%	94.4%	5.6%
2008	12.3%	28.5%	40.5%	50.3%	57.7%	63.7%	68.2%	71.7%	74.2%	76.3%	77.9%	79.5%	81.0%	82.3%	83.3%	84.3%	85.2%	86.0%	86.8%	87.6%	88.2%	88.8%	89.9%	90.5%	91.1%	91.7%	92.1%	92.4%	92.7%	93.1%	93.3%	93.8%	94.0%	94.2%	94.4%	5.6%
2009	11.5%	27.7%	40.1%	50.2%	58.2%	64.3%	68.6%	71.8%	74.1%	76.1%	77.8%	79.4%	80.9%	82.2%	83.2%	84.2%	85.1%	85.9%	86.7%	87.5%	88.1%	88.7%	89.8%	90.4%	91.0%	91.7%	92.0%	92.3%	92.7%	93.0%	93.3%	93.7%	94.0%	94.1%	94.3%	5.7%
2010	11.1%	27.6%	40.4%	51.2%	58.9%	64.6%	68.9%	71.8%	74.1%	76.1%	77.8%	79.4%	81.0%	82.2%	83.3%	84.2%	85.2%	85.9%	86.7%	87.5%	88.1%	88.7%	89.8%	90.5%	91.0%	91.7%	92.0%	92.4%	92.7%	93.0%	93.3%	93.8%	94.0%	94.1%	94.4%	5.6%
2011	11.0%	28.4%	41.7%	52.0%	59.6%	65.2%	69.0%	71.9%	74.2%	76.2%	77.9%	79.5%	81.0%	82.3%	83.3%	84.3%	85.2%	86.0%	86.8%	87.5%	88.1%	88.8%	89.9%	90.5%	91.1%	91.7%	92.1%	92.4%	92.7%	93.1%	93.3%	93.8%	94.0%	94.1%	94.4%	5.6%
2012	11.2%	28.7%	42.1%	52.6%	60.1%	65.3%	69.1%	72.0%	74.3%	76.3%	78.0%	79.6%	81.1%	82.3%	83.4%	84.3%	85.2%	86.0%	86.8%	87.6%	88.2%	88.8%	89.9%	90.5%	91.1%	91.7%	92.1%	92.4%	92.7%	93.1%	93.3%	93.8%	94.0%	94.2%	94.4%	5.6%
2013	12.0%	29.8%	43.6%	54.1%	61.1%	66.2%	69.9%	72.7%	75.0%	77.0%	78.6%	80.2%	81.6%	82.8%	83.9%	84.8%	85.7%	86.4%	87.2%	87.9%	88.5%	89.2%	90.2%	90.8%	91.4%	92.0%	92.3%	92.7%	93.0%	93.3%	93.6%	94.0%	94.2%	94.3%	94.6%	5.4%
2014	12.2%	30.6%	44.7%	54.8%	61.8%	66.8%	70.5%	73.3%	75.5%	77.4%	79.0%	80.6%	82.0%	83.2%	84.2%	85.1%	86.0%	86.7%	87.5%	88.2%	88.8%	89.4%	90.4%	91.0%	91.6%	92.2%	92.5%	92.8%	93.1%	93.5%	93.7%	94.1%	94.3%	94.5%	94.7%	5.3%
2015	12.5%	31.7%	45.6%	55.7%	62.5%	67.5%	71.1%	73.9%	76.0%	77.9%	79.5%	81.0%	82.4%	83.6%	84.6%	85.4%	86.3%	87.0%	87.8%	88.5%	89.1%	89.6%	90.6%	91.2%	91.8%	92.4%	92.7%	93.0%	93.3%	93.6%	93.8%	94.3%	94.5%	94.6%	94.8%	5.2%
2016	13.1%	32.5%	46.4%	56.4%	63.2%	68.1%	71.6%	74.4%	76.5%	78.4%	79.9%	81.4%	82.8%	83.9%	84.9%	85.7%	86.6%	87.3%	88.0%	88.7%	89.3%	89.9%	90.8%	91.4%	91.9%	92.5%	92.8%	93.1%	93.4%	93.8%	94.0%	94.4%	94.6%	94.7%	94.9%	5.1%
2017	13.5%	33.1%	47.0%	56.9%	63.6%	68.5%	72.0%	74.7%	76.8%	78.6%	80.2%	81.7%	83.0%	84.1%	85.1%	85.9%	86.8%	87.5%	88.2%	88.9%	89.4%	90.0%	91.0%	91.5%	92.1%	92.6%	92.9%	93.2%	93.5%	93.8%	94.1%	94.5%	94.7%	94.8%	95.0%	5.0%

Source: WCIRB quarterly experience calls. Projections (yellow) based on selected medical development factors from the July 1, 2018 Pure Premium Rate Filing.

Incremental payment pattern for Medical as of December 31, 2017

AY	0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372	372-384	384-396	396-408	408-420	420+
1985	22.9%	29.1%	12.5%	7.2%	4.2%	2.8%	2.0%	1.5%	1.2%	0.8%	0.9%	0.7%	0.9%	0.6%	0.6%	0.4%	0.4%	0.5%	0.5%	0.4%	0.5%	0.5%	0.5%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.3%	0.2%	0.3%	0.2%	0.1%	0.2%	4.8%
1986	22.5%	28.6%	12.3%	7.1%	4.1%	3.0%	2.2%	1.4%	1.1%	0.8%	0.9%	0.8%	0.7%	0.5%	0.6%	0.5%	0.6%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%	0.5%	0.4%	0.2%	0.1%	0.2%	5.1%
1987	22.1%	28.2%	12.1%	7.0%	4.5%	2.8%	1.8%	1.5%	1.1%	1.0%	1.0%	0.7%	0.8%	0.6%	0.7%	0.5%	0.8%	0.6%	0.6%	0.5%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.3%	0.2%	0.2%	0.4%	0.2%	0.1%	0.2%	5.2%
1988	22.6%	28.7%	12.4%	7.4%	4.4%	2.8%	2.0%	1.5%	1.3%	0.9%	0.8%	0.8%	0.6%	0.8%	0.6%	0.6%	0.4%	0.4%	0.5%	0.6%	0.5%	0.5%	0.5%	0.6%	0.5%	0.5%	0.4%	0.3%	0.2%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	4.5%
1989	22.0%	28.0%	13.7%	7.3%	4.0%	2.5%	2.0%	1.5%	1.1%	1.1%	0.7%	0.7%	0.7%	0.6%	0.7%	0.8%	0.6%	0.4%	0.5%	0.6%	0.4%	0.5%	0.7%	0.5%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	4.7%
1990	21.1%	31.2%	13.4%	7.0%	3.9%	2.8%	2.1%	1.6%	1.1%	0.8%	0.8%	0.8%	0.9%	0.9%	0.5%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.6%	0.4%	0.4%	0.3%	0.2%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	4.3%
1991	22.5%	29.2%	11.9%	6.6%	4.4%	3.1%	2.2%	1.7%	1.1%	1.0%	1.0%	0.9%	0.8%	0.7%	0.6%	0.8%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	4.4%
1992	24.1%	25.6%	10.7%	6.6%	4.3%	3.1%	2.1%	1.5%	1.3%	1.2%	1.3%	1.1%	0.9%	1.1%	0.8%	0.9%	1.5%	0.7%	0.6%	0.2%	0.5%	0.7%	0.5%	0.4%	0.4%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	4.8%
1993	23.9%	23.0%	9.7%	5.7%	3.8%	2.8%	2.3%	1.8%	1.8%	1.6%	1.5%	1.6%	1.1%	1.0%	1.1%	1.1%	0.9%	0.9%	0.9%	0.9%	1.1%	1.0%	0.6%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.6%
1994	21.3%	22.1%	10.2%	5.7%	4.0%	3.0%	2.5%	2.4%	2.0%	2.1%	1.9%	1.3%	1.4%	1.1%	1.4%	1.1%	1.0%	1.1%	0.8%	0.9%	0.9%	0.8%	0.7%	0.6%	0.6%	0.7%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.7%
1995	18.2%	20.6%	9.8%	6.0%	4.4%	3.4%	3.2%	2.6%	2.5%	2.2%	1.5%	1.8%	1.6%	1.5%	1.4%	1.5%	1.2%	0.9%	1.3%	1.1%	1.0%	0.8%	1.1%	0.6%	0.6%	0.7%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.7%
1996	16.8%	19.9%	9.7%	6.6%	5.1%	4.1%	3.4%	3.2%	2.6%	2.1%	1.8%	2.0%	1.8%	1.6%	1.5%	1.3%	1.1%	1.2%	1.1%	1.0%	0.8%	0.6%	1.0%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	5.4%
1997	15.4%	19.6%	10.0%	7.2%	5.5%	4.6%	4.0%	3.5%	2.5%	2.4%	2.1%	2.0%	1.7%	1.5%	1.3%	1.2%	1.2%	1.2%	1.0%	0.6%	0.6%	0.6%	1.0%	0.6%	0.5%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	5.2%
1998	13.6%	18.2%	10.4%	7.6%	5.9%	5.2%	4.0%	3.1%	2.7%	2.3%	2.3%	2.3%	1.6%	1.5%	1.5%	1.2%	1.4%	1.1%	0.8%	0.7%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.5%	0.2%	0.2%	0.2%	5.6%
1999	12.3%	18.2%	11.5%	8.7%	6.7%	5.1%	3.7%	2.9%	2.4%	2.3%	2.4%	1.9%	2.0%	1.3%	1.3%	1.5%	1.2%	1.1%	0.8%	0.7%	0.6%	0.6%	1.0%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.2%	0.2%	5.4%
2000	11.3%	18.8%	13.0%	9.6%	6.7%	4.7%	3.6%	2.8%	2.7%	2.3%	2.0%	1.8%	1.6%	1.6%	1.4%	1.1%	0.9%	0.7%	0.8%	0.7%	0.6%	0.6%	1.0%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.2%	0.2%	5.4%
2001	10.4%	19.2%	14.0%	9.2%	5.8%	4.5%	3.6%	3.0%	2.6%	2.5%	2.2%	1.7%	1.7%	1.8%	1.4%	1.0%	0.9%	0.8%	0.8%	0.7%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.2%	0.2%	5.5%
2002	11.4%	21.5%	13.7%	7.8%	6.1%	4.4%	3.5%	3.1%	2.4%	2.4%	1.8%	1.8%	1.4%	1.3%	1.0%	0.9%	0.9%	0.8%	0.8%	0.7%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.5%	0.2%	0.2%	0.2%	5.5%
2003	13.3%	21.2%	11.0%	7.7%	5.9%	4.4%	3.6%	3.2%	2.9%	2.2%	2.3%	2.0%	1.5%	1.3%	1.1%	0.9%	0.9%	0.8%	0.8%	0.7%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.5%	0.2%	0.2%	0.2%	5.6%
2004	13.7%	17.8%	10.9%	8.0%	6.2%	5.2%	4.3%	3.6%	2.8%	2.6%	2.6%	1.9%	1.4%	1.2%	1.1%	0.9%	0.9%	0.8%	0.8%	0.8%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.6%
2005	13.5%	16.8%	10.5%	8.5%	6.8%	5.3%	4.5%	3.6%	3.4%	2.8%	2.3%	1.7%	1.5%	1.2%	1.1%	0.9%	0.9%	0.8%	0.8%	0.8%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.6%
2006	12.5%	16.8%	11.7%	9.0%	7.0%	5.7%	4.3%	3.8%	3.0%	2.5%	1.9%	1.6%	1.5%	1.2%	1.1%	0.9%	0.9%	0.8%	0.8%	0.7%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.5%	0.2%	0.2%	0.2%	5.6%
2007	11.9%	16.9%	11.9%	9.4%	7.1%	5.5%	4.7%	3.8%	3.0%	2.3%	1.7%	1.6%	1.5%	1.2%	1.1%	0.9%	0.9%	0.8%	0.8%	0.7%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.5%	0.2%	0.2%	0.2%	5.6%
2008	12.3%	16.2%	12.0%	9.8%	7.4%	5.9%	4.6%	3.5%	2.5%	2.0%	1.7%	1.6%	1.5%	1.2%	1.1%	0.9%	1.0%	0.8%	0.8%	0.8%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.6%
2009	11.5%	16.2%	12.4%	10.1%	8.0%	6.1%	4.3%	3.1%	2.3%	2.0%	1.7%	1.6%	1.5%	1.2%	1.1%	0.9%	1.0%	0.8%	0.8%	0.8%	0.6%	0.6%	1.1%	0.6%	0.6%	0.7%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.7%
2010	11.1%	16.4%	12.9%	10.7%	7.8%	5.7%	4.3%	2.9%	2.3%	2.0%	1.7%	1.6%	1.5%	1.2%	1.1%	0.9%	1.0%	0.8%	0.8%	0.8%	0.6%	0.6%	1.1%	0.6%	0.6%	0.7%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.6%
2011	11.0%	17.4%	13.3%	10.3%	7.5%	5.6%	3.8%	2.9%	2.3%	2.0%	1.7%	1.6%	1.5%	1.2%	1.1%	0.9%	1.0%	0.8%	0.8%	0.8%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.6%
2012	11.2%	17.5%	13.4%	10.4%	7.5%	5.2%	3.8%	2.9%	2.3%	2.0%	1.7%	1.6%	1.5%	1.2%	1.1%	0.9%	1.0%	0.8%	0.8%	0.8%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.2%	0.2%	0.2%	5.6%
2013	12.0%	17.8%	13.8%	10.4%	7.0%	5.1%	3.7%	2.9%	2.2%	2.0%	1.6%	1.6%	1.5%	1.2%	1.0%	0.9%	0.9%	0.8%	0.8%	0.7%	0.6%	0.6%	1.1%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.2%	0.2%	5.4%
2014	12.2%	18.4%	14.1%	10.1%	6.9%	5.1%	3.7%	2.8%	2.2%	1.9%	1.6%	1.5%	1.4%	1.2%	1.0%	0.9%	0.9%	0.7%	0.8%	0.7%	0.6%	0.6%	1.0%	0.6%	0.6%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	5.3%
2015	12.5%	19.2%	13.9%	10.0%	6.9%	5.0%	3.6%	2.8%	2.2%	1.9%	1.6%	1.5%	1.4%	1.1%	1.0%	0.9%	0.9%	0.7%	0.7%	0.7%	0.6%	0.6%	1.0%	0.6%	0.5%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	5.2%
2016	13.1%	19.4%	13.9%	10.0%	6.8%	4.9%	3.5%	2.7%	2.1%	1.9%	1.6%	1.5%	1.4%	1.1%	1.0%	0.9%	0.9%	0.7%	0.7%	0.7%	0.6%	0.6%	1.0%	0.6%	0.5%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	5.1%
2017	13.5%	19.6%	13.9%	9.9%	6.7%	4.9%	3.5%	2.7%	2.1%	1.8%	1.5%	1.5%	1.4%	1.1%	1.0%	0.8%	0.9%	0.7%	0.7%	0.7%	0.5%	0.6%	1.0%	0.6%	0.5%	0.6%	0.3%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.1%	0.2%	5.0%

Note: Each figure is the incremental medical payments for the accident year and development period based on Exhibit 1.1.

Physician Services - Proportion of Total Medical Paid in that Period

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985	66.5%	60.4%	61.0%	64.9%	64.7%	66.1%	63.1%	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	23.3%	21.2%	21.4%	18.7%	22.3%	*22.3%*	*22.3%*	*22.3%*
1986	60.4%	61.0%	64.9%	64.7%	66.1%	63.1%	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	21.1%	17.0%	15.4%	16.9%	28.8%	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1987	61.0%	64.9%	64.7%	66.1%	63.1%	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	15.8%	17.1%	17.8%	15.3%	23.1%	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1988	64.9%	64.7%	66.1%	63.1%	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	17.0%	17.6%	23.4%	14.2%	14.6%	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1989	64.7%	66.1%	63.1%	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	15.0%	15.4%	15.7%	14.2%	14.0%	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1990	66.1%	63.1%	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	21.3%	25.5%	20.2%	21.4%	22.2%	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1991	63.1%	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	19.4%	19.6%	21.2%	20.9%	23.9%	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1992	62.8%	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	23.9%	21.7%	22.0%	19.2%	17.4%	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1993	56.5%	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	18.5%	17.4%	19.2%	19.3%	17.6%	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1994	55.3%	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	16.7%	16.1%	15.2%	17.7%	20.7%	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1995	56.8%	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	15.1%	15.0%	15.2%	15.2%	16.0%	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1996	58.7%	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	17.7%	17.3%	17.0%	18.6%	16.4%	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1997	58.5%	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	19.9%	19.6%	21.4%	25.7%	25.0%	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1998	60.9%	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	17.8%	17.6%	17.0%	18.8%	19.0%	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
1999	61.1%	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	19.5%	18.3%	20.2%	19.5%	19.5%	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2000	60.0%	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	24.2%	24.7%	25.3%	29.4%	28.9%	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2001	61.1%	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	22.4%	20.7%	20.8%	23.7%	21.6%	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2002	53.2%	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	21.7%	18.7%	19.8%	20.6%	20.4%	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2003	54.8%	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	24.4%	22.1%	21.6%	22.8%	23.3%	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2004	53.0%	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	25.1%	22.5%	21.8%	24.6%	23.8%	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2005	49.8%	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	25.6%	22.9%	21.7%	23.1%	23.3%	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2006	49.9%	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	26.1%	22.4%	22.1%	22.9%	21.9%	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2007	47.4%	42.3%	45.8%	45.1%	52.0%	52.0%	28.0%	24.3%	22.1%	21.5%	22.6%	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2008	42.3%	45.8%	45.1%	52.0%	52.0%	29.0%	24.9%	22.9%	22.7%	24.3%	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2009	45.8%	45.1%	52.0%	52.0%	31.7%	26.5%	25.0%	24.7%	23.4%	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2010	45.1%	52.0%	52.0%	34.5%	27.8%	24.8%	23.8%	23.0%	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2011	52.0%	52.0%	40.4%	30.5%	26.5%	24.0%	23.9%	*23.0%*	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2012	52.0%	52.4%	37.1%	29.9%	24.6%	24.6%	*23.9%*	*23.0%*	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2013	59.0%	50.3%	36.6%	29.0%	26.4%	*24.6%*	*23.9%*	*23.0%*	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2014	60.1%	49.8%	34.9%	30.0%	*26.4%*	*24.6%*	*23.9%*	*23.0%*	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2015	59.1%	47.6%	36.5%	*30.0%*	*26.4%*	*24.6%*	*23.9%*	*23.0%*	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2016	58.2%	47.8%	*36.5%*	*30.0%*	*26.4%*	*24.6%*	*23.9%*	*23.0%*	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*
2017	56.1%	*47.8%*	*36.5%*	*30.0%*	*26.4%*	*24.6%*	*23.9%*	*23.0%*	*23.4%*	*24.3%*	*22.6%*	*21.9%*	*23.3%*	*23.8%*	*23.3%*	*20.4%*	*21.6%*	*28.9%*	*19.5%*	*19.0%*	*25.0%*	*16.4%*	*16.0%*	*20.7%*	*17.6%*	*17.4%*	*23.9%*	*22.2%*	*14.0%*	*14.6%*	*23.1%*	*28.8%*	*22.3%*	*22.3%*	*22.3%*	*22.3%*

Source: Based on WCIRB calendar yer data calls for calendar years prior to 2013 (black). Based on WCIRB medical transaction data for calendar years 2013 and forward (red). Projected calendar years (blue) based on the latest available calendar year.

Outpatient Hospital Services - Proportion of Total Medical Paid in that Period

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985																				16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	6.9%	5.9%	8.3%	14.1%	6.5%	*6.5%*	*6.5%*	*6.5%*
1986																			16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	4.2%	8.5%	8.1%	3.1%	8.2%	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1987																		16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	16.7%	20.2%	18.9%	31.4%	19.3%	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1988																	16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	6.3%	7.0%	3.9%	6.9%	4.1%	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1989																16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	22.8%	20.1%	25.8%	31.3%	29.7%	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1990															16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	12.7%	5.1%	12.3%	10.0%	6.0%	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1991														16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	5.0%	3.2%	4.9%	13.1%	11.5%	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1992													16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	5.5%	4.3%	6.1%	7.6%	8.8%	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1993												16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	9.5%	5.9%	10.5%	11.8%	7.5%	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1994											16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	12.1%	11.0%	18.3%	15.3%	19.0%	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1995										16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	21.3%	20.4%	27.8%	25.7%	21.6%	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1996									16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	5.9%	4.5%	8.3%	19.6%	18.3%	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1997								16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	10.1%	8.8%	11.0%	13.3%	12.6%	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1998							16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	11.3%	12.0%	16.3%	17.7%	19.7%	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
1999						16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	6.7%	8.7%	13.3%	14.3%	15.4%	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2000					16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	5.8%	5.5%	8.0%	9.9%	10.9%	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2001				16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	7.9%	7.9%	9.6%	12.7%	12.1%	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2002			16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	9.1%	12.0%	16.4%	19.3%	20.0%	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2003		16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	7.1%	7.8%	10.9%	11.9%	12.9%	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2004	16.8%	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	7.3%	8.3%	8.7%	10.1%	11.6%	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2005	16.6%	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	9.1%	10.9%	11.5%	13.4%	13.2%	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2006	15.4%	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	8.7%	10.0%	10.7%	11.3%	12.3%	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2007	17.8%	18.6%	15.7%	16.5%	15.9%	15.9%	7.5%	10.0%	10.3%	10.4%	13.1%	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2008	18.6%	15.7%	16.5%	15.9%	15.9%	6.0%	5.9%	9.7%	9.7%	10.2%	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2009	15.7%	16.5%	15.9%	15.9%	7.3%	6.6%	7.5%	8.3%	9.4%	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2010	16.5%	15.9%	15.9%	6.7%	6.1%	6.8%	8.3%	7.6%	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2011	15.9%	15.9%	7.6%	6.4%	7.3%	8.0%	7.3%	*7.6%*	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2012	15.9%	9.8%	6.9%	6.9%	7.5%	7.5%	*7.3%*	*7.6%*	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2013	9.2%	9.1%	7.4%	7.0%	7.7%	*7.5%*	*7.3%*	*7.6%*	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2014	8.9%	10.5%	9.5%	8.4%	*7.7%*	*7.5%*	*7.3%*	*7.6%*	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2015	10.7%	12.3%	10.0%	*8.4%*	*7.7%*	*7.5%*	*7.3%*	*7.6%*	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2016	11.1%	12.3%	*10.0%*	*8.4%*	*7.7%*	*7.5%*	*7.3%*	*7.6%*	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*
2017	11.6%	*12.3%*	*10.0%*	*8.4%*	*7.7%*	*7.5%*	*7.3%*	*7.6%*	*9.4%*	*10.2%*	*13.1%*	*12.3%*	*13.2%*	*11.6%*	*12.9%*	*20.0%*	*12.1%*	*10.9%*	*15.4%*	*19.7%*	*12.6%*	*18.3%*	*21.6%*	*19.0%*	*7.5%*	*8.8%*	*11.5%*	*6.0%*	*29.7%*	*4.1%*	*19.3%*	*8.2%*	*6.5%*	*6.5%*	*6.5%*	*6.5%*

Source: Based on WCIRB calendar yer data calls for calendar years prior to 2013 (black). Based on WCIRB medical transaction data for calendar years 2013 and forward (red). Projected calendar years (blue) based on the latest available calendar year.

Inpatient Hospital Services - Proportion of Total Medical Paid in that Period

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985														7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	7.6%	17.2%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%
1986													7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	11.9%	12.3%	23.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987												7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	17.4%	13.1%	12.5%	12.5%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1988											7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	6.1%	16.1%	7.3%	9.1%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1989										7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	15.2%	15.4%	12.2%	8.0%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1990									7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	11.6%	10.2%	13.3%	11.3%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1991								7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	12.0%	14.7%	14.9%	11.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1992							7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	8.9%	21.7%	11.3%	12.0%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1993						7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	10.9%	17.6%	15.0%	19.8%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1994					7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	14.9%	15.9%	12.4%	21.6%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1995				7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	10.3%	8.7%	8.8%	7.4%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1996			7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	10.2%	7.5%	12.6%	9.3%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1997		7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	12.7%	14.2%	12.4%	8.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1998	7.7%	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	17.7%	10.5%	10.1%	9.7%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
1999	7.7%	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	12.7%	11.5%	10.6%	15.3%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2000	7.7%	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	11.4%	10.9%	9.6%	13.7%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2001	7.9%	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	10.9%	9.8%	8.6%	9.7%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2002	7.9%	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	16.1%	16.9%	13.9%	13.9%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2003	11.4%	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	12.1%	11.5%	10.4%	14.8%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2004	11.2%	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	10.4%	9.6%	14.0%	8.0%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2005	11.1%	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	11.7%	7.7%	9.5%	11.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2006	10.3%	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	8.2%	7.5%	7.2%	7.2%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2007	11.9%	12.4%	10.5%	11.0%	10.6%	10.6%	9.7%	6.5%	8.6%	9.8%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2008	12.4%	10.5%	11.0%	10.6%	10.6%	9.7%	10.0%	9.4%	9.3%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2009	10.5%	11.0%	10.6%	10.6%	9.6%	7.6%	8.1%	5.6%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2010	11.0%	10.6%	10.6%	9.4%	7.3%	8.4%	8.4%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2011	10.6%	10.6%	8.1%	8.0%	8.1%	6.8%	10.0%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2012	10.6%	8.6%	6.9%	8.1%	7.6%	7.5%	10.0%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2013	11.6%	8.5%	7.9%	6.2%	8.0%	7.5%	10.0%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2014	11.0%	8.7%	7.2%	6.7%	8.0%	7.5%	10.0%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2015	11.2%	8.7%	8.3%	6.7%	8.0%	7.5%	10.0%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2016	10.9%	8.6%	8.3%	6.7%	8.0%	7.5%	10.0%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
2017	12.0%	8.6%	8.3%	6.7%	8.0%	7.5%	10.0%	9.7%	7.0%	10.1%	8.4%	8.5%	9.4%	9.6%	13.4%	11.6%	16.9%	13.7%	16.9%	9.9%	14.7%	18.2%	11.9%	15.7%	19.5%	19.2%	12.9%	8.3%	10.3%	8.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Based on WCIRB calendar yer data calls for calendar years prior to 2013 (black). Based on WCIRB medical transaction data for calendar years 2013 and forward (red). Projected calendar years (blue) based on the latest available calendar year.

Durable Medical Equipments/ HCPCS - Proportion of Total Medical Paid in that Period

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985																												13.8%	11.1%	11.8%	17.3%	23.9%	*23.9%*	*23.9%*	*23.9%*
1986																											11.1%	14.8%	18.2%	34.5%	11.4%	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1987																										10.9%	9.9%	8.8%	9.3%	17.2%	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1988																									30.1%	25.8%	33.8%	40.1%	49.1%	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1989																									12.6%	13.9%	11.0%	16.6%	17.3%	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1990																								8.9%	8.8%	12.3%	16.7%	27.9%	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1991																							6.8%	7.6%	6.2%	8.5%	7.1%	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1992																						8.5%	8.3%	21.6%	27.4%	26.0%	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1993																					12.6%	10.6%	18.1%	18.2%	31.9%	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1994																				11.2%	10.3%	10.3%	8.4%	13.8%	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1995																			18.1%	20.5%	19.0%	21.0%	19.8%	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1996																		22.5%	21.6%	19.1%	18.2%	19.4%	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1997																	10.4%	10.9%	13.0%	11.7%	11.0%	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1998																11.8%	15.1%	17.2%	17.8%	18.6%	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
1999															12.7%	14.8%	13.5%	16.1%	17.4%	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2000														8.0%	8.4%	10.5%	9.4%	14.6%	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2001													11.4%	13.3%	14.5%	11.8%	15.9%	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2002												9.3%	9.5%	10.7%	12.3%	17.9%	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2003											9.6%	10.1%	13.8%	13.7%	16.2%	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2004										8.8%	9.1%	9.2%	13.4%	17.8%	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2005									8.6%	8.4%	10.7%	9.0%	12.1%	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2006								9.5%	8.7%	10.5%	12.2%	17.7%	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2007							8.6%	7.9%	9.5%	11.8%	15.4%	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2008						8.1%	7.2%	6.9%	8.0%	10.7%	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2009					6.3%	6.6%	7.0%	8.7%	12.7%	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2010				5.6%	5.1%	5.7%	5.8%	9.0%	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2011			6.1%	5.9%	6.4%	6.7%	7.5%	*9.0%*	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2012		6.5%	5.7%	5.5%	5.8%	9.2%	*7.5%*	*9.0%*	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2013	7.1%	6.8%	6.6%	5.7%	6.4%	*9.2%*	*7.5%*	*9.0%*	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2014	6.4%	7.0%	6.4%	6.7%	*6.4%*	*9.2%*	*7.5%*	*9.0%*	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2015	6.8%	6.9%	7.1%	*6.7%*	*6.4%*	*9.2%*	*7.5%*	*9.0%*	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2016	6.7%	8.0%	*7.1%*	*6.7%*	*6.4%*	*9.2%*	*7.5%*	*9.0%*	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*
2017	7.1%	*8.0%*	*7.1%*	*6.7%*	*6.4%*	*9.2%*	*7.5%*	*9.0%*	*12.7%*	*10.7%*	*15.4%*	*17.7%*	*12.1%*	*17.8%*	*16.2%*	*17.9%*	*15.9%*	*14.6%*	*17.4%*	*18.6%*	*11.0%*	*19.4%*	*19.8%*	*13.8%*	*31.9%*	*26.0%*	*7.1%*	*27.9%*	*17.3%*	*49.1%*	*17.2%*	*11.4%*	*23.9%*	*23.9%*	*23.9%*	*23.9%*

Source: Based on WCIRB calendar yer data calls for calendar years prior to 2013 (black). Based on WCIRB medical transaction data for calendar years 2013 and forward (red). Projected calendar years (blue) based on the latest available calendar year.

Pharmaceuticals - Proportion of Total Medical Paid in that Period

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985																		7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	34.7%	27.0%	25.9%	30.6%	31.5%	*31.5%*	*31.5%*	*31.5%*
1986																	7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	40.7%	35.4%	24.1%	31.5%	27.1%	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1987																7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	27.8%	25.6%	29.0%	17.3%	20.8%	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1988															7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	29.1%	22.1%	20.9%	15.2%	12.4%	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1989														7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	25.2%	25.4%	22.3%	17.2%	15.1%	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1990													7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	36.0%	37.9%	32.4%	29.8%	22.5%	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1991												7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	44.7%	41.9%	42.0%	32.6%	28.6%	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1992											7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	41.2%	29.1%	25.3%	18.4%	14.9%	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1993										7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	37.9%	38.0%	26.5%	13.0%	11.7%	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1994									7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	35.7%	33.9%	31.0%	24.9%	18.0%	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1995								7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	26.4%	23.6%	19.1%	19.0%	15.1%	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1996							7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	33.5%	33.6%	28.1%	19.6%	14.7%	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1997						7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	35.0%	32.1%	29.5%	25.5%	22.2%	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1998					7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	30.2%	31.4%	25.7%	20.8%	16.6%	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
1999				7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	35.2%	31.8%	26.3%	16.6%	14.5%	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2000			7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	36.1%	34.7%	28.9%	20.5%	15.2%	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2001		7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	33.2%	30.9%	27.2%	20.7%	15.8%	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2002	7.6%	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	28.8%	24.2%	21.3%	14.4%	11.0%	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2003	9.7%	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	28.6%	25.7%	22.1%	15.7%	12.4%	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2004	10.6%	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	27.9%	25.9%	22.8%	17.4%	14.2%	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2005	11.3%	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	25.2%	24.5%	21.3%	17.0%	15.3%	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2006	12.0%	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	24.2%	22.5%	20.7%	16.1%	14.1%	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2007	10.7%	10.4%	12.1%	11.5%	12.5%	12.5%	21.3%	20.3%	17.5%	14.1%	11.7%	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2008	10.4%	12.1%	11.5%	12.5%	12.5%	18.8%	18.0%	16.4%	13.7%	12.6%	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2009	12.1%	11.5%	12.5%	12.5%	15.4%	15.1%	14.0%	11.8%	9.6%	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2010	11.5%	12.5%	12.5%	13.8%	13.8%	12.8%	10.4%	10.0%	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2011	12.5%	12.5%	11.6%	11.9%	10.6%	8.5%	7.5%	*10.0%*	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2012	12.5%	8.4%	11.0%	9.7%	7.3%	6.5%	*7.5%*	*10.0%*	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2013	5.4%	8.1%	8.9%	6.8%	5.8%	*6.5%*	*7.5%*	*10.0%*	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2014	4.7%	6.1%	5.7%	5.4%	*5.8%*	*6.5%*	*7.5%*	*10.0%*	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2015	3.8%	3.8%	4.5%	*5.4%*	*5.8%*	*6.5%*	*7.5%*	*10.0%*	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2016	2.8%	2.9%	*4.5%*	*5.4%*	*5.8%*	*6.5%*	*7.5%*	*10.0%*	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*
2017	2.1%	*2.9%*	*4.5%*	*5.4%*	*5.8%*	*6.5%*	*7.5%*	*10.0%*	*9.6%*	*12.6%*	*11.7%*	*14.1%*	*15.3%*	*14.2%*	*12.4%*	*11.0%*	*15.8%*	*15.2%*	*14.5%*	*16.6%*	*22.2%*	*14.7%*	*15.1%*	*18.0%*	*11.7%*	*14.9%*	*28.6%*	*22.5%*	*15.1%*	*12.4%*	*20.8%*	*27.1%*	*31.5%*	*31.5%*	*31.5%*	*31.5%*

Source: Based on WCIRB calendar yer data calls for calendar years prior to 2013 (black). Based on WCIRB medical transaction data for calendar years 2013 and forward (red). Projected calendar years (blue) based on the latest available calendar year.

Other Medical Fee Schedules (Medical-legal, Medical-liens, Dental, Copy Services, Interpreter) - Proportion of Total Medical Paid in that Period

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985									13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	7.5%	10.4%	15.5%	11.1%	6.3%	6.3%	6.3%	6.3%
1986								13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	4.8%	4.9%	4.6%	5.9%	15.0%	6.3%	6.3%	6.3%	6.3%
1987							13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	5.2%	6.9%	6.3%	6.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1988						13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	5.2%	4.2%	4.0%	6.5%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1989					13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	3.0%	2.6%	6.4%	4.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1990				13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	3.3%	5.4%	2.8%	2.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1991			13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	5.9%	6.0%	4.2%	5.4%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1992		13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	5.8%	7.8%	7.0%	7.3%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1993	13.8%	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	4.4%	3.3%	4.1%	9.8%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1994	13.8%	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	3.2%	5.6%	6.2%	3.9%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1995	11.3%	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	2.5%	4.6%	3.5%	3.5%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1996	7.6%	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	4.0%	8.4%	8.2%	6.6%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1997	5.9%	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	5.8%	7.1%	6.1%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1998	5.0%	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	4.9%	6.2%	7.1%	7.0%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
1999	3.9%	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	6.9%	7.8%	9.5%	10.0%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2000	3.8%	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	8.3%	8.6%	10.9%	8.8%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2001	3.2%	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	8.1%	10.3%	12.6%	13.3%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2002	2.3%	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	8.9%	11.6%	11.3%	11.3%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2003	2.7%	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	11.9%	15.6%	14.5%	12.9%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2004	3.6%	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	14.4%	17.4%	16.9%	18.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2005	4.9%	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	13.6%	18.4%	18.6%	17.8%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2006	5.0%	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	17.1%	21.8%	22.2%	22.1%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2007	4.6%	5.7%	5.3%	5.3%	5.8%	5.8%	18.7%	23.9%	25.4%	24.2%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2008	5.7%	5.3%	5.3%	5.8%	5.8%	22.3%	26.9%	28.0%	28.4%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2009	5.3%	5.3%	5.8%	5.8%	23.5%	30.6%	31.7%	32.8%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2010	5.3%	5.8%	5.8%	23.8%	32.8%	34.9%	35.3%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2011	5.8%	5.8%	20.1%	30.1%	34.5%	37.9%	34.4%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2012	5.8%	8.2%	25.2%	33.2%	39.1%	35.4%	34.4%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2013	1.5%	10.1%	25.8%	37.1%	36.3%	35.4%	34.4%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2014	1.8%	11.1%	28.2%	33.4%	36.3%	35.4%	34.4%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2015	1.6%	12.6%	24.1%	33.4%	36.3%	35.4%	34.4%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2016	2.2%	11.1%	24.1%	33.4%	36.3%	35.4%	34.4%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%
2017	1.8%	11.1%	24.1%	33.4%	36.3%	35.4%	34.4%	31.3%	28.7%	22.8%	19.4%	16.1%	17.3%	13.5%	12.4%	9.8%	8.4%	7.2%	6.9%	6.8%	5.1%	3.8%	6.2%	3.5%	2.5%	4.3%	6.7%	3.6%	4.2%	2.0%	5.8%	15.0%	6.3%	6.3%	6.3%	6.3%

Note: Although there is no medical lien fee schedule, many components of lien are for services that were subjected to a fee schedule.

Source: Based on WCIRB calendar yer data calls for calendar years prior to 2013 (black). Based on WCIRB medical transaction data for calendar years 2013 and forward (red). Projected calendar years (blue) based on the latest available calendar year.

Proportion of Medical Subject to Fee Schedule (Sum of Exhibits 2.1 to 2.6)

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985	66.5%	60.4%	61.0%	64.9%	64.7%	66.1%	63.1%	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*
1986	60.4%	61.0%	64.9%	64.7%	66.1%	63.1%	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1987	61.0%	64.9%	64.7%	66.1%	63.1%	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1988	64.9%	64.7%	66.1%	63.1%	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1989	64.7%	66.1%	63.1%	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1990	66.1%	63.1%	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1991	63.1%	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1992	62.8%	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1993	70.3%	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1994	69.1%	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1995	68.1%	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1996	66.3%	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1997	64.4%	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1998	73.6%	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
1999	72.7%	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2000	71.5%	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2001	72.2%	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2002	71.0%	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2003	78.6%	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2004	95.2%	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2005	93.7%	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2006	92.6%	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2007	92.4%	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2008	89.4%	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2009	89.4%	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2010	89.4%	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2011	96.8%	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2012	96.8%	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2013	93.8%	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2014	92.8%	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2015	93.3%	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2016	91.8%	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*
2017	90.6%	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*	*90.6%*

Note: Each figure is the sum of the figures shown in Exhibits 2.1 through 2.6.

Proportion of Medical Not Subject to Fee Schedule

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985	33.5%	39.6%	39.0%	35.1%	35.3%	33.9%	36.9%	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%
1986	39.6%	39.0%	35.1%	35.3%	33.9%	36.9%	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%
1987	39.0%	35.1%	35.3%	33.9%	36.9%	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1988	35.1%	35.3%	33.9%	36.9%	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1989	35.3%	33.9%	36.9%	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1990	33.9%	36.9%	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1991	36.9%	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1992	37.2%	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1993	29.7%	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1994	30.9%	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1995	31.9%	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1996	33.7%	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1997	35.6%	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1998	26.4%	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
1999	27.3%	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2000	28.5%	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2001	27.8%	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2002	29.0%	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2003	21.4%	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2004	4.8%	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2005	6.3%	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2006	7.4%	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2007	7.6%	10.6%	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2008	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2009	10.6%	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2010	10.6%	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2011	3.2%	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2012	3.2%	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2013	6.2%	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2014	7.2%	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2015	6.7%	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2016	8.2%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
2017	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%

Note: Each figure is 1.0 - [the figure shown in Exhibit 2.7].

Impact of Fee Schedule Change on Medical Costs

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	Age to 1/1/2020
1985	1.035	1.000	1.015	1.012	1.000	1.000	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1986	1.000	1.015	1.012	1.000	1.000	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000
1987	1.015	1.012	1.000	1.000	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			1.000
1988	1.012	1.000	1.000	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				1.000
1989	1.000	1.000	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					1.000
1990	1.000	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000						1.000
1991	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000							1.000
1992	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000								1.000
1993	1.000	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000									1.000
1994	0.948	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000										1.000
1995	1.000	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000											1.000
1996	1.000	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000												1.000
1997	1.000	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000													1.000
1998	1.000	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000														1.000
1999	1.022	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000															1.000
2000	1.007	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																1.000
2001	1.021	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																	1.000
2002	1.009	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																		1.000
2003	1.000	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																			1.000
2004	1.000	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																				1.000
2005	1.000	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																					1.000
2006	1.000	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																						1.000
2007	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																							1.000
2008	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																								
2009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																									1.000
2010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000																										1.000
2011	1.000	1.000	1.000	1.000	1.000	1.000	1.000																											1.000
2012	1.000	1.000	1.000	1.000	1.000	1.000																												1.000
2013	1.000	1.000	1.000	1.000	1.000																													1.000
2014	1.000	1.000	1.000	1.000																														1.000
2015	1.000	1.000	1.000																															1.000
2016	1.000	1.000																																1.000
2017	1.000																																	1.000

Note: The estimated impact of SB 863 provisions effective in 2013 as well as the impact of the transition of the physician fee schedule to a resource-based relative value scale (RBRVS) basis beginning in 2014 are not included in this exhibit. These factors are included in column (2) of Exhibit 5.

Source: Based on the WCIRB's evaluation of the cost impact of changes in the medical fee schedules.

Cumulative Fee Schedule Changes to 1/1/2020 Level*

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985	1.047	1.047	1.032	1.019	1.019	1.019	1.019	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1986	1.047	1.032	1.019	1.019	1.019	1.019	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1987	1.032	1.019	1.019	1.019	1.019	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1988	1.019	1.019	1.019	1.019	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1989	1.019	1.019	1.019	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.019	1.019	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.019	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.019	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.019	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.075	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.075	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.075	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.075	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.075	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.052	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.045	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.024	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	1.014	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.014	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.014	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.014	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	1.014	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2007	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2008	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2015	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2016	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2017	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

*Based on Exhibit 3.1 and the product of all future changes through the projected policy year. For example, the 1985 at 12-month factor of 1.047 is the product of the annual fee schedule change from 24 months to 1/1/2020

Annual Medical CPI Changes for Medical Services Not Subject to Fee Schedules

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	Age to 1/1/2020
1985	1.065	1.091	1.074	1.077	1.086	1.104	1.106	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022	1.071
1986	1.091	1.074	1.077	1.086	1.104	1.106	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022		1.071
1987	1.074	1.077	1.086	1.104	1.106	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022			1.071
1988	1.077	1.086	1.104	1.106	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022				1.071
1989	1.086	1.104	1.106	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022					1.071
1990	1.104	1.106	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022						1.071
1991	1.106	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022							1.071
1992	1.081	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022								1.071
1993	1.073	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022									1.071
1994	1.043	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022										1.071
1995	1.030	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022											1.071
1996	1.030	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022												1.071
1997	1.022	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022													1.071
1998	1.022	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022														1.071
1999	1.033	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022															1.071
2000	1.043	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																1.071
2001	1.048	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																	1.071
2002	1.051	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																		1.071
2003	1.048	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																			1.071
2004	1.000	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																				1.071
2005	1.000	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																					1.071
2006	1.041	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																						1.071
2007	1.053	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																							1.071
2008	1.042	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																								1.071
2009	1.036	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																									1.071
2010	1.028	1.032	1.027	1.026	1.042	1.031	1.054	1.022																										1.071
2011	1.032	1.027	1.026	1.042	1.031	1.054	1.022																											1.071
2012	1.027	1.026	1.042	1.031	1.054	1.022																												1.071
2013	1.026	1.042	1.031	1.054	1.022																													1.071
2014	1.042	1.031	1.054	1.022																														1.071
2015	1.031	1.054	1.022																															1.071
2016	1.054	1.022																																1.071
2017	1.022																																	1.071

Source: Based on the Medical Care component of the Consumer Price Index.

Cumulative inflation Factors to 1/1/2020 Level* for Medical Services Not Subject to Fee Schedules

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+
1985	4.573	4.192	3.903	3.624	3.337	3.022	2.733	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071
1986	4.192	3.903	3.624	3.337	3.022	2.733	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071
1987	3.903	3.624	3.337	3.022	2.733	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071
1988	3.624	3.337	3.022	2.733	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1989	3.337	3.022	2.733	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1990	3.022	2.733	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1991	2.733	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1992	2.528	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1993	2.356	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1994	2.259	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1995	2.193	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1996	2.129	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1997	2.083	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1998	2.038	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
1999	1.973	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2000	1.892	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2001	1.805	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2002	1.718	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2003	1.639	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2004	1.639	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2005	1.639	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2006	1.575	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2007	1.495	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2008	1.435	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2009	1.385	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2010	1.347	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2011	1.306	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2012	1.271	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2013	1.239	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2014	1.189	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2015	1.153	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2016	1.094	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071
2017	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071	1.071

*Based on Exhibit 3.3 and the product of all future changes through the projected policy year. For example, the 1985 at 12-month of 4.573 is the product of the annual inflation factors from 24 months to 1/1/2020

Medical On-level Factors for Inflation and Fee Schedule Changes

AY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	420+	Total
1985	0.511	0.668	0.270	0.140	0.077	0.048	0.033	0.024	0.017	0.012	0.013	0.010	0.012	0.008	0.008	0.006	0.005	0.007	0.006	0.004	0.005	0.005	0.006	0.004	0.004	0.003	0.004	0.004	0.004	0.003	0.002	0.003	0.002	0.001	0.002	0.048	**1.976**
1986	0.515	0.615	0.238	0.130	0.069	0.049	0.034	0.019	0.016	0.012	0.013	0.011	0.009	0.007	0.008	0.006	0.007	0.006	0.006	0.006	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.004	0.005	0.004	0.002	0.001	0.002	0.051	**1.886**
1987	0.477	0.545	0.223	0.119	0.075	0.044	0.026	0.022	0.016	0.014	0.014	0.010	0.011	0.008	0.008	0.006	0.009	0.006	0.006	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.052	**1.755**
1988	0.437	0.528	0.210	0.122	0.070	0.040	0.029	0.022	0.019	0.013	0.011	0.010	0.008	0.010	0.007	0.007	0.005	0.005	0.006	0.007	0.005	0.006	0.005	0.005	0.005	0.005	0.004	0.003	0.002	0.003	0.002	0.004	0.002	0.001	0.002	0.045	**1.661**
1989	0.404	0.475	0.226	0.115	0.057	0.037	0.029	0.022	0.016	0.014	0.009	0.009	0.008	0.007	0.008	0.008	0.006	0.005	0.005	0.007	0.005	0.006	0.007	0.006	0.007	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.048	**1.573**
1990	0.358	0.515	0.211	0.098	0.056	0.041	0.031	0.023	0.014	0.011	0.011	0.010	0.011	0.010	0.006	0.005	0.005	0.006	0.005	0.005	0.005	0.005	0.006	0.004	0.004	0.003	0.002	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.043	**1.518**
1991	0.371	0.461	0.169	0.095	0.063	0.045	0.031	0.022	0.015	0.013	0.012	0.011	0.009	0.007	0.006	0.008	0.006	0.007	0.006	0.006	0.005	0.006	0.005	0.006	0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.044	**1.457**
1992	0.381	0.362	0.155	0.095	0.061	0.044	0.028	0.020	0.017	0.015	0.016	0.012	0.010	0.011	0.009	0.009	0.015	0.007	0.006	0.002	0.005	0.007	0.006	0.004	0.004	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.049	**1.381**
1993	0.338	0.331	0.139	0.081	0.054	0.037	0.030	0.023	0.023	0.019	0.018	0.016	0.012	0.010	0.012	0.011	0.010	0.010	0.009	0.009	0.012	0.010	0.007	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.319**
1994	0.306	0.317	0.146	0.082	0.053	0.040	0.032	0.030	0.024	0.024	0.020	0.014	0.015	0.012	0.014	0.011	0.010	0.011	0.008	0.009	0.009	0.008	0.007	0.006	0.006	0.007	0.003	0.003	0.003	0.004	0.003	0.005	0.002	0.002	0.002	0.058	**1.306**
1995	0.260	0.294	0.141	0.080	0.058	0.044	0.040	0.032	0.029	0.023	0.015	0.019	0.017	0.015	0.015	0.015	0.012	0.009	0.014	0.011	0.010	0.008	0.011	0.006	0.006	0.007	0.003	0.003	0.003	0.004	0.003	0.005	0.002	0.002	0.002	0.058	**1.277**
1996	0.240	0.285	0.129	0.086	0.066	0.051	0.042	0.037	0.027	0.022	0.019	0.021	0.019	0.016	0.015	0.013	0.011	0.012	0.011	0.010	0.008	0.006	0.010	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.002	0.002	0.054	**1.255**
1997	0.221	0.261	0.131	0.092	0.068	0.056	0.046	0.036	0.026	0.025	0.022	0.021	0.018	0.016	0.013	0.012	0.012	0.012	0.010	0.006	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.002	0.002	0.052	**1.220**
1998	0.181	0.238	0.134	0.095	0.072	0.060	0.042	0.032	0.028	0.024	0.024	0.024	0.017	0.015	0.015	0.013	0.014	0.011	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.179**
1999	0.161	0.234	0.143	0.106	0.077	0.053	0.039	0.031	0.025	0.024	0.025	0.020	0.020	0.013	0.013	0.015	0.013	0.011	0.008	0.007	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.002	0.002	0.054	**1.157**
2000	0.145	0.234	0.158	0.110	0.070	0.049	0.038	0.029	0.028	0.024	0.021	0.018	0.016	0.016	0.014	0.011	0.009	0.008	0.008	0.007	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.002	0.002	0.054	**1.133**
2001	0.129	0.234	0.160	0.096	0.061	0.047	0.037	0.031	0.028	0.025	0.023	0.017	0.018	0.018	0.014	0.010	0.009	0.008	0.008	0.007	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.002	0.005	0.002	0.002	0.002	0.055	**1.104**
2002	0.139	0.247	0.143	0.082	0.064	0.045	0.037	0.033	0.025	0.024	0.018	0.018	0.015	0.013	0.010	0.009	0.009	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.078**
2003	0.153	0.221	0.115	0.081	0.062	0.046	0.038	0.033	0.029	0.022	0.023	0.020	0.015	0.013	0.011	0.009	0.009	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.048**
2004	0.143	0.188	0.115	0.083	0.065	0.054	0.045	0.037	0.028	0.027	0.026	0.019	0.014	0.012	0.011	0.009	0.010	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.034**
2005	0.142	0.178	0.108	0.089	0.071	0.055	0.045	0.036	0.035	0.028	0.024	0.017	0.015	0.012	0.011	0.009	0.010	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.032**
2006	0.132	0.174	0.122	0.094	0.073	0.057	0.043	0.038	0.030	0.025	0.019	0.016	0.015	0.012	0.011	0.009	0.009	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.029**
2007	0.124	0.177	0.124	0.097	0.072	0.056	0.048	0.039	0.030	0.023	0.017	0.016	0.015	0.012	0.011	0.009	0.009	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.025**
2008	0.128	0.169	0.124	0.099	0.075	0.060	0.046	0.035	0.025	0.020	0.017	0.016	0.015	0.012	0.011	0.009	0.010	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.007	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.057	**1.022**
2009	0.120	0.168	0.125	0.102	0.082	0.061	0.044	0.032	0.023	0.020	0.017	0.016	0.015	0.012	0.011	0.009	0.010	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.007	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.057	**1.017**
2010	0.115	0.166	0.130	0.109	0.079	0.057	0.043	0.029	0.023	0.020	0.017	0.016	0.015	0.012	0.011	0.009	0.010	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.007	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.057	**1.012**
2011	0.111	0.175	0.135	0.105	0.076	0.057	0.038	0.029	0.023	0.020	0.017	0.016	0.015	0.012	0.011	0.009	0.010	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.007	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.057	**1.009**
2012	0.113	0.178	0.136	0.105	0.076	0.053	0.038	0.029	0.023	0.020	0.017	0.016	0.015	0.012	0.011	0.009	0.010	0.008	0.008	0.008	0.006	0.006	0.011	0.006	0.006	0.007	0.003	0.003	0.003	0.003	0.003	0.005	0.002	0.002	0.002	0.056	**1.010**
2013	0.121	0.181	0.140	0.105	0.071	0.052	0.037	0.029	0.023	0.020	0.017	0.016	0.015	0.012	0.010	0.009	0.009	0.008	0.008	0.007	0.006	0.006	0.011	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.002	0.002	0.055	**1.009**
2014	0.123	0.186	0.142	0.102	0.070	0.051	0.037	0.028	0.022	0.019	0.016	0.015	0.014	0.012	0.010	0.009	0.009	0.009	0.007	0.008	0.007	0.006	0.010	0.006	0.006	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.053	**1.008**
2015	0.127	0.193	0.140	0.101	0.069	0.050	0.036	0.028	0.022	0.019	0.016	0.015	0.014	0.012	0.010	0.009	0.009	0.009	0.007	0.007	0.007	0.006	0.010	0.006	0.005	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.052	**1.007**
2016	0.132	0.196	0.140	0.100	0.068	0.050	0.036	0.027	0.021	0.019	0.016	0.015	0.014	0.011	0.010	0.009	0.009	0.007	0.007	0.007	0.006	0.006	0.010	0.006	0.005	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.051	**1.007**
2017	0.136	0.197	0.140	0.100	0.068	0.049	0.035	0.027	0.021	0.019	0.016	0.015	0.014	0.011	0.010	0.008	0.009	0.007	0.007	0.007	0.006	0.006	0.010	0.006	0.005	0.006	0.003	0.003	0.003	0.003	0.002	0.004	0.002	0.001	0.002	0.050	**1.007**

Example: The 1985 at 12-month factor of 0.511 is equal to [66.5% (Exhibit 2.7) x 1.047 (Exhibit 3.2)+ 33.5% ([Exhibit 2.8) x 4.573 (Exhibit 3.4)] x 22.9% (Exhibit 1.2).

Total Medical Cost Level Factors

AY	Factor to 1/1/2020 Level for Medical Inflation & Fee Schedule Change (a) (1)	Factor to 1/1/2020 Level for Legislative Cost and Frequency Impacts (b) (2)	Composite Medical On-level Factor (3)=(1) x (2)
1986	1.886	0.543	1.024
1987	1.755	0.543	0.953
1988	1.661	0.543	0.902
1989	1.573	0.543	0.854
1990	1.518	0.456	0.692
1991	1.457	0.404	0.589
1992	1.381	0.439	0.606
1993	1.319	0.540	0.712
1994	1.306	0.552	0.722
1995	1.277	0.550	0.702
1996	1.255	0.547	0.687
1997	1.220	0.546	0.667
1998	1.179	0.485	0.572
1999	1.157	0.431	0.499
2000	1.133	0.403	0.456
2001	1.104	0.378	0.417
2002	1.078	0.400	0.431
2003	1.048	0.426	0.446
2004	1.034	0.644	0.666
2005	1.032	0.748	0.772
2006	1.029	0.788	0.810
2007	1.025	0.787	0.807
2008	1.022	0.783	0.800
2009	1.017	0.775	0.789
2010	1.012	0.775	0.785
2011	1.009	0.799	0.807
2012	1.010	0.840	0.849
2013	1.009	0.923	0.931
2014	1.008	0.971	0.979
2015	1.007	0.995	1.002
2016	1.007	0.998	1.005
2017	1.007	1.000	1.007

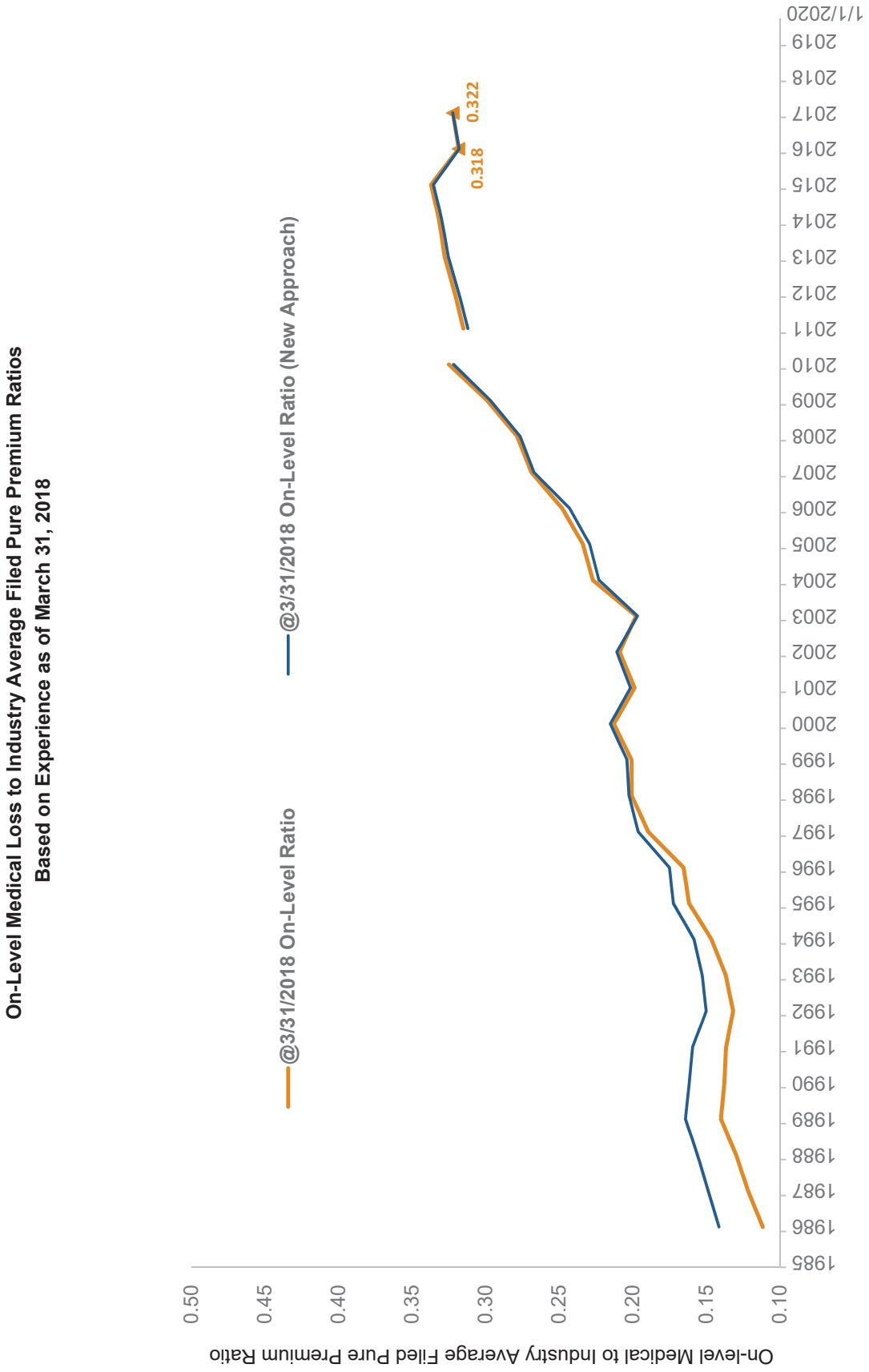
(a) See Exhibit 4
(b) Based on Section B, Exhibit 4.3 of January 1, 2019 Pure Premium Rate Filing

Projection of Medical Severity Trends by Accident Year
Based on Experience as of March 31, 2018

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Current Approach			New Approach		
Accident Year	Estimated Ultimate Severity(a)	Annual % Change	Medical Adjustment Factor(b)	Ultimate On-level Severity (1) x (3)	Annual % Change	Medical Adjustment Factor(c)	Ultimate On-level Severity (1) x (6)	Annual % Change
1990	8,821	---	0.921	8,123	---	1.080	9,529	---
1991	9,479	7.5%	0.903	8,563	5.4%	1.054	9,988	4.8%
1992	9,589	1.2%	0.873	8,368	-2.3%	0.994	9,528	-4.6%
1993	10,629	10.8%	0.856	9,096	8.7%	0.956	10,162	6.7%
1994	11,730	10.4%	0.899	10,548	16.0%	0.972	11,402	12.2%
1995	13,438	14.6%	0.891	11,976	13.5%	0.950	12,763	11.9%
1996	14,445	7.5%	0.882	12,746	6.4%	0.934	13,487	5.7%
1997	17,153	18.7%	0.876	15,030	17.9%	0.908	15,574	15.5%
1998	21,008	22.5%	0.772	16,218	7.9%	0.779	16,366	5.1%
1999	24,076	14.6%	0.669	16,105	-0.7%	0.679	16,353	-0.1%
2000	27,041	12.3%	0.615	16,622	3.2%	0.622	16,807	2.8%
2001	32,145	18.9%	0.560	18,013	8.4%	0.568	18,257	8.6%
2002	32,486	1.1%	0.582	18,907	5.0%	0.587	19,080	4.5%
2003	31,006	-4.6%	0.611	18,932	0.1%	0.608	18,847	-1.2%
2004	28,689	-7.5%	0.808	23,170	22.4%	0.793	22,750	20.7%
2005	29,556	3.0%	0.808	23,871	3.0%	0.792	23,400	2.9%
2006	32,291	9.3%	0.804	25,976	8.8%	0.788	25,444	8.7%
2007	36,008	11.5%	0.789	28,425	9.4%	0.784	28,244	11.0%
2008	39,143	8.7%	0.786	30,777	8.3%	0.781	30,558	8.2%
2009	41,303	5.5%	0.783	32,346	5.1%	0.777	32,095	5.0%
2010	41,504	0.5%	0.781	32,406	0.2%	0.773	32,096	0.0%
2011	41,334	-0.4%	0.803	33,172	2.4%	0.795	32,856	---
2012	38,809	-6.1%	0.843	32,718	-1.4%	0.836	32,446	-1.2%
2013	35,934	-7.4%	0.927	33,293	1.8%	0.920	33,042	1.8%
2014	34,446	-4.1%	0.985	33,923	1.9%	0.979	33,728	2.1%
2015	33,575	-2.5%	1.007	33,810	-0.3%	1.002	33,650	-0.2%
2016	33,358	-0.6%	1.006	33,559	-0.7%	1.005	33,516	-0.4%
2017	34,414	3.2%	1.006	34,621	3.2%	1.007	34,642	3.4%
Estimated Annual Exponential Trend Based on				1990 to 2017:	6.1%		1990 to 2017:	5.5%
				2005 to 2017:	2.5%		2005 to 2017:	2.7%
				2013 to 2017:	0.7%		2013 to 2017:	0.9%

(a) See Section B, Exhibits 6.3 and 6.4 of January 1, 2019 Pure Premium Rate Filing. Severities reflect the cost of medical cost containment programs (MCCP).
(b) See Section B, Exhibit 4.3 of January 1, 2019 Pure Premium Rate Filing.
(c) Based on Exhibit 5 excluding the impact of frequency.

Source: WCIRB experience calls


On-Level Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of March 31, 2018
@3/31/2018 On-Level Ratio
@3/31/2018 On-Level Ratio (New Approach)
0.322
0.318
On-level Medical to Industry Average Filed Pure Premium Ratio
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
1985
1986
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2019
1/1/2020

Item AC18-12-03
RMS Terrorism Risk Assessment

At the Actuarial Committee and Governing Committee's December 2017 meetings, it was recommended that staff pursue an updated study of potential terrorism losses. The last study of potential terrorism losses was completed in 2003 and an updated study could utilize the database developed for the 2017 study of earthquake losses.

Staff contracted with RMS to conduct an analysis of potential California workers' compensation terrorism losses that would be subject to the United States Terrorism Risk Insurance Program Reauthorization Act (TRIPRA) of 2015. RMS has completed its assessment, attached, and will present its findings to the Committee.

Workers' Compensation Risk Assessment California Terrorism

Report Prepared For:

Workers' Compensation Insurance Rating Bureau
October 2018

Disclaimer

This report has been prepared in accordance with the terms of an agreement between Risk Management Solutions (RMS®) and Workers' Compensation Insurance Rating Bureau (WCIRB), "the Client," for the sole and exclusive use of the Client and may not be used or relied upon by others without the prior written consent of RMS.

This report – and the analyses, models, and predictions contained within – are based on data provided by the Client and compiled using RMS proprietary computer risk assessment systems. These proprietary RMS systems are based on scientific data, mathematical and empirical models, and the encoded experience of counter terrorism experts, structural engineers, and epidemiologists. As with any model of complex physical systems, particularly those with low frequencies of occurrence and high-severity outcomes, errors are possible through no fault of RMS. Furthermore, the accuracy of the loss estimations presented in this report is largely dependent on the accuracy and quality of data supplied to RMS by the Client.

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Executive Summary

Executive Summary

RMS conducted a California terrorism risk assessment for the Workers' Compensation Insurance Rating Bureau (WCIRB) to determine the proportion of workers' compensation loss payable that is covered by insurers, the US government, and retained by the policyholders under the US Terrorism Risk Insurance Program Reauthorization Act (TRIPRA) for calendar year 2019. RMS quantified total workers' compensation losses using an analysis of exposure data from member companies of the WCIRB.

Key highlights from this study are described below.

Exposure Overview and Assumptions

Terrorism risk is very concentrated in nature and often varies significantly over small geographic areas. The resolution of address data is therefore very important in determining a location's proximity to targets, hazard level, and financial impact, given a terrorist attack occurs. The quantification of terrorism risk, as a result, is greatly dependent on the detail and positional accuracy of the underlying exposure data.

To ensure consistency with the corresponding WCIRB Earthquake Casualty Risk Assessment conducted in December 2017, RMS utilized the same exposure dataset and assumptions, as summarized below:

- The WCIRB portfolio contains 11.4 million full-time equivalent (FTE*) employees across 543,502 distinct locations in California, with a total payroll of $544 billion. The portfolio is structured so that each record consists of a location's data grouped by occupation class, resulting in a total of 993,123 records in the dataset.
- For 98% of the exposure, RMS was able to achieve a high level of positional accuracy (street address or better).
- Building attributes, such as number of stories or construction class, were not available. RMS was able to backfill this data for locations that geocoded to a building centroid. For the remaining locations, RMS utilized regional building stock to infer the building density mix based on the provided ZIP code.
- When evaluating workers' compensation losses for terrorism risk, in addition to considering the geographic location of exposure, the number of employees exposed to any particular attack must also be accounted for. Employees are only insured while working. The model attempts to capture the correct exposure by taking into consideration any available shift data. In the absence of such data, RMS utilizes an average industry distribution by occupation class to determine the FTE exposed at the time of an attack.
- When modeling terrorist attacks, RMS identifies likely terrorist targets that have a high symbolic value or the potential to cause significant economic damage or mass casualties. These include categories such as government buildings, stadiums, skyscrapers, tourist attractions. When modeling mobile exposure such as workers' compensation line of business, one needs to determine where people are located throughout the day to calculate potential losses from an attack. For this study, RMS chose 11 a.m. on a weekday to estimate the number of employees exposed as it represents the peak occupancy levels for most occupations.

*FTE: the equivalent number of employees who work 40 hours/week.

Cost Severities

RMS estimates the average cost (medical and indemnity) expected from a given injury state using a simulation approach that accounts for legal, regulatory, demographic, and medical treatment information on a U.S. state-level basis.

RMS caps the indemnity death benefit to a maximum of $320,000, corresponding to the maximum benefit for employees with three or more dependents. On WCIRB's request, RMS revised this death benefit to assume a maximum benefit of $290,000, reflecting the maximum benefit for employees with only two dependents. After re-running the simulation with this revision, the overall state-level death benefit reduced from $282,000 to $274,000.

Table 1 provides the modified cost severities for California using the new simulation with only two dependents per worker. This is the same cost severity scheme as was used for the 2017 WCIRB Earthquake Casualty Risk Assessment.

Table 1: Workers' compensation cost severities in California

Cost component	Medical only	Temporary total	Permanent partial-minor	Permanent partial-major	Permanent total	Fatal
Medical	$1,440	$10,300	$73,000	$365,000	$2,000,000	$120,000
Indemnity	$0	$7,300	$47,200	$194,000	$1,658,000	$274,000
Total	$1,440	$17,600	$120,200	$559,000	$3,658,000	$394,000

Loss Modeling

Table 2 illustrates the probabilities of activation for the program cap, program trigger, and deductible associated with the 2019 TRIPRA program. The WCIRB effective deductible is the portion of the TRIPRA deductible that is retained by WCIRB-member companies.

Based on an attack catalog drawing from approximately 60,000 terrorism events, RMS analysis suggests that there is a 9.5% probability of triggering the TRIPRA program (or exceeding $180 million for all TRIPRA eligible lines of business). This should not be interpreted as a 1-in-10 chance of terrorist attack. Instead, it indicates that the methodology used to generate the exceedance probability curve considers events which are very severe but unlikely due to pervasive counter-security measures. Because there are relatively few points on the exceedance probability curve that correspond to the lower return periods (i.e. <100 years), a mathematical interpolation is used to infer losses.

Using this interpolation, the likelihood of reaching the TRIPRA threshold ($180M) is 9.5%. RMS analysis also suggests there is a 0.26% probability (corresponding to a 391-year return period) that the workers' compensation losses will exceed the WCIRB effective deductible of $1.9 billion. Of the workers' compensation losses that exceed the WCIRB effective deductible and are below the program cap adjusted for workers' compensation line of business, the government retains 81%. The remaining 19% along with the deductible is covered by the WCIRB-member companies. Please refer to the "TRIPRA Overview" section for additional details.

Table 2: Probability of TRIPRA Program Activation

Program Structure	Value	Return Period	Critical Probability
Program CAP	$100,000,000,000	15,173	0.0066%
TRIPRA Deductible Activation	$31,069,998,200	2,524	0.0396%
WCIRB Effective Deductible Activation	$1,918,099,004	391	0.2557%
Program Trigger	$180,000,000	10	9.5867%

The workers' compensation loss retained by the WCIRB-member companies under the TRIPRA Program is referred to as *Net-Insured Retained*. Key metrics in respect to the net-insured retained losses are listed below:

- 1-in-10,000-year net-insured retained loss of $5.0 billion
- 1-in-5,000-year net-insured retained loss of $3.8 billion
- 1-in-500-year net-insured retained loss of $2.0 billion
- An average net-insured retained loss per year of $21 million, with an average loss rate per FTE of $1.85 and an average loss rate per $100 payroll of $0.0039

Central business districts (CBD) and skyscrapers are the top loss-causing target categories. Without the TRIPRA program, they incur an average annual loss of $14.8 million and $9.1 million, respectively. Under the TRIPRA Program, each comprises of an average net-insured loss of $8.6 million per year.

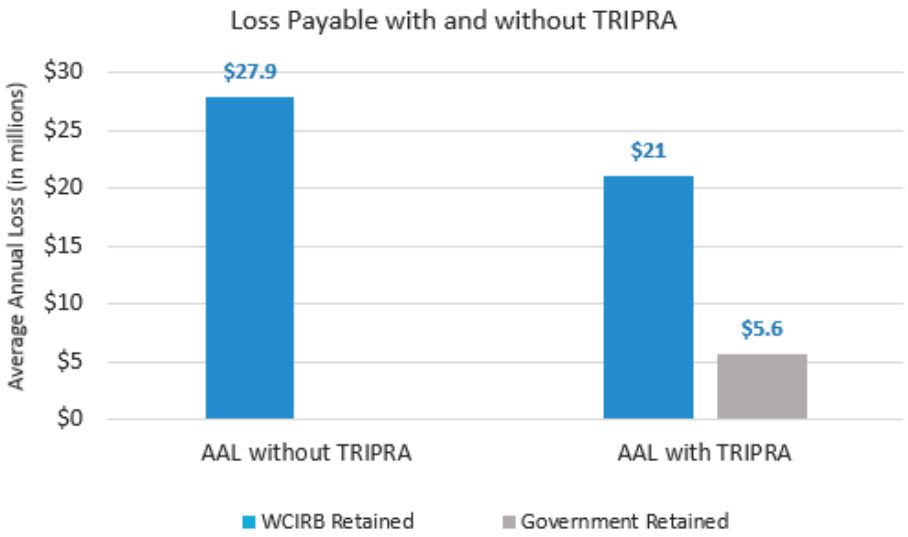
Biological anthrax attacks account for the highest average annual losses to the WCIRB portfolio without TRIPRA. When factoring in the 2019 TRIPRA structure, however, it is the 600 lb. bomb that results in the largest net-insured retained average annual losses, with a value of $8.9 million.

Although Los Angeles has the most exposure, San Francisco generates the highest loss, with an average annual loss of $16.7 million to the WCIRB portfolio without TRIPRA and $12.2 million in net-insured loss payable with the 2019 TRIPRA Program. This is due to the high density of exposure and potential terrorist targets in San Francisco.

TRIPRA Effect on Loss Payable

Figure 1 depicts the average annual loss (AAL) payable by WCIRB-member companies and by the government with and without the 2019 TRIPRA Program.

Figure 1: WCIRB Loss payable with and without TRIPRA



Without TRIPRA, the WCIRB average annual loss payable is $27.9 million. With TRIPRA, $1.3 million of this loss lies above the program cap. The remaining loss of $26.6 million is shared between the government and WCIRB. $5.6 million is retained by the government, and $21 million is retained by WCIRB-member companies, reducing their loss payable by 25% due to the TRIPRA program.

Analysis Settings and Assumptions

This risk assessment was conducted using Version 4.2.18 of the RMS Probabilistic Terrorism Model (PTM), released in the summer of 2018. This model incorporates updates to reflect recent trends in the terrorism risk landscape, including an update of the global target database. The model only considers macro attacks that can potentially result in huge economic losses (in excess of US$1 billion) or casualties of more than 20 fatalities and/or 100 injuries.

The model uses an attack catalog of 66,365 events across the United States. All attack modes were incorporated in this analysis, including conventional and chemical, biological, radiological, and nuclear (CBRN) attacks. Results were modeled using a standard risk outlook, which represents the best assessment of the risk of macro-scale terrorism loss for the current parametrization.

Details of the model methodology can be found in the “Model Methodology” section.

Exposure Summary

Exposure Summary

The WCIRB provided exposure data represented by aggregate payroll and the number of FTE by occupation class. The dataset consisted of 993,123 records in the state of California with coordinate and street-level address information by employer for each member company. RMS utilized the FTE data and street-level address information for each location and occupation type.

As done in the WCIRB Earthquake Casualty Risk Assessment, RMS geocoded the dataset using the street-level address information, resulting in 98% of the exposure corresponding to a high-resolution geocode match (street level or better). Table 3 provides a breakdown of the WCIRB portfolio by geocode resolution.

Table 3: Total FTE and total payroll by geocode resolution

Geocode resolution	Number of records	Total FTE*	Total payroll (in millions)	% of total FTE	% of total payroll	Description of resolution
Building	30,386	630,290	$37,498	5.6%	6.9%	Geocodes to the exact center of the building footprint.
Parcel	713,817	8,210,299	$390,324	72.3%	71.8%	Geocodes to the exact center of the parcel boundaries for street address match.
Street	234,057	2,328,739	$107,157	20.5%	19.7%	Geocoder achieves a fine level of positional accuracy by interpolating the location of the property along a street segment.
Street name	4,108	59,156	$2,645	0.5%	0.5%	Geocoder achieves a level of positional accuracy based on the centroid along a set of street segments representing the street and an enclosing geography, such as the postal code.
Postal code	10,755	127,369	$5,966	1.1%	1.1%	Geocoder places the location on the centroid of the postal code (e.g., U.S. zip code) in which it falls. Postal-code centroids are exposure and population weighted to provide a better representation of exposure. Population-weighted centroids and geographic centroids are not usually the same place.
Total	993,123	11,355,852	$543,586	100%	100%	

* The FTE has been rounded to 0 decimal places for presentation purposes only. The model itself captures the fractional employees.

Note: Employees of temporary staffing firms are allocated to their estimated places of employment.

Exposure by RMS Employee Occupation Classification

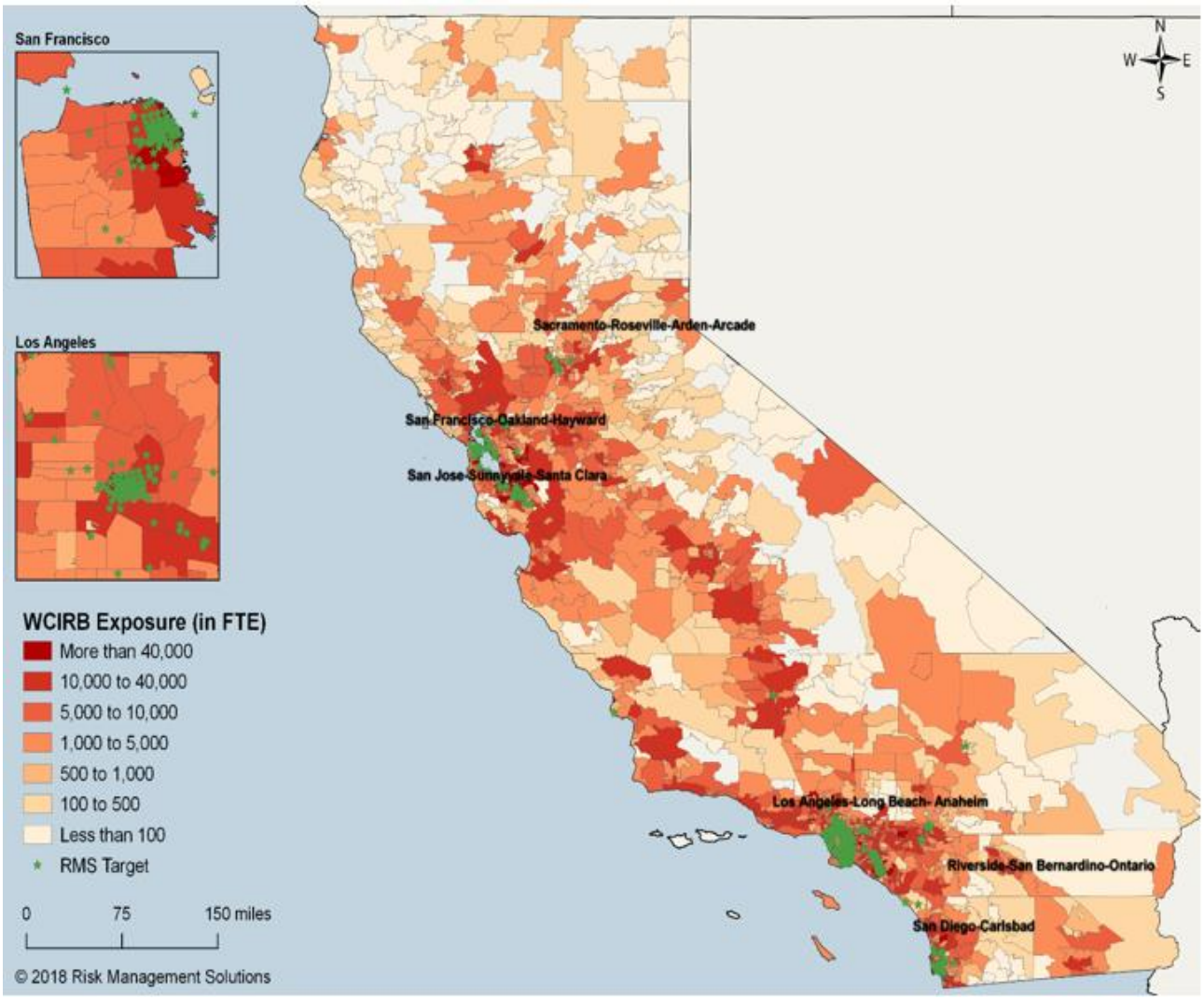
RMS utilized the employee descriptions provided by WCIRB to map each FTE's occupation to the RMS workers' compensation occupation classification (WCOCC) scheme, as used by our model. Table 4 depicts how the data is classified by occupation with the time-of-day adjustments made to each occupation class.

Table 4: Total FTE and total payroll by RMS occupation classification

RMS workers' compensation occupation classification	Total FTE	Total payroll (in millions)	% of total FTE	% of total payroll	Time-of-day adjustment (11 a.m.)
1 – Office	6,157,080	$362,477	54%	67%	75%
3 - Heavy and other manufacturing	1,356,548	$55,647	12%	10%	73%
5 - Retail trade	1,365,352	$46,049	12%	8%	62%
6 – Restaurant	708,933	$17,475	6%	3%	52%
2 - Light manufacturing	633,819	$17,670	6%	3%	70%
4 - Wholesale trade	365,066	$12,719	3%	2%	75%
13 – Construction	348,623	$13,637	3%	3%	82%
14 – Medical	348,028	$15,043	3%	3%	70%
8 - Hotel/Motel	72,403	$2,869	1%	1%	53%
Total	11,355,852	$543,586	100%	100%	

Exposure Distribution

Figure 2: FTE Exposure Map



Exposure by Metropolitan Statistical Area (MSA)

Figure 2 depicts the exposure from the WCIRB portfolio relative to the location of RMS-identified targets. As illustrated by both this map and Table 5, exposure is highest in the Los Angeles-Long Beach-Anaheim MSA, accounting for about 35% of the portfolio's total FTE. The San Francisco-Oakland-Hayward MSA and the San Jose- Sunnyvale-Santa Clara MSA consist of 17% and 11%, respectively, of the portfolio's exposure. Together, these three metropolitan areas make up about 63% of WCIRB's exposure. As the map suggests, these MSAs also have large concentrations of RMS Targets, indicating that the WCIRB exposure lies in high-risk areas.

Table 5: Exposure by MSA

Metropolitan Statistical Area (MSA)	Total FTE	% of total FTE
Los Angeles-Long Beach-Anaheim	3,979,403	35%
San Francisco-Oakland-Hayward	1,897,708	17%
San Jose-Sunnyvale-Santa Clara	1,265,768	11%
San Diego-Carlsbad	1,013,942	9%
Riverside-San Bernardino-Ontario	761,999	7%
Sacramento-Roseville-Arden-Arcade	483,936	4%
All Remaining Exposure	1,953,096	17%
Total	11,355,852	100%

Within these MSAs, there are a few cities where exposure is highly concentrated. Table 6 lists the top ten cities in California, ranked by FTE. These top ten cities alone consist of 30% of the WCIRB portfolio's exposure. In addition to having the largest exposure, San Francisco and Los Angeles have the highest concentration of RMS Targets, signifying a greater risk of terrorist attacks.

Table 6: Top ten cities by exposure (FTE)

City	Total FTE	% of total FTE
Los Angeles	674,031	6%
San Francisco	607,137	5%
San Diego	595,795	5%
San Jose	381,469	3%
Irvine	269,434	2%
Mountain View	209,819	2%
Sacramento	188,022	2%
Santa Clara	183,797	2%
Fresno	138,305	1%
Palo Alto	131,347	1%
All Others	7,976,696	70%
Total	11,355,852	100%

Exposure Accumulation

Terrorism is an urban risk, predominantly in areas where there are large concentrations of people and business activity. Therefore, in addition to identifying the cities with the highest exposure, it is crucial to identify areas that have the most concentrated exposure, as it is the attacks in these areas that are likely to cause significant losses.

The RMS Terrorism Model incorporates two categories of attack modes: conventional attacks and chemical, biological, radiological, and nuclear (CBRN) attacks also called non-conventional attacks.

For conventional attacks, which are more likely to occur than CBRN attacks, the majority of the damage and human injury occurs within a 400-meter radius. RMS conducted an accumulation analysis on the WCIRB portfolio, using a 400-meter radius, to determine the areas that have the largest concentrations of exposure. This type of analysis helps in understanding where the highest potential loss could occur to the WCIRB portfolio.

Although Los Angeles has the highest overall exposure, the largest concentration of exposure for a 400-meter radius lies in the main central business district (CBD) in San Francisco, also known as the financial district, as indicated by Table 7. This accumulation area has the potential to impact 168,951 employees. This is in contrast with Los Angeles's highest exposure accumulation for a 400-meter radius (ranked number 3 in Table 7), which has the potential to impact 54,138 employees. This corresponds to Los Angeles' financial district. Given the concentrated nature of terrorism risk, even small attacks in high-accumulation areas such as these have the potential to result in large losses.

Table 7: Top 10 Exposure Accumulations in WCIRB portfolio for a 400-meter radius

Rank	City, Postal Code	Centroid Location	Total FTE
1	San Francisco, 94111	Within a CBD*: (Montgomery St. and California St.)	168,951
2	Mountain View, 94043	Googleplex (Google's largest global headquarters)	139,357
3	Los Angeles, 90071	CBD: Hope Pl and S Grand Ave	54,138
4	San Francisco, 94103	Jessie Square: 3rd St. and Mission St.	48,829
5	Los Angeles, 90067	Century Woods Drive	44,121
6	Cupertino, 95014	Apple Headquarters	37,072
7	Palo Alto, 94304	Stanford Hospital	32,286
8	San Jose, 95134	Samsung Semiconductor	31,330
9	San Francisco, 94108	Wentworth Pl. and Jackson St.	30,784
10	Los Angeles, 90017	Multiple CBDs and skyscrapers	30,126

*RMS-defined central business district (CBD) targets are locations that are part of the central district of a city, usually characterized by a high concentration of retail and office buildings.

TRIPRA Overview

- TRIPRA Overview
-2019 TRIPRA Structure
-Effective Workers' Compensation Deductible Calculation

TRIPRA Overview

On January 12, 2015, President Obama signed into law the Terrorism Risk Insurance Program Reauthorization Act (TRIPRA), which extends the Terrorism Risk Insurance Act, commonly known as TRIA, through December 31st, 2020. The act serves to reduce the level of federal coverage of insured terrorism losses through 2020 by incrementally increasing the program trigger and the insurer's co-participation percentage on a yearly basis. Culminating in 2020, the government share under TRIPRA will cover between 80 to 85% of the insured losses, depending on the calendar year. The program trigger will increase by $20 million each year until 2020, when the program trigger will reach $200 million. The program cap for each year will be $100 billion in aggregate industry losses. Please refer to Table 8 below for a breakdown of the TRIPRA structure by year from 2015 to 2020.

Table 8: TRIPRA Structure Changes from 2015-2020

Calendar Year	Minimum Attack Size (i.e. Program Trigger)	Percent Covered by Government	Percent Covered by insurance Industry
2015	$100 million	85%	15%
2016	$120 million	84%	16%
2017	$140 million	83%	17%
2018	$160 million	82%	18%
2019	$180 million	81%	19%
2020	$200 million	80%	20%

As per TRIPRA, each primary insurer's deductible will be 20% of its prior calendar-year direct earned premium (DEP) for all TRIPRA-eligible lines. Figure 3 lists these TRIPRA-eligible lines of business, classified as either property, workers' compensation, or all other lines of business.

Figure 3: TRIPRA-eligible Lines of Business

Aircraft
Allied Lines
Boiler and Machinery
Excess Workers' Compensation
Fire
Inland Marine
Ocean Marine
Other Liability (Claims)
Other Liability (Occurrence)
Workers' Compensation
Commercial Multi Peril (Non Liability)
Commercial Multi Peril (Liability)
Product Liability

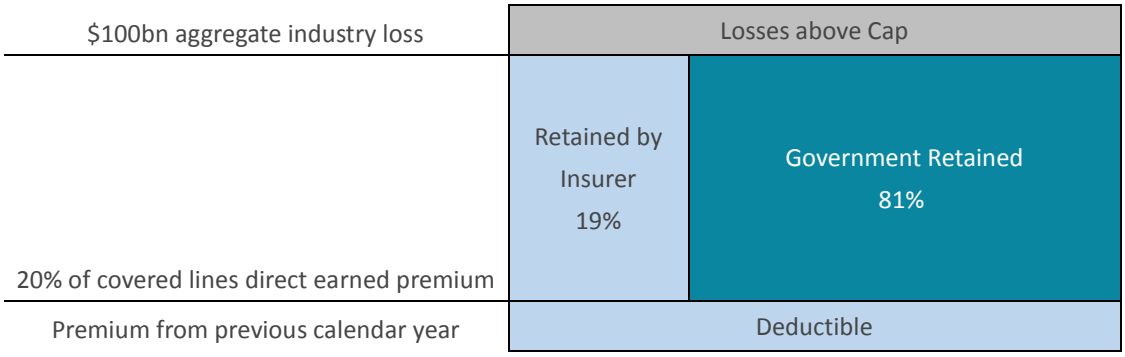
Lines of Business Classification Legend

Property	
Workers' Compensation	
All Other Lines	

2019 TRIPRA Structure:

For this analysis, RMS used the 2019 TRIPRA structure, as illustrated in the figure below. In order for the program to trigger, the minimum attack loss must be $180 million. Losses retained by the government are in excess of the deductible, less the insured participation of 19%, adjusted to the $100 billion program cap for the entire insurance industry. The deductible and the remaining 19% share will be covered by the insurance companies (net-insured retained).

Figure 4: 2019 TRIPRA Program Structure



TRIPRA: Effective Workers' Compensation Deductible Calculation

To obtain the national TRIPRA deductible value, RMS gathered 2017 nationwide Direct Earned Premium (DEP) statistics by insurer for all TRIPRA-eligible lines of business using S&P Global Market intelligence data (SNL.com). 2017 was the most up to date information available in SNL. The national TRIPRA deductible across all insurers in California summed up to $31 billion across all TRIPRA-eligible lines of business.

To calculate WCIRB's share of the deductible, which only corresponds to the workers' compensation (WC) line of business, RMS disaggregated the total TRIPRA deductible based on the three broad groups – WC, property, and all other lines, as outlined in Figure 3. Based on the 9/11 attack, RMS assumes 10% of the TRIPRA deductible is allotted to "all other lines".

The remaining deductible is distributed between the workers' compensation and property lines of business based on their expected proportion of average annual loss resulting from terrorist attacks in California. To determine this ratio, RMS modeled losses using its proprietary 2018 Industry Exposure Databases for property and workers' compensation exposure. This resulted in 87% of the remaining deductible to be covered by the property line of business, and 13% to be covered by the workers' compensation line of business.

Since not all insurers will be impacted by a terrorist attack, RMS assumes insurers that have a higher workers' compensation market share would more likely be affected; consequently, they would have a higher probability of paying out the workers' compensation deductible. RMS used each insurer's share of workers' compensation DEP in California as a proxy for their market share. The top twenty-five workers' compensation insurers make up 90.8% of the total DEP in California. The workers' compensation deductible for each group (the top 25 insurers and the remaining) is weighed by their respective market share. The resulting deductible is referred to as the *Effective Deductible* and is incurred by the entire workers' compensation industry in California.

To capture WCIRB's share of the effective deductible, RMS weighed the effective deductible by the ratio of WCIRB's expected loss with respect to the industry's expected WC loss. The subsequent WCIRB deductible was calculated to be $1.9 billion.

Loss Summary

-Loss Overview

-Exceedance Probability Analysis

-Loss Analysis

Loss Overview

Terrorist attacks are executed with the intention of inflicting maximum loss, whether it be in the form of economic loss or number of casualties. As such, workers' compensation losses will be maximized when the highest number of employees are exposed. Because human exposure is mobile, the number of employees exposed varies depending on the time of day and day of week. Based on industry averages across occupations, 11 a.m. is expected to be the peak time at which the maximum number of employees are present at work, Therefore, for this study, RMS uses 11 a.m. on a weekday to estimate terrorism casualties.

TRIPRA Program Activation

RMS analysis uses an attack catalog of about 66,000 terrorism events with 11 a.m. peak exposure adjustment option and a standard risk outlook.

The analysis suggests that there is a 9.5% probability of triggering the TRIPRA program. However, this does not imply a 1-in-10 chance of a terrorist attack exceeding the TRIPRA trigger. This merely implies the methodology used to generate the exceedance probability curve considers events which are very severe but unlikely to occur due to the counter-terrorism measures. Consequently, there are very few points on the exceedance probability curve corresponding to the lower return period. A mathematical interpolation is used to measure the losses at shorter return periods. Using this interpolation, the likelihood of reaching the TRIPRA threshold ($180M) is 9.5%.

Additionally, the probability of losses reaching the WCIRB effective deductible of 1.9 billion is 0.26%. The probability of exhausting the TRIPRA program with the cap of $100 billion is 0.006%, corresponding to a 15,173-year return period.

Exceedance Probability Analysis

Table 9 illustrates the probability of losses exceeding various thresholds due to one or more attacks in a given year for the peak exposure adjustment (11 a.m.) scenario.

RMS analysis suggests that there is a 0.1% probability (corresponding to a 1000-year return period) that one or more terrorist attacks will cause at least $2.3 billion in net-insured losses under TRIPRA.

Without TRIPRA, the average annual WCIRB loss is $27.9 million. Adjusted for the TRIPRA program cap, the average annual WCIRB loss becomes $26.6 million of which $21 million is retained by the WCIRB and $5.6 million is retained by the government. This implies the average annual loss payable by WCIRB is reduced by 25% under TRIPRA.

Despite only having a participation rate of 19%, the WCIRB retains a majority of the average annual loss, in part, because the higher likelihood events are those attacks that have losses below the deductible, as illustrated by the low probability of exceeding the WCIRB effective deductible (0.26%). WCIRB covers all losses until this deductible is reached.

$13.8 million or 66% of the $21 million net-insured average annual loss lies below the WCIRB effective deductible and hence is entirely retained by the WCIRB. The remaining 34% lies above the deductible and is shared proportionately between WCIRB and the government based on their respective participation rate (19% for WCIRB and 81% for the government).

With TRIPRA, the net-insured will sustain an average loss of $1.85 per FTE and an average loss rate per $100 payroll of $0.0039.

Table 9: Key Return Period Losses

Critical probability	Return period (years)	WCIRB AEP Loss (in millions)			
		WCIRB Loss Without TRIPRA	WCIRB Losses - Adjusted for TRIPRA Program Cap**	Net-Insured Retained Loss	Government Retained WCIRB Loss
0.0020%	50,000	$77,278	$39,482	$9,055	$30,427
0.0040%	25,000	$36,352	$25,928	$6,480	$19,448
0.0100%	10,000	$18,104	$18,104	$4,993	$13,111
0.0200%	5,000	$11,758	$11,758	$3,788	$7,970
0.0400%	2,500	$8,075	$8,075	$3,088	$4,987
0.1000%	1,000	$4,142	$4,142	$2,341	$1,802
0.2000%	500	$2,354	$2,354	$2,001	$353
1.0000%	100	$332	$332	$332	$0
Average loss per year*		**$27.9**	**$26.6**	**$21.0**	**$5.6**
Average loss rate per $100		$0.0051	$0.0039		
Average loss rate per FTE		$2.4553	$1.8499		

*Average annual loss represents the loss averaged over all aggregate exceedance probability (AEP) levels.

**WCIRB adjusted losses account for the allocation of the loss to WCIRB after the program cap is applied.

Loss Analysis

Top Losses

Table 10 lists the five most severe terrorist attacks that impact the WCIRB portfolio without the TRIPRA program. All these attacks are extreme cases – chemical, biological, radiological or nuclear (CBRN) attacks – and most of them occur in central business districts in San Francisco due to large outdoor attacks.

Table 10: Top 5 Attacks by WCIRB Losses (in millions) without TRIPRA

Rank	Target Name	Target Type	Method of Attack*	WCIRB Loss Without TRIPRA	WCIRB Loss Adjusted for Program Cap	With TRIPRA	
						Net-Insured Retained AAL	Government Retained WCIRB AAL
1	California St. and Montgomery St.	Central Business District	Nuclear Bomb Large	$100,764	$39,718	$9,100	$30,618
2	Stevenson St. and 6th St.	Central Business District	Biological - Anthrax Large, Outdoors (SE)	$97,155	$26,191	$6,530	$19,661
3	California St. and Montgomery St.	Central Business District	Biological - Anthrax Large, Outdoors (SE)	$91,288	$25,668	$6,431	$19,237
4	Green St. and Jones St.	Central Business District	Biological - Anthrax Large, Outdoors (SE)	$91,181	$25,663	$6,430	$19,233
5	The Embarcadero and Bryant St.	Central Business District	Biological - Anthrax Large, Outdoors (SE)	$85,376	$25,181	$6,338	$18,843

*Outdoor attacks include wind direction

Given that the top five attacks are almost all caused by the same method of attack, Table 11 provides more insight on the maximum loss value (without the TRIPRA program) per attack mode. Ranked by maximum loss incurred by WCIRB without TRIPRA, the table illustrates losses with different magnitudes, resulting in a total of thirty-five attack modes. The table shows that losses from large smallpox, arson, dirty bombs, nuclear plant sabotage, hazmat, industrial explosions, toxic releases, and small sarin gas attacks do not exceed the deductible value of $1.9 billion, leading WCIRB to retain all of their associated losses.

Moreover, small and medium smallpox attacks, apart from the genetically engineered versions, cause losses below the 2019 TRIPRA Program trigger; consequently, losses from these attacks are also entirely covered by the WCIRB.

Table 11: Maximum WCIRB Loss (in millions) Without TRIPRA Per Attack Mode

						With TRIPRA	
Method of Attack	**Target Name**	**Target Type**	**City**	**WCIRB Attack Loss without TRIPRA**	**WCIRB Loss Adjusted for Program Cap**	**Net-Insured Retained Loss**	**Government Retained WCIRB Loss**
Large Nuclear Bomb	California St and Montgomery St	Central Business District	San Francisco	$100,764	$39,718	$9,100	$30,618
Large Biological Attack - Anthrax	Stevenson St and 6th St	Central Business District	San Francisco	$97,155	$26,191	$6,530	$19,661
Indoor Chemical Attack - Sarin Gas	Google	HQ of Fortune 100 Company	Mountain View	$80,042	$26,672	$6,621	$20,051
Small Nuclear Bomb	California St and Montgomery St	Central Business District	San Francisco	$64,868	$33,742	$7,965	$25,777
Medium Biological Attack - Anthrax	Green St and Jones St	Central Business District	San Francisco	$40,076	$19,489	$5,257	$14,232
Indoor Biological Attack - Anthrax	Google	HQ of Fortune 100 Company	Mountain View	$38,951	$31,182	$7,478	$23,704
Small Biological Attack - Anthrax	Stevenson St and 6th St	Central Business District	San Francisco	$21,866	$15,349	$4,470	$10,879
10 Ton Bomb	California St and Montgomery St	Central Business District	San Francisco	$10,984	$10,532	$3,555	$6,977
5 Ton Bomb	California St and Montgomery St	Central Business District	San Francisco	$9,066	$8,835	$3,232	$5,603
2 Ton Bomb	California St and Montgomery St	Central Business District	San Francisco	$6,762	$6,622	$2,812	$3,810
1 Ton Bomb	California St and Montgomery St	Central Business District	San Francisco	$5,421	$5,341	$2,568	$2,773
Large Biological - Genetically Engineered Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$5,209	$2,379	$2,006	$373
Aircraft Impact	Spear Tower	Skyscraper	San Francisco	$5,082	$5,066	$2,516	$2,550
Large Chemical Attack - Sarin Gas	Montgomery St and Gold St	Central Business District	San Francisco	$4,803	$4,598	$2,427	$2,171
Medium Chemical Attack - Sarin Gas	Montgomery St and Gold St	Central Business District	San Francisco	$2,442	$2,437	$2,017	$420
600 lb. Bomb	Wells Fargo	HQ of Fortune 100 Company	San Francisco	$2,375	$2,371	$2,004	$367
Large Biological Attack - Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$1,742	$1,317	$1,317	$0
Arson (conflagration)	Wells Fargo	HQ of Fortune 100 Company	San Francisco	$1,717	$1,608	$1,608	$0
Large Dirty Bomb	California St and Montgomery St	Central Business District	San Francisco	$1,321	$1,285	$1,285	$0
Nuclear Plant Sabotage	San Onofre	Nuclear Power Plant	Camp Pendleton	$1,066	$432	$432	$0
Sabotage – Industrial Toxic Release - Large	Witco Corp Allied Kelite Div	Industrial Facility	Los Angeles	$877	$877	$877	$0
Small Dirty Bomb	California St and Montgomery St	Central Business District	San Francisco	$736	$730	$730	$0

Table 11: Maximum WCIRB Loss (in millions) Without TRIPRA Per Attack Mode (continued)

						With TRIPRA	
Method of Attack	**Target Name**	**Target Type**	**City**	**WCIRB Attack Loss without TRIPRA**	**WCIRB Loss Adjusted for Program Cap**	**Net-Insured Retained Loss**	**Government Retained WCIRB Loss**
Hazmat Transportation	Los Angeles Hazmat (1)	Hazmat Transportation	Los Angeles	$672	$672	$672	$0
Sabotage - Industrial Explosion- Large	Ciba-Geigy Corp Furane Produc	Industrial Facility	Los Angeles	$637	$637	$637	$0
Medium Biological Genetically Engineered Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$531	$516	$516	$0
Sabotage -Industrial Explosion- Medium	Ciba-Geigy Corp Furane Produc	Industrial Facility	Los Angeles	$393	$393	$393	$0
Sabotage - Industrial - Explosion + Release - Large	Bp Chemicals Inc.	Industrial Facility	Hawthorne	$384	$384	$384	$0
Sabotage - Industrial Explosion - Small	Exxon Company Usa	Oil Refinery	Benicia	$317	$317	$317	$0
Small Chemical Attack - Sarin Gas	California St and Montgomery St	Central Business District	San Francisco	$309	$309	$309	$0
Sabotage – Industrial Toxic Release -Medium	Alta Photographic Inc	Industrial Facility	San Diego	$261	$261	$261	$0
Sabotage - Industrial Explosion + Release -Medium	Merck & Co Inc Kelco Div	Industrial Facility	San Diego	$290	$290	$290	$0
Sabotage - Industrial Explosion + Release -Small	Merck & Co Inc Kelco Div	Industrial Facility	San Diego	$192	$192	$192	$0
Medium Biological Attack - Smallpox*	San Francisco City Center	Smallpox Epicenter	San Francisco	$147	$147	$147	$0
Small Biological Attack - Smallpox*	San Francisco City Center	Smallpox Epicenter	San Francisco	$20	$20	$20	$0
Sabotage – Industrial Toxic Release – Small**	Gallade Chemical Inc. Dba Oran	Industrial Facility	Santa Ana	$18	$18	$18	$0

*Indicates events that do not exceed the 2019 TRIPRA Program trigger of $180 million.

**When accounting for all TRIPRA covered lines of business, loss from small industrial toxic release attacks exceed the TRIPRA program trigger.

While the top attacks described in Tables 10 and 11 are high in severity, they have a low relative likelihood of occurring. This is because of the difficulty associated with the execution of these attacks – requiring specialized skills, dozens of terrorist personnel, months to years of planning, and heavy financial backing. Moreover, the possibility of detection for these attacks by counter terrorist forces is very high. As a result, the large CBRN attacks that make up the highest overall attack losses are not actually driving the highest average annual losses.

Instead, the highest average annual loss-causing attack, as portrayed by Table 12, results from a 600 lb. bomb. Although attacks from 600 lb. bombs have a relatively low severity, they are more likely to occur due to the comparatively fewer resources and less time needed for a successful attack. Thus, conventional attacks such as those from 600 lb. bombs play a more significant role in driving average annual loss payable.

Table 12: Maximum WCIRB Average Annual Loss (without TRIPRA) by Attack Mode

						With TRIPRA	
Attack Mode	**Target Name**	**Target Type**	**City**	**WCIRB AAL Without TRIPRA**	**WCIRB Loss Adjusted for Program Cap**	**Net-Insured Retained AAL**	**Government Retained WCIRB AAL**
600 lb. Bomb	California St and Montgomery St	Central Business District	San Francisco	$1,159,258	$1,157,487	$985,871	$171,616
Small Biological Attack - Anthrax	Union St and Castle St	Central Business District	San Francisco	$236,023	$174,618	$52,837	$121,781
Aircraft Impact	Spear Tower	Skyscraper	San Francisco	$195,850	$195,218	$96,963	$98,255
1 Ton Bomb	California St and Montgomery St	Central Business District	San Francisco	$131,649	$129,718	$62,380	$67,338
Small Nuclear Bomb	California St and Montgomery St	Central Business District	San Francisco	$81,101	$42,186	$9,958	$32,228
2 Ton Bomb	California St and Montgomery St	Central Business District	San Francisco	$41,637	$40,775	$17,313	$23,462
Arson* (conflagration)	California St and Montgomery St	Central Business District	San Francisco	$40,784	$38,364	$38,364	$0
5 Ton Bomb	Transamerica Pyramid	Skyscraper	San Francisco	$25,798	$25,033	$10,690	$14,343
Industrial Sabotage - Explosion + Release - Small	Bp Chemicals Inc	Industrial Facility	Hawthorne	$20,405	$20,405	$20,405	$0
Medium Biological Attack - Anthrax	Elm Ave and E Seaside Way	Central Business District	Long Beach	$20,371	$13,591	$4,509	$9,082
Hazmat Transportation	Los Angeles Hazmat (1)	Hazmat Transportation	Los Angeles	$12,304	$12,304	$12,304	$0
Large Nuclear Bomb	California St and Montgomery St	Central Business District	San Francisco	$10,243	$40,037	$925	$3,112
Small Dirty Bomb	California St and Montgomery St	Central Business District	San Francisco	$8,319	$8,015	$8,015	$0
10 Ton Bomb	US Security Bureau	Government Building	San Francisco	$8,100	$7,660	$2,920	$4,740
Indoor Chemical Attack - Sarin Gas	Bank America Ctr - Cal St	Skyscraper	San Francisco	$5,328	$5,328	$2,972	$2,356
Sabotage-Industrial Explosion -Small	Ciba - Geigy Corp Furane Produc	Industrial Facility	Los Angeles	$5,017	$5,017	$5,017	$0
Medium Chemical Attack - Sarin Gas	Montgomery St and Gold St	Central Business District	San Francisco	$4,513	$4,502	$3,726	$776
Indoor Biological Attack - Anthrax	Bank America Ctr - Cal St	Skyscraper	San Francisco	$4,309	$4,308	$4,075	$233
Large Dirty Bomb	California St and Montgomery St	Central Business District	San Francisco	$3,794	$3,144	$3,144	$0
Nuclear Plant Sabotage	San Onofre	Nuclear Power Plant	Camp Pendleton	$3,667	$1,486	$1,486	$0
Sabotage-Industrial Explosion – Medium	Ciba - Geigy Corp Furane Produc	Industrial Facility	Los Angeles	$3,542	$3,542	$3,542	$0
Large Biological Attack - Anthrax	Central Ave and Magnolia Ave	Central Business District	Riverside	$3,447	$1,376	$387	$989

Table 12: Maximum WCIRB Average Annual Loss (without TRIPRA) by Attack Mode (continued)

						With TRIPRA	
Attack Mode	Target Name	Target Type	City	WCIRB AAL Without TRIPRA	WCIRB Loss Adjusted for Program Cap	Net-Insured Retained AAL	Government Retained WCIRB AAL
Sabotage –Industrial Explosion + Release - Medium	Bp Chemicals, Inc.	Industrial Facility	Hawthorne	$2,375	$2,375	$2,375	$0
Small Biological Attack - Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$1,885	$1,885	$1,885	$0
Sabotage-Industrial Explosion – Large	Ciba - Geigy Corp Furane Produc	Industrial Facility	Los Angeles	$1,355	$1,355	$1,355	$0
Medium Biological Attack - Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$1,020	$1,020	$1,020	$0
Large - Genetically Engineered Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$992	$453	$382	$71
Small Chemical Attack - Sarin Gas	Bank America Ctr - Cal St	Skyscraper	San Francisco	$785	$785	$785	$0
Medium Genetically Engineered Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$539	$524	$524	$0
Large Chemical Attack - Sarin Gas	The Embarcadero and Pier 19	Central Business District	San Francisco	$965	$886	$493	$393
Sabotage –Industrial Explosion + Release - Large	Bp Chemicals, Inc.	Industrial Facility	Hawthorne	$404	$404	$404	$0
Large Biological Attack - Smallpox	San Francisco City Center	Smallpox Epicenter	San Francisco	$394	$298	$298	$0
Industrial Sabotage - Toxic Release - Medium	Courtaulds Aerospace Inc Chem	Industrial Facility	Glendale	$288	$288	$288	$0
Industrial Sabotage - Toxic Release - Small	Spraylat Corp LA Div	Industrial Facility	Los Angeles	$265	$265	$265	$0
Industrial Sabotage - Toxic Release - Large	Witco Corp Allied Kelite Div	Industrial Facility	Los Angeles	$132	$132	$132	$0

Loss Drivers

To understand what is driving these losses, RMS investigated the components that are typically considered by terrorists to maximize the utility of an attack. This includes target location, target category, and the choice of attack mode.

Targets are chosen depending on the potential symbolic value or consequential economic loss and number of casualties they can cause. In terms of choosing an attack mode, a judgement must be made based on a comparative assessment between the level of difficulty in utilizing a mode of attack versus the role that attack mode can have in generating losses.

Outlined below are the key attack characteristics in terms of target locations, target categories, and attack modes that are driving the average annual losses for the WCIRB portfolio.

Losses by Geography

Over the past decade, terrorism attacks worldwide have demonstrated that there is an overall tendency for terrorist groups to concentrate their macro-attacks on major and popular cities. Table 13 ranks the top ten cities that generate the highest average annual losses to the WCIRB portfolio.

Table 13: Top Ten Cities by WCIRB Average Annual Loss (in millions) without TRIPRA

City	WCIRB AAL without TRIPRA	WCIRB AAL Adjusted for Program Cap	With TRIPRA	
			Net-Insured Retained AAL	Government Retained WCIRB AAL
San Francisco	$16.70	$15.81	$12.18	$3.63
Los Angeles	$6.43	$6.29	$5.31	$0.98
Oakland	$1.68	$1.58	$1.06	$0.52
Long Beach	$0.91	$0.89	$0.79	$0.10
San Diego	$0.90	$0.89	$0.78	$0.11
San Jose	$0.50	$0.46	$0.31	$0.15
Burbank	$0.11	$0.11	$0.11	$0.00
Irvine	$0.11	$0.08	$0.04	$0.04
Santa Ana	$0.10	$0.08	$0.04	$0.04
Anaheim	$0.10	$0.08	$0.05	$0.03
All Others	$0.35	$0.34	$0.33	$0.01
Total AAL	**$27.9**	**$26.6**	**$21.0**	**$5.6**

As illustrated in Table 13, the top average annual loss-causing cities for the WCIRB portfolio consist of San Francisco, Los Angeles, Oakland, Long Beach, and San Diego, making up 95% of the average annual WCIRB losses with and without TRIPRA.

San Francisco is the primary loss driver, generating 60% of the WCIRB average annual losses payable without TRIPRA and 58% with TRIPRA. As seen in Tables 10, 11, and 12, most severe attacks occur in San Francisco. This, along with the presence of highly concentrated exposure, contributes to San Francisco's large losses.

The top loss-driving cities are consistent with the top loss-causing MSAs, as highlighted in Figure 5 and Table 14, with San Francisco-Oakland-Hayward retaining 66% of the average annual WCIRB losses without TRIPRA and 63% of their losses with TRIPRA

Figure 5: Top 3 Metro Areas by WCIRB Average Annual Loss

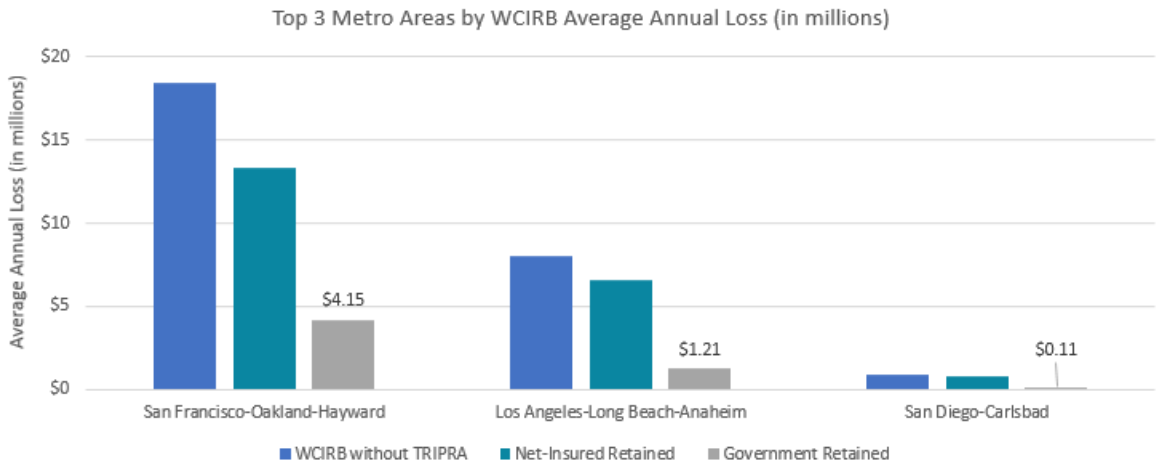


Table 14: Average Annual Loss (in $) to WCIRB Portfolio By MSA

			With TRIPRA	
Metropolitan Statistical Area (MSA)	**WCIRB AAL without TRIPRA**	**WCIRB AAL Adjusted for Program Cap**	**Net-Insured Retained AAL**	**Government Retained WCIRB AAL**
San Francisco-Oakland-Hayward	$18,371,899	$17,396,645	$13,245,770	$4,150,875
Los Angeles-Long Beach-Anaheim	$7,996,978	$7,773,879	$6,566,789	$1,207,090
San Diego-Carlsbad	$902,935	$895,814	$783,738	$112,076
San Jose-Sunnyvale-Santa Clara	$499,969	$460,449	$310,022	$150,427
Sacramento-Roseville-Arden-Arcade	$57,590	$57,567	$55,677	$1,890
Riverside-San Bernardino-Ontario	$46,766	$43,353	$39,405	$3,948
Others	$4,948	$5,947	$5,947	$0
Total Loss	**$27,881,085**	**$26,633,654**	**$21,007,348**	**$5,626,306**

Target Categories

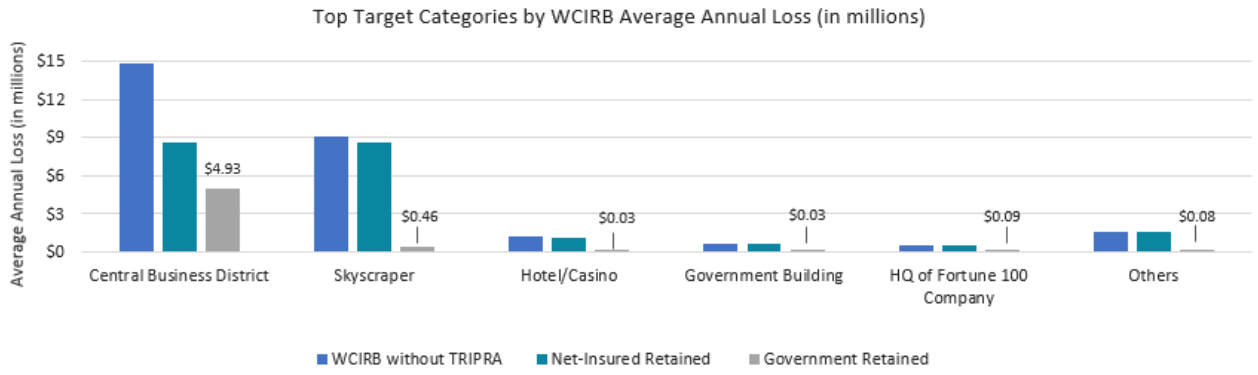
Within these cities and metropolitan areas, there are zones and structures that are more vulnerable to terrorism risk. Buildings gain validity as targets if they are symbolic of political and economic power. For example, within a sizeable city such as San Francisco, a wide variety of targets exist, ranging from government offices to skyscrapers, hotels, and economic power houses.

RMS has developed its own proprietary target database that includes potential targets - buildings or structures that, if attacked, would result in significant property damage, economic interruption, loss of human life or have a high symbolic impact. These high-risk areas typically consist of central business districts, revered buildings,

corporate headquarters, major industrial or nuclear facilities, and skyscrapers.

As depicted in Figure 6, the targets that sustain the highest average annual losses for the WCIRB portfolio include RMS-defined central business districts, skyscrapers, hotels and casinos, government buildings, and headquarters of Fortune 100 companies. These five categories alone generate 94% of all WCIRB average annual losses and 93% of their net-insured retained average annual losses with TRIPRA.

Figure 6: WCIRB Average Annual Loss by Top Target Categories



Amongst all target categories, central business districts account for about $14.8 million or 53% of the overall WCIRB average annual losses without TRIPRA. Characterized as areas of highest commercial activity within a city, central business districts were created by RMS to capture locations that might be more vulnerable to terrorist attacks due to the presence of multiple high-profile targets (office and retail buildings).

Apart from central business districts, skyscrapers are the second highest loss-causing target category, making up 33% of the overall WCIRB average annual losses without the TRIPRA program.

Under TRIPRA, both central business districts and skyscrapers are the primary loss drivers for the WCIRB portfolio, each accounting for 41%, or $8.6 million, of the average annual net-insured retained losses.

Attack Methods

The RMS Terrorism Model takes into consideration eleven primary modes of attack, categorized into non-conventional-CBRN or conventional attacks. For select attack modes, RMS models multiple magnitudes, providing different vulnerabilities given a small, medium, or large attack. For example, conventional bombs modeled by RMS range from 600 lb. to 10 tons. Additionally, the model accounts for a range of potential outcomes by incorporating climactic conditions such as wind speed and direction and considering whether the attack occurs indoors or outdoors.

Table 15 depicts average annual WCIRB losses by attack mode and illustrates the breakdown of total losses between the two broad attack mode categories: CBRN or conventional. Tables 10 and 11 portrayed how CBRN attacks cause the most severe losses. Table 12 provided us with the insight that a 600 lb. bomb attack causes the maximum average annual loss to the WCIRB portfolio. Consistent with this finding, apart from anthrax

attacks, Table 15 shows that conventional attacks are the primary average annual loss drivers. In fact, with a net-insured retained loss of $8.9 million, the 600 lb. bomb is the primary loss-causing attack mode for the net-insured, accounting for 43% of their total average annual losses.

Amongst the CBRN modes of attack, biological anthrax attacks are the most likely weapon of choice due to the relatively lower cost of production and skills needed to develop it. Compared to conventional attacks, anthrax attacks still cause significantly more damage in terms of the number of fatalities due to their high-severity nature. Hence, they rank high as a contributor to WCIRB average annual losses.

Table 15: Average Annual Loss (in $) by Attack Mode

			With TRIPRA	
Attack Methods	WCIRB AAL without TRIPRA	WCIRB AAL Adjusted for Program Cap	Net-Insured Retained AAL	Government Retained WCIRB AAL
Biological – Anthrax	$10,869,478	$9,857,105	$5,524,802	$4,332,303
Nuclear Bomb	$644,286	$445,753	$153,845	$291,908
Chemical Sarin Gas	$246,959	$245,754	$224,379	$21,375
Sabotage - Industrial - Explosion	$163,580	$163,580	$163,580	$0
Dirty Bomb	$158,769	$154,561	$154,561	$0
Sabotage – Hazmat	$40,115	$40,115	$40,115	$0
Sabotage - Industrial - Toxic	$18,513	$18,513	$18,513	$0
Biological – Smallpox	$16,172	$15,294	$15,223	$71
Sabotage - Nuclear Plant	$5,486	$3,056	$3,056	$0
Total CBRN	**$12,163,358**	**$10.943,731**	**$6,298,074**	**$4,645,657**
600 lb. Bomb	$9,199,660	$9,196,971	$8,945,273	$251,698
Aircraft Impact	$1,977,789	$1,977,106	$1,805,067	$172,039
1 Ton Bomb	$1,773,744	$1,770,594	$1,640,853	$129,741
Conflagration	$1,044,348	$1,035,272	$1,035,272	$0
2 Ton Bomb	$784,436	$782,617	$683,543	$99,074
5 Ton Bomb	$725,881	$719,651	$477,905	$241,746
10 Ton Bomb	$211,869	$207,712	$121,362	$86,350
Total Conventional	**$15,717,727**	**$15,689,923**	**$14,709,275**	**$980,648**
Total Average Annual Loss	$27,881,085	$26,633,654	$21,007,349	$5,626,305

Due to the comparably low-severity nature of conventional attacks, they might not cause losses over the $1.9 billion deductible, leading the WCIRB-member companies or the insured to retain all or a majority of the losses. As a result, the insured retain a greater proportion of losses from conventional attacks than they do from CBRN attacks.

Without TRIPRA, the WCIRB-member companies have an average annual loss payable of $12.2 million from CBRN attacks.

Table 16 shows that with the TRIPRA 2019 program, the government retains 42% of the program-cap adjusted CBRN average annual losses. This amounts to a decrease of 48% in net-insured average annual loss payable to only $6.3 million.

By contrast, the government retains only 6% of the program-cap adjusted average annual losses for conventional attacks under TRIPRA and only 3% of the loss caused by 600 lb. bombs. The net-insured, as a result, retain 94% of all conventional and 97% of all 600 lb. bombs program-cap adjusted average annual losses. Due to this high retention by the net-insured, attacks by 600 lb. bombs play a much more significant role in driving the net- insured losses as opposed to anthrax attacks, which have a net-insured retention of only 56%.

Overall, with TRIPRA, the government retains 21% of the total WCIRB average annual losses under the program cap and above the deductible, causing a 25% decrease in average annual loss payable by WCIRB-member companies.

Table 16: Average Annual Loss Retention Percentages with TRIPRA per Attack Mode

Attack Mode	% Net-Insured Retained	% Government Retained	% Decrease in WCIRB AAL Payable with TRIPRA
CBRN	58%	42%	-48%
Conventional	94%	6%	-6%
Major Components			
Biological – Anthrax	56%	44%	-49%
600 lb. Bomb	97%	3%	-3%
Total Average Annual Loss	79%	21%	-25%

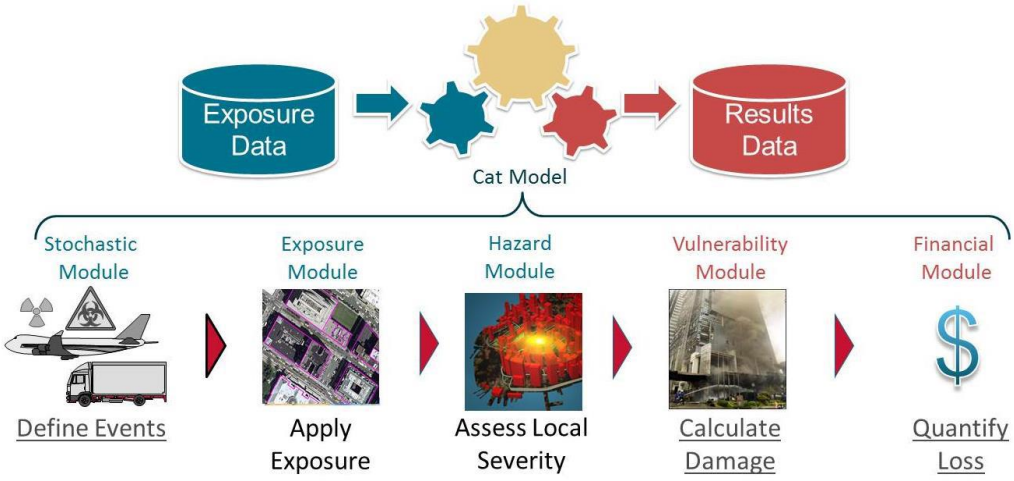
Model Methodology

Model Methodology

Terrorism Scope

RMS defines the scope of terrorism modeled in this study as terrorism directed at the United States. The focus is on macro-terrorist attacks which will lead to massive economic losses, large losses of life, and/or destruction of symbolic targets. Foreign groups including Al-Qaida, Islamic State, and the global Salafi-jihadi movement are representative of the terrorist threat analyzed.

Figure 7: Model Composition



The RMS terrorism models are comprised of five modules as depicted in Figure 7 are described below:

- **Stochastic Events Module**: This contains the set of target/attack pairings that define scenario events for which losses are calculated along with the relative likelihood of different attacks, multiplicity, and the overall frequency of attacks
- **Exposure Module:** Exposure at risk is identified in terms of number of employees at risk for workers' compensation line of business and buildings, contents and business interruption as part of property line of business. Exposure must include high-resolution address information.
- **Hazard Module:** This module quantifies the hazard from each attack scenario in the event set at each location with exposure. The measure of hazard depends on the type of attack ranging from pressure waves for bomb blasts to contaminant dispersal for biological attacks. It takes into consideration the local building and environmental conditions.
- **Vulnerability Module:** It calculates the impact of an attack, in terms of injuries/fatalities to people and damage to property, as a function of hazard, building attributes, and geographic characteristics. This module provides the parameters for loss distribution in terms of a mean and standard deviation that accounts for secondary uncertainty associated with the losses from an event.
- **Financial Analysis Module:** The physical damage to buildings, their contents, and business interruption and their impacts on human exposure are translated into financial losses after applying financial structures such as policy limits, deductibles, and reinsurance treaties. The exceedance probability curve and average annual loss (AAL) is influenced by the risk outlook chosen (Standard, Increased, Reduced).

Stochastic Events Module

The stochastic events module defines the event set used to generate losses. Terrorism events are defined by a combination of targets, attack modes, and multiplicity. Targets are selected for inclusion in the RMS Target Database from a large inventory of potential locations based on a combination of quantitative value assessments and specialists' expert opinions. Attack modes include both conventional and CBRN attacks. Multiplicity accounts for the potential for swarm attacks (a coordinated event consisting of multiple attacks). Event rates for terrorism are calculated using a game theory engine which considers the utility of an attack, the logistical cost of an attack, and target hardening and security.

Identifying Targets

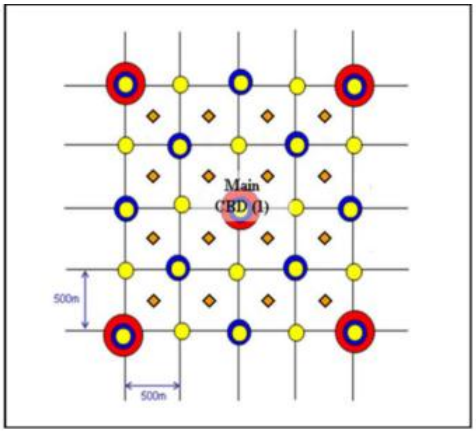
Targets are defined as geographic locations, buildings, or structures that, if attacked by terrorists, would result in significant property damage, economic interruption, or loss of human life, and would also have a high symbolic impact. RMS identifies the most likely terrorist targets for each modeled country. This includes locations with major concentrations of people and business activity, trophy buildings, and tourist attractions, as well as sites at which a terrorist attack could create considerable ancillary losses to the surrounding region, such as major nuclear and industrial facilities. The potential terrorist targets are selected and prioritized from the perspective of a terrorist seeking to maximize the utility of an attack. RMS targets are selected from a large inventory of potential targets based on quantitative value assessments along with specialists' expert opinions on likely target categories, locations, and methods of terrorist attack.

Creation of RMS-defined Central Business Districts

Central business district (CBD) targets are locations that are part of the central district of a city, usually characterized by a high concentration of retail and office buildings. Each CBD is identified using aerial photography with land use/land cover data, commercial property values, and employee counts. Additional target points are created using a consistent and predictable grid/numbering system so that the primary business district is covered. Average spacing between major points of the grid is 500 meters. Some CBD areas include intermediate points for improved resolution.

Figure 8 provides a visual illustration of how the CBD targets are located and the attack modes that correspond to each CBD target.

Figure 8: CBD Target Locations and Corresponding Attack Modes



Descriptions for the colors in Figure 8 follow:

- Yellow = 600 lb., 1-ton, 2-ton, and 5-ton bombs, conflagration, small dirty bombs, chemical-outdoor attacks
- Blue = large dirty bombs, small biological-outdoor anthrax attacks, small nuclear bombs
- Red = medium and large biological-outdoor anthrax attacks, large nuclear bombs
- Orange = 600 lb., 1-ton and 2-ton bombs, conflagration

Attack Modes

RMS defines attack mode scenarios by considering the relevant attack modes for each of the targets. Eleven primary attack modes including both conventional and CBRN (chemical, biological, radiological, and nuclear) Some of these have different magnitudes and/or consider climatic conditions, such as wind speed and wind direction to account for a range of potential outcomes. Each attack mode is described in the following tables.

Table 17: Conventional Attacks

Attack Mode	Magnitude	Other Details
Bomb – 600 lb.	600 lb. TNT equivalent	Passenger auto (sedan) size bomb
Bomb – 1 Ton	1 ton TNT equivalent	Minivan size bomb
Bomb – 2 Ton	2 ton TNT equivalent	Box van size bomb
Bomb – 5 Ton	5 ton TNT equivalent	Large van or moving truck size bomb
Bomb – 10 Ton	10 ton TNT equivalent	Semi tractor-trailer size bomb
Aircraft Impact	747 Commercial Airliner	September 11 type attack
Conflagration	9000-gasoline tanker	
Industrial Sabotage	Explosion, Explosion + Release, Release Only	Sabotage of a chemical or industrial facility resulting in a chemical explosion only

Table 18: CBRN Attacks

Attack Mode	Magnitude	Other Details
Chemical	Small - 10kg, Medium - 300kg, Large - 1,000kg Sarin Gas outdoors; 10kg Sarin gas indoors	Indoor and outdoor considered; 8 wind directions
Biological	1kg, 10kg, 75kg and Anthrax outdoors; 40kg Anthrax indoors Smallpox: Small (10 people infected); Medium (100 people infected); Large (1,000 people infected); Two levels of genetically engineered modeled (Medium and Large)	Indoor and outdoor Anthrax considered; eight wind directions
Radiological	Small - 1,500 curies; Large - 15,00 curies of Cesium 137	Also known as Dirty Bomb; 4 wind directions
Nuclear Bomb	Small - 1 kiloton; Large - 5 kiloton yield	
Nuclear Plant Sabotage	3 magnitudes of radioactive release	Attack on nuclear power plant; 8
Hazmat Transportation Sabotage	Release of 90 tons of liquid chlorine gas	Eight wind directions

Determination of Attack Scenario Probabilities

Each attack scenario, consisting of a specific combination of target and attack, is assigned a likelihood of occurrence relative to every other attack scenario for that country. This likelihood is based on the assumption that a successful terrorist attack occurs and is referred to as the *conditional probability*, which is required to generate probabilistic results. The conditional probability is based on a number of inputs including the relative likelihood of mode of attack, a relative likelihood of attack for each type of target, a relative likelihood of attack for the city in which the target is located, and weather statistics such as wind direction that may affect plume events.

- Relative likelihood of attack mode chosen: conventional bombs are easier to plan for and execute than CBRN attacks
- Relative likelihood of attack for each type of target: locations having high symbolic or economic importance are more likely to be targeted
- Relative likelihood of attack for the city in which the target is located (i.e. target city likelihood): As validated by the experiences in the last decade, major attacks are likely to be focused on major cities to maximize the political agenda of the terrorist.

Multiplicity

Terrorist organizations plan on executing multiple synchronous attacks to inflict maximum loss. Multiplicity in attacks are basically coordinated attacks committed by the same group within a given time frame. A synchronous attack involves two or more targets that are struck within 24 hours. Success is still claimable even if some of the synchronous attacks fail, as demonstrated by what happened on 9/11.

Exposure Module

The most critical elements of exposure for modeling workers' compensation due to terrorism are – the geographical resolution of the data, the number of employees, attributes of the building like construction and height and occupation of employees.

For terrorism analyses, data resolution is extremely important due to the concentrated nature of terrorism risk. Exposures geocoded at the lower resolutions like zip code level or worse can lead to inaccurate loss results. Building construction and height are the primary building attributes that impact vulnerability and losses are sensitive to these two attributes. In the case where building attributes are not known, regional building inventory averages are used.

Occupation information is important for casualty modeling because it determines the percentage of people that will be subject to a terrorist attack. For example, if an attack is modeled at 11 a.m. on a weekday, the percentage of office workers at work will be different than the percentage of restaurant workers at work. If occupation information is not available, the model will use building occupancy to infer the occupation of the employee.

To quantify occupation exposure, RMS recommends using the peak time of day, or 11 a.m. on a weekday. This expresses the worst-case scenario where terrorists maximize the utility of their attack by obtaining the highest number of total exposed lives across occupations.

Hazard Module

Hazard is a way of defining the physical characteristics of a terrorist attack.

Terrorism hazard is primarily determined by distance from an attack. The measure of hazard differs by attack mode as the hazard from a bomb blast is measured in pressure waves while the hazard from a biological or chemical attack is measured in dosage/deposition of contaminant.

In addition to varying by attack mode, terrorism hazard also differs by building characteristics (construction, height), target environment (for instance, sarin gas release inside or outside a building), and the size of the attack (. 1-versus 5-ton bomb).

Simulation of Attack Scenarios

Given a set of exposures, RMS performs a simulation of each attack scenario. RMS models scenarios by overlaying a hazard footprint at each target location. Hazard data is pre-compiled by variable resolution grids (VRG), which are as small as 50 meters by 50 meters in dense urban areas. Losses are determined based on the hazard level at each exposure location falling within the footprint.

Vulnerability Module

In both the casualty and property terrorism models, vulnerability represents the relationship between the level of hazard and casualties or hazard and mean damage. The casualty rate is defined as the number of people injured in each of the six injury classes described in Table 19 to the total number of people exposed to an event. Vulnerability for both the property and casualty terrorism model is primarily a function of building construction and building height. For terrorism, there are vulnerability curves for thirty different combinations of building construction and height. These curves translate the hazards from various types of terrorist attacks to casualty rates or mean damage ratios, which are then used to assign loss or compensation values.

Table 19: Injury Classes

Injury state	Description
No injury*	No bodily harm.
Medical only	Minor injury that can be easily treated and will not cause any permanent impairment. Examples include abrasions, lacerations, strains, sprains, contusions.
Temporary total	Injury that results in an individual's inability to work but from which the individual can fully recover within a reasonably short period of time. Examples include simple broken bones, loss of consciousness, serious strains, and sprains.
Permanent partial-minor	A permanent injury that results in ongoing partial disability. Examples include complicated fractures, serious joint injury, concussions, or minor crush injury.
Permanent partial-major	A permanent injury that results in a disability level greater than 25%, but less than total disability with no return to work. Examples include massive organ injury, heart laceration, loss of limb(s), or crushed extremities.
Permanent total	The most severe type of non-fatal injury. Results in a total disability state where the individual is unable to work again. Examples include spinal cord syndrome, crush syndrome, and massive head injury. These injuries require extended hospitalization.
Fatal	Immediate death or fatal injuries resulting in death.

* No loss is associated with the "no injury" classification, so there is no modeled output for this injury state

Causes of Injuries

The causes of injuries depend on the attack mode being modeled. For conventional bombs, injuries can result from three major sources:

- Damage from blast effects
- Flying fragment items (e.g., glass shards)
- Falling debris

For attack modes involving release of CBRN agents (e.g., sarin or anthrax), the injuries (quantity and severity) depend on the level of exposure to these agents, efficiency of detection (including time until infection treatment begins and ends), and available medical treatment programs during the immediate aftermath of an attack.

Another important consideration is that, typically, human casualty lines of business exposure is mostly indoors. This necessitates the consideration of how a particular attack outdoors would ultimately affect people indoors. For example, in the case of a bomb attack, flying glass or building debris are major causes of injuries, and the level of protection afforded varies according to building height, construction type, and construction quality. On the other hand, for the attacks involving the release of substances outdoors, buildings provide substantial shielding, thereby reducing the severity and number of injuries for people indoors. In this case, the infiltration ratio of indoor concentration to outdoor concentration is used to estimate indoor casualties.

Finally, for all attacks, the proportion of people outdoors and indoors is used to obtain a weighted average of outdoor and indoor casualties. The casualty rate is averaged across the building. This proportion is based on studies conducted by agencies responsible for health protection, on activity patterns of populations, with the objective of characterizing exposure to outdoor pollution.

Financial Module

Physical damage to buildings, their contents, and business interruption, and impacts on human exposure are translated into financial losses after applying relevant financial structures such as policy limits, deductibles, and reinsurance treaties applied by the financial module. Also, the exceedance probability (EP) loss curve and average annual loss is influenced by the risk outlook chosen (Standard, Increased, or Reduced).

Risk Outlooks

RMS provides three different risk outlooks to enable clients to carry out sensitivity analyses of how their risk management decisions might be affected if alternative views were taken into consideration. The three outlooks consist of:

- **Standard Risk Outlook:** This outlook represents the best assessment of the risk of macro-scale terrorism loss in each country for the current parameterization, resulting from the most active terrorism threat groups. The probability of attack is higher, but improved security measures have also reduced the chances of attacks succeeding. Medium-scale conventional attack modes predominate, multiple synchronous attacks are still likely, and the chance of a CBRN attack is small.

- **Increased Risk Outlook:** This risk outlook represents pessimistic interpretations of the available information and trends that would lead to increased risk of attempted attacks. During the year, there is a potential for a relaxation of security measures or events to take place that would provoke terrorist attacks at a higher level than those

incorporated in the RMS Standard threat assessment.

- **Reduced Risk Outlook:** This outlook incorporates optimistic interpretations of available intelligence and extrapolation of trends that would lead to a decreased view of terrorism risk. During the year, increasing counter-terrorism gains and improving security levels everywhere could produce a safer environment than that incorporated in the RMS Standard Risk Outlook.

Modeling Uncertainty in Losses

There are several sources of uncertainty in modeling the losses from a terrorist attack. RMS' Probabilistic Terrorism Model divides the uncertainty in two parts—the primary uncertainty arising from uncertainty in location of the attack with respect to the exposed employees, severity, and probability of occurrence of an attack; and the secondary uncertainty arising from the impact on the people from the attack. Both primary and secondary uncertainty are modeled separately for different classes of attacks.

Primary Uncertainty

Primary uncertainty is the uncertainty around whether an attack will occur, and if an attack does occur, which attack it will be. For terrorism, primary uncertainty is defined for each attack/target pair within the probabilistic model. The model considers the relative probability that a certain kind of attack will be carried out against a certain target. Attacks with conventional bombs are easier to plan for and execute than anthrax releases. Also, given a capability to carry out a specific attack, locations having high symbolic or economic importance are much more likely to be targeted.

In addition to relative likelihood of occurrence of a successful terrorist attack at different target/attack combinations, the frequency of successful attacks is modeled separately for each country. The occurrence of successful macro terror attacks is the outcome of a stochastic control process generated by the dynamics of the confrontation between the forces of terrorism and counter-terrorism. Due to the controlling actions of counter-terrorism following a successful attack, the distribution of successful macro terror attacks is non-Poissonian, based on the principle that countermeasures will be ramped up after any successful attack. In statistical terms, this implies that attacks subsequent to an initial attack cannot be treated as being statistically independent, and their probability of occurrence has to be modeled accordingly. The RMS threat model for macro-terror attacks depends on modeling three input parameters:

- Number of attempted attacks in a year
- Distribution of success rate of attempted attacks
- Suppression factor that is based on government response to an attack

Finally, the uncertainty in number of individual incidents that comprise a terrorist attack (e.g., 9/11) is considered by assigning likelihood for multiplicity of attacks. Attack multiplicity distributions are determined based on historical attack pattern, target type defense, weapon availability, terrorists' capabilities and resources, and the overall chance of detection. The probabilistic methodology takes into account the probabilities of varying numbers of simultaneous attacks launched as part of a single terrorist operation.

Secondary Uncertainty

Secondary uncertainty is the uncertainty in the size of loss, given that a specific attack has occurred. The size of loss can be a range of possible values, some of which are more likely than others. For all attacks involving conventional explosions, secondary uncertainty is modeled through simulations involving bomb explosions, performed through the proprietary Autodyn software.

An additional source of secondary uncertainty in modeling U.S. workers compensation comes from the casualties that occurred. The random nature of terrorism attacks combined with the uncertainty of where people are located at that time gives rise to significant uncertainty in the number of casualties and resulting losses. As a result, there is considerable uncertainty in financial payouts for injuries and deaths. Different members of the population can be expected to have varying levels of coverage; furthermore, regulations governing payouts by injury level also vary from state to state. This source of uncertainty is modeled through the RMS cost severities for casualty models.

Workers' Compensation Cost Severities

A catastrophe model such as the RMS Terrorism Model produces an injury severity distribution, or the number of injuries expected for different injury states. The nature of workers' compensation coverage is such that there is no pre-defined or specified limit of insurance coverage. The amount for which an insurer is ultimately liable depends on many components, including the severity of injuries, the extent of physical impairment, and the duration over which benefits will be paid.

Catastrophic impact is quantified in terms of the expected loss amount by applying mean cost severities that capture statutory indemnity benefits and the cost of medical treatment.

The development of RMS cost severities considers many different factors, or cost components. Each of these cost components, as well as other considerations in estimating ultimate cost, is explained in greater detail in this section.

Medical Costs

All statutory workers' compensation laws provide for the full coverage of medical costs arising from the treatment of injuries and lifesaving procedures.

Generally, injuries result in two forms of medical treatment: acute and maintenance. Acute care is provided to immediately treat the injury but may last for a longer period of time depending on how long it takes to stabilize the injured employee. Beyond acute care, there are maintenance costs. For minor injuries, medical treatment may consist of only acute care, but permanent injuries may require regular maintenance in the form of check-ups, medication, physical therapy, at-home care, nursing care, or a combination of these. Because there is no limit on the medical component covered by workers' compensation insurance, medical inflation is of concern.

Indemnity Costs

Typically, indemnity benefits refer to the benefits that an injured employee receives to compensate for lost wages. RMS has interpreted indemnity costs more broadly to include not only traditional indemnity benefits, but also legal fees, vocational rehabilitation, and funeral costs.

- **Indemnity benefits:** Injured employees are compensated for lost wages. Although they vary by state,

indemnity benefits are typically two-thirds (2/3) of the injured employee's average weekly wage. The indemnity component is highly regulated, and almost every state imposes a maximum and minimum to which the benefit is subject. Many states also have a maximum benefit. Indemnity benefits begin after an initial injury period that varies by state but is between three and seven days. If the employee misses a greater amount of work, then that employee is usually entitled to indemnity benefits for the entire period for the entire duration of the injury. In the case of a permanent disability, this means that indemnity benefits would last for the life of the injured employee unless the state's workers' compensation laws limit the amount or duration of benefits.

- **Survivor benefits:** For fatality claims under workers' compensation, the surviving spouse and/or dependents are awarded benefits according to state law. These have been included as part of the fatal injury indemnity benefits.
- **Legal fees:** Many severe workers' compensation claims involve mediation, arbitration, or, in some cases, court trials. Most states allow the injured employee to recover these fees as part of their workers' compensation coverage. These legal costs have been factored into the RMS cost severities for permanent partial and permanent total disability claims.
- **Vocational rehabilitation:** Workers' compensation insurance in most states also includes a provision to retrain employees who sustain permanent injuries if they can no longer perform their job but are capable of performing a different job. These vocational rehabilitation costs have also been factored into the RMS cost severities for permanent partial disability claims.
- **Funeral and burial costs:** Each state includes a workers' compensation funeral benefit provision to assist the family of a deceased employee to cover the funeral and burial costs. RMS has included each state's specific funeral benefits as part of the overall indemnity cost.

Glossary

Aggregate Exceedance Probability (AEP)

AEP measures the probability of exceeding a specified loss threshold from one or more occurrences in a given Year.

Average Annual loss (AAL)

The expected annual loss on a long-term average basis. Mathematically, it is the expected value of the aggregate loss distribution, or alternatively, the area under the AEP Curve.

CBRN attacks

Chemical, biological, radiological, and nuclear attacks. These attacks are high-severity and low frequency attacks due to the extensive time and resources needed to be successfully executed.

Conventional attacks

Bomb, aircraft impact, conflagration, or industrial attacks. These attacks are lower in severity, and high frequency attacks due to the comparably less resources and time needed to be successfully executed.

Effective workers' compensation deductible

The WCIRB portion of the workers' compensation share of the TRIPRA deductible.

Government retained

The loss payable by the government with the 2019 TRIPRA Program.

Macro-Terrorism Attacks

Attacks that can potentially have the following consequences:

(1) Economic losses in excess of US$1 billion;

(2) Casualties of more than 20 dead and/or 100 injured; (3) Massively symbolic damage

Net-insured retained (NIR)

The loss retained by the WCIRB-member companies with the 2019 TRIPRA Program.

Peak exposure adjustment scenario

An exposure time adjustment used by RMS to estimate exposure at a specific time of day and day of the week. For this analysis, 11 a.m. on a weekday was used.

Program Cap-Adjusted Losses

The allocation of loss to WCIRB after the TRIPRA program cap is applied.

Standard Risk Outlook

The best assessment of terrorism risk given the current 2019 parameterization.

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Item AC18-12-04
Potential Changes to Filing Schedule

Based on stakeholder concerns, WCIRB staff is considering modifying the schedule of when the WCIRB submits its Rate and Regulatory Filings to the California Department of Insurance (CDI) as well as the proposed effective dates of the Filings. Summarized below is the WCIRB's current rate and regulatory filing schedule, specific stakeholder concerns regarding the current schedule, staff's suggestions for a potential alternate filing schedule and the advantages and disadvantages of the alternative schedule.

Staff is seeking the Committee's feedback regarding the proposed alternate filing schedule.

Current WCIRB Filing Schedules

- The WCIRB's annual regulatory filing, which includes proposed changes to the *California Workers' Compensation Uniform Statistical Reporting Plan—1995* (USRP), *California Workers' Compensation Experience Rating Plan—1995* (ERP) and *Miscellaneous Regulations for the Recording and Reporting of Data—1995* (Miscellaneous Regulations), is submitted in late June with changes proposed to take effect the subsequent January 1. Following a public hearing, the CDI typically issues its decision on the regulatory filing in September.
- The WCIRB's annual pure premium rate filing, which includes advisory pure premium rates proposed to be effective January 1, is submitted in mid-August based on March 31 loss and loss adjustment expense experience. A CDI public hearing on the pure premium rate filing is typically held in early October.
- The WCIRB's annual pure premium rate filing is frequently amended by the time of the October hearing based on June 30 loss experience as well as any significant legislative or regulatory changes. Following the public hearing, the CDI typically issues its pure premium rate filing decision in early November.
- In early April, the Governing Committee considers whether a mid-year pure premium rate filing should be made based on the Actuarial Committee's review of December 31 experience. The mid-year filing, if it is made, includes advisory pure premium rates proposed to be effective July 1. Mid-year filings have been made the last four years and 12 out of the last 16 years. If a mid-year filing is made, the CDI typically holds a public hearing in early May and issues its decision on July 1 advisory pure premium rates in the latter part of May.

Stakeholder Concerns

- Multiple pure premium rate filings each year can be disruptive to employers, producers and insurers.
- California is the only state that regularly makes multiple rate filings in a calendar year.
- The process of annually submitting a pure premium rate filing with plans to potentially amend it within a few weeks of making the filing based on subsequent loss experience creates stakeholder confusion and can erode the credibility of the pure premium ratemaking process.
- Insurance Code Section 11735(a) requires that rates and supplementary rate information be filed by insurers not later than 30 days prior to their proposed effective date. Given this 30-day requirement, rate decisions issued in November and late May can create challenges for insurers that must have their rate filing processes complete in time for January 1 and July 1 underwriting and policy issuance. In particular, with 12% of total policies and 18% of the total statewide premium being written on January policies, reflecting the CDI's November decision on January 1 advisory pure premium rates in January 1 renewals can be particularly problematic for some insurers. As a result, some insurers submit their rate filings to be effective in February or March instead of January, which can create challenges aligning with standard classification changes that become effective January 1.

- Given that the potential mid-year filing review reflects the most current completed accident year for the first time in the actuarial pure premium rate analysis, it is common that the mid-year filing reflects a significant pure premium rate level change. Conversely, the annual filing, in the absence of significant legislative or regulatory changes, typically reflects a much more modest change. Exhibit 1 compares the indicated changes for mid-year filings to those of annual filings.

Potential Alternative Filing Schedules

In 2014, when the regulatory filing was bifurcated from the pure premium rate filing in order to accelerate the issuance of January experience ratings, the Actuarial Committee recommended accelerating the annual pure premium rate filing schedule by one month. While this timing would preclude the post-filing review of June 30 experience, the accelerated process would have helped better facilitate insurer January 1 underwriting and policy issuance processes. However, given that Senate Bill No. 863 (SB 863) had recently gone into effect, the CDI indicated that the filing schedule should not be accelerated at that time so the most current SB 863 cost monitoring information would be available for consideration with the annual filing.[1]

Given stakeholder concerns with the WCIRB's current filing schedule, staff has developed the following alternative rate and regulatory filing schedule for the Committee's consideration. The dates shown assume implementation during the 2021 filing effective year (see Exhibit 2 for a summary of this recommendation):

- The WCIRB would make a January 1, 2021 Regulatory Filing in June of 2020 with the principal focus being classification relativities reflecting classification experience through policy year 2017 that underlies January 1, 2021 expected loss rates and advisory pure premium rates, updates to Experience Rating Plan values and annual adjustments to thresholds and limitations.
- The WCIRB would make a January 1, 2021 Pure Premium Rate Filing in September of 2020 based on June 30, 2020 experience that reflects the updated January 1, 2021 classification relativities.
- The WCIRB would make an additional 2021 Regulatory Filing in January of 2021 with an August 1, 2021 effective date. C & R Committee work on proposed regulatory changes would be completed by October of 2020.
- The WCIRB would make an August 1, 2021 Pure Premium Rate Filing in April of 2021 based on December 31, 2020 experience and updated August 1, 2021 classification relativity information that reflects classification experience through policy year 2018.
- Throughout 2021 and subsequent quarters, the WCIRB's Actuarial Committee would evaluate updated quarterly experience and the WCIRB's evaluation of that quarterly experience would be published. However, the annual rate filing schedule would be maintained with August 1 effective dates unless significant legislative or regulatory changes are enacted during the year[2] or if the Governing Committee or Insurance Commissioner directs that an off-cycle filing be made in light of extraordinary experience.

Advantages of Alternative Filing Schedules

- By basing the WCIRB's annual pure premium rate filling largely on the most current accident year's December 31 experience, the need for mid-year filings would be significantly reduced.
- Additional time between the expected CDI decision in late May on the WCIRB's April annual pure premium rate filing and the August 1 effective date of the proposed advisory pure premium rates would better facilitate insurers ability to reflect the CDI decision in their rate filings, which would be aligned with the effective date of the regulatory filing changes.

[1] At the December 8, 2005 meeting, the Governing Committee approved a change to submit the WCIRB's annual filing in September based on June 30 experience instead of in August based on March 31 experience pending the CDI's concurrence. However, in that the Insurance Commissioner's schedule would not accommodate the later hearing, the schedule change was indefinitely deferred.

[2] If the WCIRB were to make an off-cycle pure premium rate filing due to significant legislative or regulatory changes, the latest updated quarterly experience would also be reflected.

- Significantly fewer policies (7%) have August effective dates than January or July effective dates, so the impact would be less than the WCIRB's current pure premium rate filing schedule.
- The classification loss and payroll experience used in the classification relativity process underlying advisory pure premium rates would be more current.
- The WCIRB's pure premium rate filing would not be filed on a basis that is subject to amendment based on subsequent experience that becomes available by the time of the CDI hearing.
- Quarterly published evaluations of the updated loss experience and its impact on pure premium rate adequacy would continue to provide information that insurers could use to adjust their premium rates when they deem appropriate.

Disadvantages of Alternative Filing Schedule

- Advisory pure premium rates applicable to January policies, the month for which the highest proportion of policies are written, would normally not reflect the most current quarterly loss experience.
- With fewer mid-year pure premium rate filings, approved pure premium rates for some periods of the year could be less accurate than when two filings are made each year.
- Updated unallocated loss adjustment expense experience for the latest calendar year, which is based on statutory insurer annual statement data, may not be available for the next year's annual filing in April.
- WCIRB Committee schedules and other related processes would need to be modified to align to the new filing schedule.

Change in Indication – Mid-Year Filings to Subsequent Annual Filing

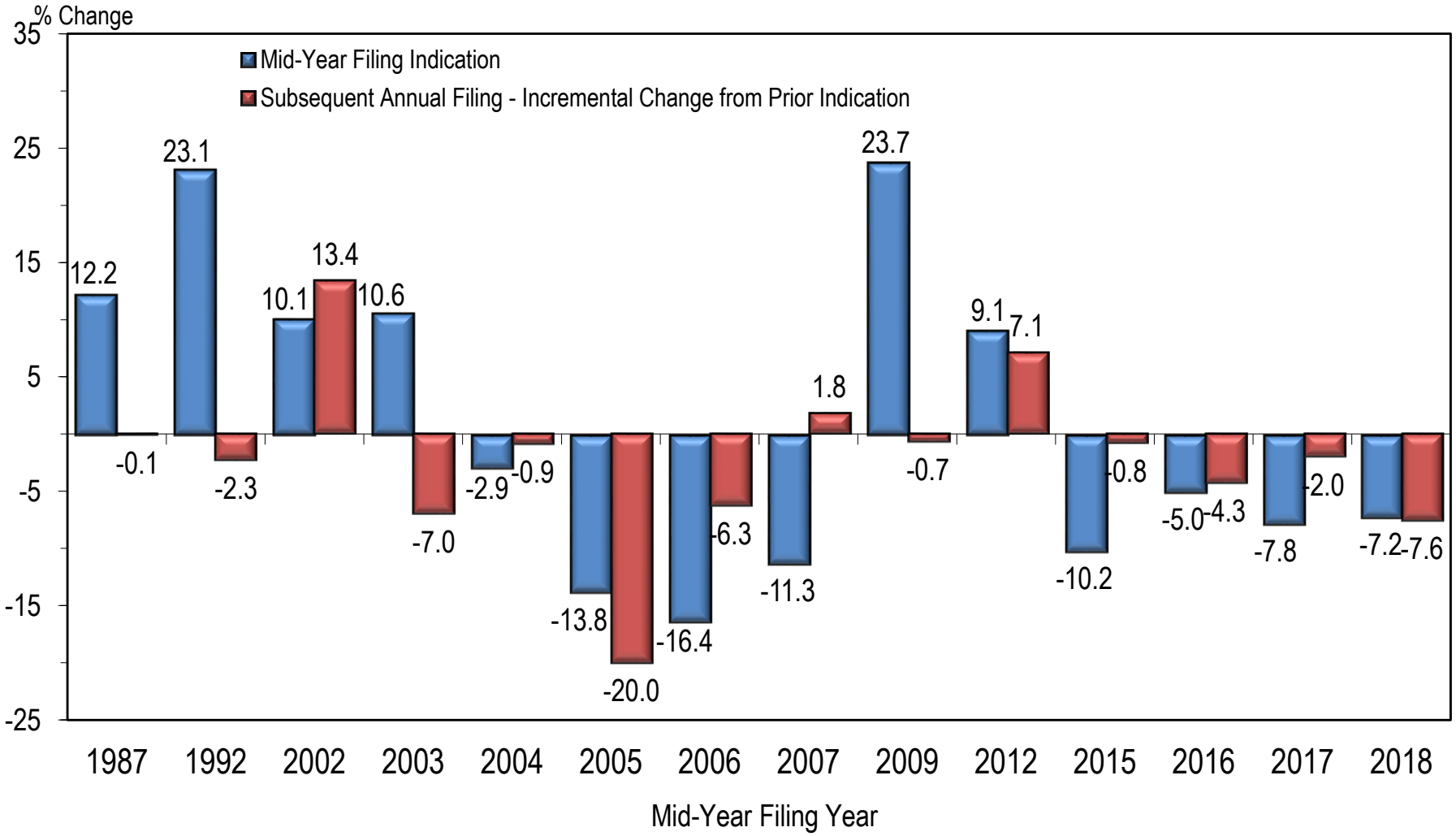

Exhibit 2

Potential Alternative Filing Schedule

---------- 2020 Filing Schedule – Current Filing Schedule Maintained -------

1/1/20 Regulatory Filing

Submit June 2019 – Reflect Proposed USRP & ERP Changes and 2020 Class Relativities Based on PY 2016 Experience

1/1/20 PP Rate Filing

Submit August 2019 – Reflect 3/31/19 Experience & 2020 Class Relativities with Potential Amendment Using 6/30/19 Exp.

7/1/20 PP Rate Filing

Submit April 2020 (if Approved by WCIRB Governing Comm.) – Reflect 12/31/19 Experience

---------- 1/1/2021 Filing Schedule – Transition Period ----------

1/1/21 Regulatory Filing

Submit June 2020 – Reflect ERP Changes, Updated Wage Thresholds and 1/1/21 Class Relativities Based on PY 2017 Experience

1/1/21 PP Rate Filing

Submit September 2020 – Reflect 6/30/20 Experience & 1/1/21 Class Relativities

---------- 8/1/2021 & Later Filing Schedule – Alternative Filing Schedule --------

8/1/21 Regulatory Filing

Submit January 2021 – Reflect Proposed USRP & ERP Changes and 8/1/21 Class Relativities Based on PY 2018 Experience

8/1/21 PP Rate Filing

Submit April 2021 – Reflect 12/31/20 Experience & 8/1/21 Class Relativities

Item AC18-12-05
Potential 2019 Actuarial and Research Projects

Potential actuarial and medical research studies under consideration for 2019 are shown below. Also shown for each potential study is staff's assessment of the current status of the study. Committee input is being solicited as to the completeness and relative priority of these potential studies.

A. Studies Arising Out of California Department of Insurance (CDI) Directives and Decisions

1. Indemnity Claim Frequency Model Projections. In the CDI Decision on the January 1, 2017 Pure Premium Rate Filing, the CDI recommended that the WCIRB review its frequency projection model in light of the continued increases in indemnity claim frequency.

   Project Status: The WCIRB regularly reviews its frequency projection model and has made a number of enhancements over the years. In 2017 and 2018, staff continued its review of the model parameters including consideration of a time-series approach with the Actuarial Research Working Group (ARWG). Staff anticipates continuing this work in 2019 with any recommendation for change presented to the to the Actuarial Committee in the third quarter of 2019 for consideration of the January 1, 2020 Pure Premium Rate Filing

2. Terrorism Data Reporting. The has CDI directed staff to provide information to both the National Association of Insurance Commissioners (NAIC) and the Federal Insurance Office (FIO) related to terrorism exposure in California workers' compensation.

   Project Status: In early 2017, the WCIRB issued a special call related to terrorism premium and based on that information and data already collected via unit statistical reports provided the information requested by the NAIC on terrorism charges by insurer on a confidential basis in July of 2017. Also in 2017, the staff worked with FIO, NCCI and ISO, who is collecting the terrorism data on behalf of the FIO, to finalize the workers' compensation terrorism data reporting structure for information submitted to the FIO. In accordance with that structure and FIO requirements, staff provided the FIO, on a confidential basis, terrorism premium and exposure information by insurer group in 2017 and 2018. Staff anticipates providing the annual update to that information in the first and second quarters of 2019.

3. Impact of Maximum Permanent Disability Benefits on Indemnity Severity Trend. In the CDI Decision on the January 1, 2019 Pure Premium Rate Filing, the CDI recommended that the WCIRB analyze the impact the relatively low permanent disability weekly maximums may have on indemnity severity trends.

   Project Status: As part of the on-leveling process reflected in each filing, the WCIRB estimates the impact wage inflation and statutory cost of living adjustments to certain benefit maximums has on indemnity benefits and reflects on-level adjustments based on those estimates in the pure premium rate projection. Staff anticipates completing an analysis of that estimation process for the Actuarial Committee's review by the first quarter of 2019 for consideration of a potential July 1, 2019 Pure Premium Rate Filing.

4. Potential Adjustments to Allocated Loss Adjustment Expense (ALAE) Projections. In the CDI Decision on the January 1, 2019 Pure Premium Rate Filing, the CDI recommended that the WCIRB review the ALAE projection methodology in light of accelerating claim settlement rates.

Project Status: Staff anticipates completing an analysis of potential adjustments to the ALAE projection methodology for the Actuarial Committee's review by the third quarter of 2019 for consideration of the January 1, 2020 Pure Premium Rate Filing.

5. Adjustments to Loss Development for Reduced Lien Filings. In the CDI Decision on the January 1, 2019 Pure Premium Rate Filing, the CDI, based on recently available lien filing information, predicated the approved January 1, 2019 pure premium rates on an assumed 50% reduction in lien filings rather than the 40% reflected in the WCIRB filing. The CDI also recommended that the WCIRB review the adjustment based on the most recent lien information available.

   Project Status: Staff anticipates completing an analysis of adjustments to loss development to reflect reduced lien filings for the Actuarial Committee's review by the first quarter of 2019 for consideration of the potential July 1, 2019 Pure Premium Rate Filing.

B. Studies/Projects Directed by Legislation

1. Statewide Paid Costs. Section 11759.1 of the Insurance Code requires the WCIRB to report annually on workers' compensation costs paid during the preceding calendar year. The 2018 calendar year report is required to be completed by June of 2019.

   Project Status: Staff anticipates publishing the required report by the end of the second quarter of 2019. In addition, as in the last several years, staff anticipates compiling information from this report and other WCIRB reports into a high-level "executive summary" of the state of the California workers' compensation system to be published by the third quarter of 2019.

2. Policyholder Dividends. Section 11739 of the Insurance Code requires the WCIRB to collect information on policyholder dividends in California and prepare an annual report to the Insurance Commissioner.

   Project Status: Staff anticipates providing the report to the CDI by the third quarter of 2019.

3. Report on Roofing Industry. Section 11665 of the Insurance Code requires the WCIRB to annually compile and report the payroll and loss data reported in the roofing classification for employers holding C-39 licenses from the Contractors State License Board as well as the payroll and loss information by employer payroll size interval.

   Project Status: Staff anticipates providing the report to the CDI by the second quarter of 2019.

C. Cost Impact of Legislative Changes

1. SB 863 Cost Monitoring. SB 863 was enacted in 2012 and included a number of reform provisions related to the California benefit delivery system. In March of 2013, the WCIRB submitted a comprehensive plan to the CDI to monitor the emerging costs related to SB 863. The WCIRB's fourth and final comprehensive retrospective cost evaluation of SB 863 was published on November 17, 2016.

   Project Status: While the final comprehensive SB 863 monitoring report was published in 2016, at the November 8, 2016 joint Actuarial Committee and Claims Working Group meeting, it was agreed that staff will prepare summaries of the key elements of SB 863 that are still emerging, such as the phased-in changes to the physician fee schedule to a Resource-Based Relative Value Scale (RBRVS) basis. Staff is presenting a summary of

updated SB 863 cost monitoring information at the December 5, 2018 Actuarial Committee meeting. Given the length of time that has elapsed since SB 863 began to be implemented and the difficulties of isolating the impact of SB 863 from the impact of subsequent legislation, regulation and environmental factors, staff does not anticipate further updates to SB 863 estimates in 2019.

2. Review of SB 863 Ratemaking Adjustments. The WCIRB's initial evaluations of SB 863 included estimates to several impacted system components that were in part based on judgmental assumptions that may or may not materialize. These estimates were reflected in the on-leveling adjustments reflected in the January 1, 2013 and subsequent pure premium rate filings.

   Project Status: The WCIRB adjusts on-level factors based on differences in emerging experience from that reflected in the WCIRB's initial SB 863 projections as part of the pure premium rate filing process. Staff anticipates updating the on-level adjustments based on the latest December 2018 SB 863 cost monitoring information for the review of the Actuarial Committee in the first quarter of 2019 in consideration of a potential July 1, 2019 Pure Premium Rate Filing.

3. Additional SB 863 Fee Schedules. SB 863 provides for new fee schedules for interpreter, copy and home health services to be promulgated.

   Project Status: The Division of Workers' Compensation (DWC) promulgated a schedule for copy services effective July 1, 2015. The Actuarial Committee reviewed the impact of this schedule in the second quarter of 2015 and agreed that no prospective pure premium rate adjustment was appropriate. At this time, the DWC has not promulgated final schedules for interpreter and home health services. If either of those fee schedules are finalized, working with the Claims Working Group, Medical Analytics Working Group and Actuarial Committee, staff anticipates completing its analysis of the pure premium rate impact of the new fee schedules within 120 days of the final values being promulgated.

4. Drug Formulary. Pursuant to AB 1124, the DWC adopted a new drug formulary to be effective January 1, 2018.

   Project Status: The WCIRB's evaluation of the new drug formulary was completed in the first quarter of 2018 and reflected in the July 1, 2018 and January 1, 2019 pure premium rate filings. Staff is presenting an initial preliminary analysis of the impact of the drug formulary on post-January 1, 2018 pharmaceutical costs at the December 5, 2018 Actuarial Committee meeting. Staff anticipates updating this analysis based on an additional year of post-drug formulary experience by the fourth quarter of 2019.

5. Impact of Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244). SB 1160 and AB 1244 were signed into law on September 30, 2016. Primarily, SB 1160 restricts utilization review within the first 30 days of treatment on injuries occurring on or after January 1, 2018 and SB 1160 and AB 1244 include a number of provisions related to liens. The WCIRB's cost evaluation of SB 1160 and AB 1244 as approved by the Actuarial Committee at the September 6, 2016 meeting was reflected in the WCIRB's Amended January 1, 2017 Pure Premium Rate Filing, as well as subsequent pure premium rate filings.

   Project Status: As discussed in Item A(5) above, staff anticipates reviewing the loss development adjustments for the impact of SB 1160 and AB 1244 on lien filings for the Actuarial Committee's review in the first quarter of 2019 in consideration of a potential July 1, 2019 Pure Premium Rate Filing. A preliminary analysis of the SB 1160 restriction on utilization review within 30 days of the injury is being presented to the Actuarial Committee at the meeting of December 5, 2018. Staff anticipates updating this analysis

based on an additional year of post-SB 1160 experience by the fourth quarter of 2019 based on medical transaction data through June 30, 2019.

D. Other Studies Directly Impacting Pure Premium Rates and Rate Level Projections

1. Classification Ratemaking Methodologies. In adopting new loss development groupings for classification relativities at the September 8, 2010 meeting, the Actuarial Committee also recommended several areas of additional actuarial research.

   Project Status: Refinements to the loss development process for classification relativities and other refinements that were approved at the April 2, 2012 meeting were implemented in 2013 and reflected in the January 1, 2014 Pure Premium Rate Filing. Wage level adjustments by classification including the impact of various minimum wage ordinances were approved by the Actuarial Committee at the December 6, 2016 meeting and reflected in the January 1, 2017 Pure Premium Rate Filing. In 2014, staff began a multi-year study of stochastic loss development, as used in loss development for the advisory retrospective rating plan values, for classification ratemaking and presented the analysis at the December 3, 2014 Actuarial Committee meeting. At the December 3, 2014 meeting, the Committee agreed that a stochastic approach for classification relativity loss development is promising but requires significant additional study. Staff doesn't anticipate further work on this topic in 2019.

2. Study of Dual Wage Thresholds. In 2017, the Classification and Rating (C & R) Committee recommended that a comprehensive study of the dual wage classification thresholds be conducted every two years.

   Project Status: The last comprehensive study of dual wage thresholds was completed in 2017 and reflected in the January 1, 2018 Regulatory Filing. As a result, staff anticipates completing this study for the Classification and Rating Committee's review in the second quarter of 2019 in preparation for the January 1, 2020 Regulatory Filing.

3. Payroll Limitations for Classification Ratemaking. At the March 21, 2017 meeting, the Actuarial Committee reviewed the summary of the February 17, 2017 meeting of the Actuarial Research Working Group (ARWG) which discussed claim costs by wage level interval. During the meeting, it was noted that the data suggested that severity costs increased to a point, then leveled off at the state average annual salary, while total costs per $100 of payroll declined at high levels of wages. Given this, it was noted that staff planned to explore expanding the number of classifications subject to an employee annual payroll limitation.

   Project Status: In the 2019 Regulatory Filing, the WCIRB proposed and the CDI approved limiting an employee's payroll to the amount used to limit the payroll of executive officers for five classifications effective on January 1, 2020 and later policies. Staff anticipates analyzing the appropriate pure premium rate adjustments for these classification in the second quarter of 2019 for review of the Actuarial and Classification and Rating Committee in preparation for the January 1, 2020 Pure Premium Rate Filing. Staff anticipates analyzing whether it is appropriate to limit payroll in additional classifications in 2020.

5. Review of Medical On-Level Adjustments. Adjusting developed accident year medical loss ratios for the impact of measureable phenomena that impact medical costs such as legislative reforms, fee schedule changes and general medical inflation is a key component of the WCIRB's pure premium ratemaking process. It has been a number of years since the Actuarial Committee has undertaken a comprehensive review of that process.

   Project Status: A preliminary analysis of the methodology to adjust medical losses to an on-level basis is being reviewed by the Actuarial Committee at the December 5, 2018

meeting. Staff anticipates continuing this comprehensive review of the on-leveling process for medical losses including the process by which annual changes in Medicare fees are incorporated into the California workers' compensation fee schedules for review of the Actuarial Committee by the third quarter of 2019 in preparation for the January 1, 2020 Pure Premium Rate Filing.

6. Study of Loss Development Tail. At the August 2, 2017 meeting, the Actuarial Committee reviewed a study of longer-term loss development that focused on the recent volatility in incurred loss development patterns. At that meeting, it was noted that paid loss development patterns fit very well to the inverse power curve that is currently being utilized for incurred loss development.

   Project Status: Staff plans to continue to review the tail development methodology with the Actuarial Committee as part of the Committee's regular reviews of loss experience. However, staff doesn't anticipate undertaking a study of use of a tail based on paid losses in 2019.

7. Pharmaceutical Cost Reductions. At the August 1, 2018 meeting, the Actuarial Committee noted that with the sharp reductions in pharmaceutical costs and that the pharmaceutical share of medical payments varies significantly by maturity level, medical loss development could be affected. As a result, the Committee recommended that the WCIRB undertake an analysis of the impact of the recent reduction in pharmaceutical costs on medical loss development.

   Project Status: **Staff anticipates completing this study for the Actuarial Committee's review in the third quarter of 2019 in preparation for the January 1, 2020 Pure Premium Filing.**

8. Review of ULAE Projection Methodologies. As discussed at the August 1, 2018 Actuarial Committee meeting, while the WCIRB has continued to modify the data collected related to ULAE in order to enhance the accuracy of the ULAE projection, a comprehensive review of the ULAE projection methodologies has not been undertaken for some time.

   Project Status: Staff recommends completing this study for the review of the Actuarial Committee by the fourth quarter of 2019.

E. Other Studies Indirectly Impacting Rate Level Projections

1. Evaluation of the Impact of Fraud Indictments. Efforts by the DWC, CDI, local district attorneys and others that have been successful in identifying and prosecuting fraud have been identified as a significant driver of reduced medical cost trends. At the meeting of December 6, 2016, the Actuarial Committee recommended that staff continue to track the volume of medical services provided in the past by providers who have subsequently been indicted for fraud.

   Project Status: Following review by the Actuarial Committee, Claims Working Group and Medical Analytics Working Group, the WCIRB published a study of potential impact of the fraud indictments in October 2018. Staff anticipates updating the study including refinements based on the timing of the indictments for review of the Actuarial Committee and publication by the third quarter of 2019.

2. Analysis of Opioid Use. In March of 2018 the WCIRB released a study that focused on the process of weaning injured workers off opioids and its cost implications. At the March 16, 2018 meeting, the Medical Analytics Working Group recommended the WCIRB study early indicators of heavy opioid use and alternative treatments to heavy use of opioids that are currently being utilized.

Project Status: **Staff anticipates completing this study for the Medical Analytics Working Group and Actuarial Committee's review in the first quarter of 2019 with publication by the second quarter of 2019.**

3. Study of Medicare "Set-asides" (MSAs). At the July 28, 2015 meeting, the Claims Working Group recommended that consideration be given to conducting a more in-depth study of MSAs.

   Project Status: At the March 23, 2016 meeting, the Claims Working Group discussed a potential study on the cost of MSAs that provided additional information on the frequency in which MSAs are used and the costs involved when MSAs are used. Prior to undertaking a more comprehensive study, the Working Group agreed that staff should compare post-settlement loss development patterns of claims that are settled through a compromise and release (C&R), which includes a settlement component for future medical losses, with those settled through a stipulated award.

   The Claims Working Group and Actuarial Committee reviewed the development differences between C&R settled claims and stipulated award settled claims at the November 8, 2016 meeting. At the March 30, 2017 meeting, the Claims Working Group suggested that any further study of the issue be deferred pending ongoing research by other organizations. Staff doesn't anticipate further work on this issue in 2019.

4. Impact of the Affordable Care Act (ACA) on Workers' Compensation Costs. The ACA has fundamentally altered the healthcare delivery system in the United States and may have significant impact on workers' compensation medical costs in California. At the October 1, 2013 meeting, the Medical Analytics Working Group discussed various ways to assess the ACA impact on California workers' compensation costs in the future when sufficient post-ACA experience is available.

   Project Status: The WCIRB published a report on the impact of the ACA on California Workers' Compensation in May of 2018 that indicated that the increased availability of healthcare insurance through the ACA may be a factor in reducing the frequency of soft tissue claims in workers' compensation. Staff doesn't anticipate further work on this issue in 2019.

5. Analysis of Cumulative Injury Claims. Recent Actuarial Committee analyses of claim frequency changes have indicated that cumulative injury claims are increasingly and are a significant factor driving many of the key cost trends in California. .

   Project Status: The WCIRB published a comprehensive report on cumulative injury claims in October of 2018. Some of the key metrics in the report will be updated and incorporated into the WCIRB's bi-annual review of system diagnostics, but staff does not anticipate undertaking a comprehensive study of this issue in 2019.

6. Analysis of Factors Driving California Medical Payout Pattern. Staff analysis has shown that the very slow rate of medical loss payouts is one of the key contributing factors to the high medical costs in California.

   Project Status: Staff published a comprehensive analysis of the factors driving the medical loss payout pattern in California and how those patterns differ from patterns in other states on July 8, 2015. While not planning a major update to the report in 2019, staff anticipates updating some of the key comparisons of California to the rest of the country with respect to medical payouts in the second quarter of 2019.

7. Physical Medicine Analysis. At the October 3, 2017 meeting, the Medical Analytics Working Group recommended that given increases in the cost of physical medicine and the potential for physical medicine to be used in lieu of opioid prescriptions, staff consider a comprehensive study of physical medicine costs.

   Project Status: Staff anticipates completing a comprehensive analysis of physical medicine utilization and costs in California by the fourth quarter of 2019.

8. Analysis of Very Large Claims. The Claims Working Group and Actuarial Committee regularly review the frequency and relative cost of large claims. Given recent trends in medical treatment patterns for severe injuries as well as updated mortality information including that for impaired individuals, it has been suggested that the WCIRB undertake comprehensive analysis of the frequency and characteristics of very large or "jumbo" claims in the California workers' compensation system.

   Project Status: Staff is collaborating with rating bureaus in other jurisdictions on a potential national study of "mega claims." Additionally, staff anticipates completing a comprehensive analysis of very large California claims including an analysis of their relative frequency, severity, trends, loss development patterns, payment patterns, medical treatment patterns, claimant characteristics, and claim adjudication patterns for review of the Actuarial Committee by the fourth quarter of 2019.

9. Provider Treatment Pattern Analysis. In 2018, the WCIRB began to explore the impact of behavioral factors on the workers' compensation system. As part of that exploration, staff has entered into a partnership with a University of California of Berkeley behavioral scientist to study treatment patterns of various types of providers.

   Project Status: Staff anticipates continuing the work in this area in 2019 with initial preliminary results to be presented in the second quarter of 2019.

F. Studies Related to Rating Plans

1. Experience Rating Eligibility. At the October 22, 2014 meeting, the Actuarial Research Working Group discussed changes to the experience rating eligibility criteria in light of other changes to the Plan being adopted and noted that staff has not completed a comprehensive review of experience rating eligibility in a number of years.

   Project Status: Now that the changes to the experience rating formula to vary the split point by the size of the employer and address the non-reporting of small medial-only claims have been implemented, staff anticipates completing an initial review of the appropriateness of the current eligibility threshold for review of the Classification and Rating and Actuarial Committees by the fourth quarter of 2019.

2. Development of Experience Rating Expected Loss Rates. The Actuarial Committee annually reviews the WCIRB's methodology to compute the experience rating expected loss rates proposed to the CDI each year. The methodology used for this process was adopted by the Actuarial Committee at the June 11, 2008 meeting.

   Project Status: Since it has been almost a decade since a comprehensive review of the methodology has been undertaken, staff anticipates beginning the methodology review process in 2019 although a comprehensive analysis of the methodology will not be undertaken until 2020.

3. Retrospective Rating Plan Values. In 2018, the WCIRB updated the advisory *California Retrospective Rating Plan* values, including hazard group assignments, insurance charges and loss elimination ratios, to be effective January 1, 2019.

   Project Status: Staff published updated California hazard group classification assignments on a decimal basis and loss and loss and ALAE elimination ratios in the second quarter of 2017. Staff published a full update to the advisory California Retrospective Rating Plan, including updated insurance charges, reviewed by the Actuarial Research Working Group in 2018. In 2019, staff anticipates continuing development of additional artifacts requested by members related to ALAE, paid losses, and individual claim trajectories.

G. Other Potential Studies

1. Analysis of California Regional Differences. Recent WCIRB analyses of claim frequency, cumulative injuries, liens, and other system components have suggested that there are significant regional differences across California. However, analyses of these differences had been limited by the data the WCIRB had historically collected on location. At the July 25, 2014 meeting, the Actuarial Research Working Group discussed potential alternative sources of geographical information to enhance analyses of regional differences.

   Project Status: Staff used a wide range of available information to prepare an analysis of regional differences in components such as frequency, severity and permanent disability patterns. The WCIRB's latest report on regional differences will be published in December 2018. Staff anticipates continuing this work in 2019 by also including a focus on regional differences in development patterns, pharmaceutical costs and frequency and severity by industry and diagnostic group with a follow-up report to be published by the fourth quarter of 2019.

2. Wage Data Analysis. Early in 2017, staff developed a comprehensive data cube and wage report for members with detailed information on various wage distributions by industry, classification and occupation as well as other wage related information. The information relates historical and projected wage levels by classification to industries, recognizing differences in payroll exclusions in developing insured exposures and differences in the allocation of standard exception classifications.

   Project Status: Staff anticipates updating this wage information based on updated source information by the second quarter of 2019.

3. Comparison of Workers' Compensation Medical Costs to Group Health Costs. At the May 27, 2009 meeting, the Claims Working Group suggested that consideration be given to conducting a research study comparing occupational and non-occupational medical treatment cost data for a similar mix of injuries.

   Project Status: Staff does not anticipate further analysis in this area in 2019.

4. Development of Diagnostic Grouper. The WCIRB has been collecting ICD-9 and now ICD-10 information on each medical transaction since 2012. The Medical Analytics Working Group has suggested that WCIRB medical analytical research as well as WCIRB benchmarking reports provided to members can be significantly enhanced by summarizing information based on groupings of claims by similar diagnoses.

   Project Status: In 2018, staff has been working on the development of a diagnostic grouper and received feedback from the Medical Analytics Working Group in August 2018. Staff anticipates completing the diagnostic grouper in the first quarter of 2019.

5. Aging of the Work Force. This study would quantify the aging of the work force and identify changes in costs – particularly severities – due to this demographic shift. The study would also identify future aging patterns and forecast their impact.

   Project Status: Staff completed some preliminary analysis of the impact of aging on claim costs as part of prior frequency studies, but does not anticipate conducting any further analysis in this area in 2019.

6. Terrorism Losses. In early 2003, the WCIRB contracted with EQECAT to help estimate potential terrorism losses with respect to the Terrorism Risk Insurance Act of 2002. The results of the analysis were published in a March 12, 2003 WCIRB Bulletin.

   Project Status: At the December 13, 2017 meeting, the Governing Committee authorized the WCIRB to contract with Risk Management Solutions (RMS), a leading catastrophe risk modeling firm, to conduct an analysis of potential statewide workers' compensation exposure arising from terrorism. The results of the study are scheduled for presentation to the Actuarial Committee at the meeting of December 5, 2018. Depending on Actuarial Committee feedback, additional work on refining cost estimates by classification and region could be completed in 2019.

7. Earthquake Losses. In July of 2002, EQECAT completed a report estimating the average annual expected costs arising from California earthquakes. In 2003, EQECAT completed a follow-up study to address some of the issues raised by the CDI in reviewing the 2002 study. Based on the results of these studies, the WCIRB included a provision to reflect expected earthquake losses in the January 1, 2004 Pure Premium Rate Filing. In the Decision on that filing, the CDI rejected this provision based on concerns as to the underlying loss distribution projected by the model and the lack of a mechanism to fund the cost of a major earthquake if one were to occur. In 2007, the WCIRB contracted with EQECAT to update the California earthquake studies. The updated report was published in June 2007. In December 2017, the WCIRB in partnership with RMS published an updated analysis.

   Project Status: At the August 1, 2018 meeting, the Actuarial Committee discussed whether a pure premium rate adjustment to reflect the long-term average expected losses arising from earthquake based on the recent RMS study would be appropriate. The Committee expressed concern with including a multiplicative provision in pure premium rates inasmuch as the earthquake exposure does not vary proportionately with classification advisory pure premium rates and different treatments of catastrophe loadings in other jurisdictions could create administrative issues in California for insurers. As a result, the Committee believed it was premature to propose the inclusion of an earthquake provision in advisory pure premium rates at this time, but agreed the issue could be revisited in the future in conjunction with any indication of statewide terrorism expected loss costs based on the results of the ongoing RMS terrorism study. The Committee also recommended that staff continue to work on refining estimates by region and industry. Staff anticipates continuing this analysis in 2019.

8. Universal Healthcare Proposals. In 2017 the California Senate passed Senate Bill No. 563 which was intended to establish a government-run universal healthcare system in California. While this legislation did not address the funding issues and was never enacted into law, it is possible that the issue may arise again in California.

   Project Status: Staff does not anticipate analysis of this issue in 2019.

Item AC18-12-06
2019 Schedule of Meetings

Shown below is a proposed schedule of Actuarial Committee meetings for 2019.

Monday, March 18, 2019

Tuesday, April 2, 2019

Friday, June 14, 2019

Thursday, August 1, 2019

Tuesday, September 3, 2019

Thursday, December 5, 2019