

Actuarial Committee

Meeting Agenda – Updated

Date	Time	Location	Staff Contact
April 2, 2020	9:30 AM	Webinar Teleconference	David M. Bellusci
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Released: March 30, 2020

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

Due to concerns over the coronavirus (COVID-19), this meeting is being held via webinar teleconference.

Please register for WCIRB Actuarial Committee Meeting on Apr 2, 2020 9:30 AM PDT at:

<https://attendee.gotowebinar.com/register/8641604347544666637>

After registering, you will receive a confirmation email containing information about joining the webinar.

I. Approval of Minutes

None

II. Working Group Meeting Summaries

Claims Working Group meeting held on March 23, 2020

III. Unfinished Business

A. AC20-03-01: First Quarter 2020 Review of Diagnostics

B. AC20-03-02: 12/31/2019 Experience – Review of Methodologies

IV. New Business

A. AC20-04-01: 12/31/2019 Loss Adjustment Expense Experience Review

B. AC20-04-02: 12/31/2019 Experience – Alternative Loss Projections

C. AC20-04-03: 2021 Experience Rating Plan Changes

D. AC20-04-04: COVID-19 Crisis

V. Matters Arising at Time of Meeting

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VI. Next Meeting Date: June 12, 2020

VII. Adjournment

Notice

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Claims Working Group

Meeting Summary

To: Participants of the Claims Working Group
Date: March 30, 2020

RE: Summary of March 23, 2020 Meeting

Discussion Topics

At the meeting, the following topics were discussed.

A. First Quarter 2020 Review of Diagnostics

The meeting materials included the WCIRB's diagnostic exhibits that are reviewed by the Actuarial Committee and Claims Working Group on a semi-annual basis. Among the diagnostics discussed by the Working Group were the following:

- a. Unit Statistical Data shows that claim settlement rates continue to increase for both permanent partial disability claims and temporary disability-only claims. Staff noted that more current aggregate financial data suggests that the claim settlement rates appear to be stabilizing. It was also noted that the most significant improvement in settlement ratios over the last five years has been in the Los Angeles Basin, which now has among the highest settlement rates in the state for permanent disability claims. Several members suggested that with the COVID-19 pandemic and resultant shelter-in-place orders there will likely be a significant slowdown in most aspects of claims administration including claims settlement. It was also noted that in particular some of the slowdown in medical activity could have long-term implications on claim cost and duration.
- b. The proportion of permanent disability claims closing through compromise and release settlements has been increasing modestly but steadily over the last several years. It was noted that the highest proportion of compromise and release settlement claims was in the Los Angeles Basin, but those claims had the lowest average incurred amounts. A member noted that with the shelter-in-place orders, "walkthroughs" at the WCAB offices to obtain approvals of compromise and release settlements will become very difficult which could significantly erode the ability to get such settlements approved.
- c. Lien filings continue to decrease since the enactment of Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244) effective in 2017, although the decreases in recent quarters have moderated. It was noted that lien filings in 2019 were approximately 75% below the pre-SB 1160 level. The Working Group discussed the possible reasons for these decreases, including reduced out-of-network medical treatment, packaging of multiple liens into a single lien filing and trying to resolve billing disputes prior to a lien settlement. A member also noted that potential copy service lien claimants may be bypassing the lien

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process to request hearings on disputes before WCAB judges and requested that staff explore if information on these hearings is available with the Division of Workers' Compensation.

- d. The Working Group reviewed information on indemnity claim frequency. The Working Group was advised that preliminary unit statistical data suggests a decline in cumulative trauma claims and overall claim frequency in the Los Angeles Basin and San Diego areas. It was noted that Federal immigration activities could be having an impact on frequency in these regions. Working Group members also noted that with the prevalence of "shelter-in-place" orders indemnity frequency will likely temporarily drop. However, Working Group members also expressed concerns that the lack of ergonomic equipment for temporary work-at-home employees as well as the potential for a significant number of post-termination claims arising from employees who lose their job in the economic slowdown could negatively impact frequency in the longer term.
- e. Average indemnity severity measures for accident years 2018 and 2019 are above that of the prior years and reflect increases above that estimated due to wage inflation and annual cost of living increases in temporary and permanent total disability benefits. It was noted that the latest unit statistical information on permanent disability ratings and very preliminary indemnity transaction data on temporary disability duration do not suggest a significant increase in either of these areas. A Working Group member noted that so far they have not seen evidence of a significant increase psychiatric add-ons to permanent disability ratings arising from the 2019 Wilson decision¹, but suggested that the issue warrants continued monitoring.
- f. The Working Group reviewed the updated diagnostics on medical severities. It was noted that, while 2018 accident year severities continue to be well above those for accident year 2017, accident year 2019 medical severities have dropped. It was also noted while the 2019 decrease in medical severities was consistent with early indicators based on both aggregate financial data and medical transaction data, the significant 2018 increase does not conform to the indicators based on medical transaction data. The Working Group was advised that staff is exploring whether the 2018 increased severity may be due to an increase in settlements not reflected in the medical transaction data or an increase in very large claims in 2018 that may have only been partially reflected in the medical transaction data.

B. Update on Medical Severity Trends

Staff presented an update on the medical severity trends using the WCIRB medical transaction data from July 1, 2012 through June 30, 2019. The Working Group was advised that the share of total medical payments for pharmaceuticals decreased by 78% from 18% in the second half of Service Year (SY) 2012 to 4% in the first half of SY2019, while the share of medical paid for other components increased. Staff noted that a significant increase in the payment share for physical medicine (including physical therapy, acupuncture and chiropractic care) also contributed to the increases in the physician services payment share. Staff also noted that all medical service types experienced a decline in the paid per claim in the first half of 2019, except for physical medicine.

¹ *Wilson v. State Cal Fire and State Compensation Insurance Fund (SCIF)* 84 Cal. Comp. Cases 393, 2019 Cal. Wrk. Comp. LEXIS 29 (W.C.A.B. May 10, 2019).

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Staff also summarized the findings of the WCIRB's recently published study on physical medicine treatment, including a summary of the overall trends and patterns of service utilization and cost. The study also analyzed the substitution between physical medicine and opioids in the workers' compensation system, as well as the impact of early physical medicine on lost time.

C. Legislative, Regulatory and Judicial Update Summary

The Working Group reviewed pending 2020 legislation as provided in the meeting materials. During the meeting, Working Group members specifically discussed AB 1815 (concerning an updated schedule for revisions to the medical-legal fee schedule), AB 2269 (concerning personal rights, Automated Decision Systems and impact on insurance coverage eligibility), and AB 2398 (concerning "covered claims" and "net written premium" under California Insurance Guarantee Association provisions).

The Working Group generally discussed pending post-AB 5 bills that put forth new frameworks for determining employment status as well as those that exempt a wide range of professions from the application of the "ABC Test". The pending presumption bills for firefighters, peace officers and hospital employees were also highlighted. Most notably, Working Group members focused on healthcare workers and the expectation that the presumptions will extend to those diagnosed with the COVID-19 virus. As noted during the meeting, the California Legislature is on an extended recess due to the ongoing pandemic and is currently scheduled to return April 13, 2020, although this date is subject to change.

With respect to regulations, the Workers' Compensation Appeals Board (WCAB) Rules of Practice and Procedure were summarized as well as the recent amendments to Medical-Legal Fee Schedule Billing Regulations. Concern was expressed that electronic WCAB case filings may be significantly delayed in light of the current pandemic. Working Group members also emphasized the large impact on medical-legal costs associated with the proposed additional payment for the review of medical records based on number of pages.

Lastly, the Working Group reviewed recent judicial decisions involving employment determination status, liens, temporary disability and third party liability. A Working Group member emphasized the continued importance of the *Wilson* case² and its progeny with respect to determining whether an injury is "catastrophic" supporting an increased impairment rating under Labor Code Section 4660.1(c)(2)(B).

² See supra note 1, *Wilson v. State Cal Fire and SCIF*.

Item AC20-03-01
First Quarter 2020 Review of Diagnostics

At the March 16, 2020 meeting, the Committee reviewed the first quarter 2020 diagnostics. Those diagnostics were also reviewed by the Claims Working Group at the March 23, 2020 meeting. The information and feedback provided by the Claims Working Group will be provided at the meeting.

Item AC20-03-02

12/31/2019 Experience – Review of Methodologies

At the March 16, 2020 meeting, the Committee reviewed a preliminary summary of accident year experience through December 31, 2019. Exhibits 1 through 8 provide an updated analysis of December 31, 2019 experience. In total, approximately 100% of the market is included. The loss projection methodologies are generally consistent with those reflected in the analysis presented at the March 16, 2020 meeting. Wage and loss levels are projected to April 1, 2021—the approximate midpoint of experience on policies incepting during the period from July 1, 2020 through December 31, 2020. For consistency, premiums have been on-leveled to the July 1, 2019 industry average filed pure premium rate level.¹ Updates from the analysis presented at the March 16, 2020 meeting include (a) updated premium on-level adjustments and claim frequency forecasts based on the March 2020 UCLA Anderson forecast,² (b) an indemnity severity trend of 0% and medical severity trend of 1.5% preliminarily recommended by the Committee at the March 16, 2020 meeting and (c) minor revisions to insurer data submissions.

As shown on Exhibit 8, based on December 31, 2019 accident year experience, the projected loss ratio for policies incepting during the period from July 1, 2020 through December 31, 2020 is 0.561. (This compares to 0.557 presented at the March 16, 2020 meeting and 0.583 reflected in the January 1, 2020 Pure Premium Rate Filing.)

Exhibits 9 through 12 include supplemental information based on December 31, 2019 experience.

¹ In a potential mid-year filing, premiums will be on-leveled to the January 1, 2020 industry average filed pure premium rate level.

² Due to the recent economic impact of COVID-19, which is in part reflected in the March 2020 UCLA Anderson forecast but not in the November 2019 California Department of Finance forecast, only the UCLA Anderson forecast is used for the wage change for 2020.

California Workers' Compensation
Accident Year Experience as of December 31, 2019

<u>Year</u>	<u>Earned Premium</u>	<u>Paid Indemnity</u>	<u>Indemnity Reserves</u>	<u>Paid Medical**</u>	<u>Medical Reserves</u>	<u>IBNR*</u>	<u>Total Incurred**</u>	<u>Loss Ratio*</u>
1987	4,374,085,383	1,506,586,217	6,788,123	1,334,475,511	44,824,706	51,174,762	2,943,849,319	0.673
1988	5,173,049,472	1,703,995,443	6,020,498	1,542,154,007	34,457,070	38,596,813	3,325,223,831	0.643
1989	5,676,279,371	1,940,504,130	6,885,040	1,798,369,778	50,426,878	37,727,348	3,833,913,174	0.675
1990	5,705,878,797	2,261,017,175	7,080,474	2,045,692,846	41,984,392	60,949,353	4,416,724,240	0.774
1991	5,872,566,346	2,481,039,430	15,443,972	2,203,949,723	48,346,440	54,904,603	4,803,684,168	0.818
1992	5,692,939,950	1,979,853,751	13,426,410	1,765,835,664	52,311,831	57,815,580	3,869,243,236	0.680
1993	5,942,544,967	1,695,567,397	13,112,257	1,516,394,844	62,774,974	46,215,598	3,334,065,070	0.561
1994	5,034,831,820	1,628,835,229	20,387,175	1,467,360,963	86,322,151	38,983,681	3,241,889,199	0.644
1995	3,790,122,732	1,766,934,235	25,504,579	1,624,334,746	94,743,497	50,559,246	3,562,076,303	0.940
1996	3,748,266,525	1,957,534,276	30,979,364	1,718,844,292	96,206,132	58,590,457	3,862,154,521	1.030
1997	3,928,295,572	2,319,753,353	38,165,376	2,016,714,398	125,090,083	93,758,099	4,593,481,309	1.169
1998	4,333,560,338	2,775,301,843	49,731,336	2,643,031,839	215,345,949	184,625,971	5,868,036,938	1.354
1999	4,551,546,853	3,057,436,790	54,879,885	3,039,124,528	171,629,260	246,938,847	6,570,009,310	1.443
2000	5,923,031,823	3,429,896,218	64,584,283	3,561,057,107	209,688,221	401,680,518	7,666,906,347	1.294
2001	10,120,534,867	4,842,596,838	99,258,452	5,364,855,961	367,527,709	597,064,069	11,271,303,029	1.114
2002	13,434,933,190	4,774,257,186	91,263,929	5,484,444,815	323,197,725	886,557,509	11,559,721,164	0.860
2003	19,476,317,174	4,548,266,766	147,991,441	5,053,039,908	362,086,351	1,241,428,022	11,352,812,488	0.583
2004	23,096,787,993	3,210,920,222	124,057,933	4,053,390,064	284,629,918	1,370,422,904	9,043,421,041	0.392
2005	21,398,213,516	2,528,360,793	106,037,896	3,648,292,344	270,201,376	1,117,619,407	7,670,511,816	0.358
2006	17,232,800,048	2,615,380,960	112,324,531	3,753,259,900	293,829,398	779,799,761	7,554,594,550	0.438
2007	13,275,649,610	2,752,845,610	141,041,032	4,019,738,120	352,170,222	837,885,727	8,103,680,711	0.610
2008	10,764,323,955	2,800,230,275	145,508,217	4,012,666,921	357,273,472	503,890,929	7,819,569,814	0.726
2009	8,896,709,168	2,674,163,099	145,733,387	3,820,462,519	357,725,257	486,083,180	7,484,167,442	0.841
2010	9,398,228,398	2,683,942,793	148,125,116	3,904,953,044	319,455,240	575,975,466	7,632,451,659	0.812
2011	10,129,285,077	2,648,185,809	156,442,902	3,531,529,475	355,245,128	775,260,251	7,466,663,565	0.737
2012	11,692,134,220	2,671,163,105	196,152,364	3,412,297,883	392,748,727	943,364,453	7,615,726,532	0.651
2013	14,149,827,161	2,690,505,273	215,029,429	3,234,915,559	416,076,281	1,566,659,026	8,123,185,568	0.574
2014	15,997,914,039	2,785,329,643	288,703,047	3,112,667,443	488,337,490	2,108,328,836	8,783,366,459	0.549
2015	17,059,168,432	2,738,649,284	382,788,513	2,946,471,845	635,040,917	3,305,458,363	10,008,408,922	0.587
2016	17,954,524,605	2,474,625,401	510,151,514	2,662,666,207	778,878,679	3,241,082,902	9,667,404,703	0.538
2017	17,671,411,530	2,049,736,134	744,721,648	2,278,277,137	1,068,207,256	3,627,724,680	9,768,666,855	0.553
2018	17,426,352,098	1,389,844,897	1,024,199,240	1,742,216,741	1,443,893,152	4,485,863,018	10,086,017,048	0.579
2019	16,121,172,923	474,398,904	872,599,845	729,709,710	1,492,417,760	5,722,767,468	9,291,893,687	0.576

* 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

Accident Year	Age-to-Age (in months)															
	<u>24/12</u>	<u>36/24</u>	<u>48/36</u>	<u>60/48</u>	<u>72/60</u>	<u>84/72</u>	<u>96/84</u>	<u>108/96</u>	<u>120/108</u>	<u>132/120</u>	<u>144/132</u>	<u>156/144</u>	<u>168/156</u>	<u>180/168</u>	<u>192/180</u>	<u>204/192</u>
1994											1.000	1.002	1.002	0.997	1.000	1.000
1995										0.998	1.003	1.003	1.000	1.002	1.002	1.000
1996									1.003	1.001	1.004	1.000	1.000	1.000	1.001	1.002
1997								1.002	1.007	1.005	1.002	1.002	1.003	1.002	1.001	1.001
1998							1.007	1.008	1.004	1.004	1.002	1.003	1.004	1.001	1.002	1.001
1999						1.014	1.011	1.006	1.007	1.004	1.002	1.003	1.003	1.002	1.002	1.001
2000					1.021	1.015	1.011	1.008	1.004	1.004	1.005	1.003	1.001	1.004	1.002	1.000
2001				1.035	1.023	1.021	1.014	1.009	1.006	1.007	1.006	1.005	1.003	1.002	1.001	1.001
2002			1.069	1.033	1.033	1.018	1.011	1.010	1.010	1.007	1.005	1.003	1.002	1.002	1.003	1.002
2003		1.187	1.069	1.056	1.033	1.021	1.018	1.015	1.015	1.009	1.006	1.004	1.003	1.002	1.002	1.004
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	1.002	1.006	
2005	1.503	1.218	1.098	1.068	1.053	1.040	1.028	1.016	1.012	1.006	1.005	1.006	1.003	1.004		
2006	1.690	1.247	1.111	1.080	1.053	1.035	1.023	1.015	1.009	1.007	1.004	1.005	1.002			
2007	1.784	1.273	1.120	1.070	1.049	1.037	1.022	1.012	1.011	1.005	1.007	1.010				
2008	1.858	1.302	1.136	1.074	1.045	1.030	1.019	1.012	1.009	1.006	1.007					
2009	1.983	1.293	1.142	1.076	1.048	1.024	1.019	1.014	1.009	1.011						
2010	1.994	1.315	1.131	1.069	1.045	1.026	1.016	1.012	1.012							
2011	1.997	1.277	1.133	1.061	1.037	1.022	1.018	1.012								
2012	1.992	1.279	1.113	1.063	1.041	1.023	1.016									
2013	1.931	1.259	1.111	1.055	1.032	1.021										
2014	1.960	1.278	1.115	1.059	1.030											
2015	1.969	1.260	1.101	1.049												
2016	1.941	1.246	1.097													
2017	1.911	1.243														
2018	1.906															
Selected (a)	1.906	1.243	1.097	1.049	1.030	1.021	1.016	1.012	1.010	1.007	1.006	1.005	1.002	1.003	1.003	1.002
Cumulative	3.097	1.625	1.307	1.192	1.136	1.103	1.080	1.063	1.051	1.040	1.033	1.027	1.021	1.019	1.016	1.013

(a) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and six-year average for the subsequent age-to-age factors.

Incurred Indemnity Loss Development Factors (Continued)

Accident Year	Age-to-Age (in months)																		ULT/420Inc (b)
	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	396/384	408/396	420/408	
1983						1.002	1.001	1.001	1.000	1.000	1.001	1.001	1.001	1.001	1.001	1.000	1.001	1.001	
1984					1.000	1.001	1.000	1.000	1.001	1.001	1.000	1.001	1.001	1.000	0.999	1.000	1.000	1.001	
1985				1.000	1.001	1.001	1.000	1.001	1.000	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	
1986			1.000	1.000	1.000	1.001	1.001	1.000	1.001	1.002	1.001	1.000	0.999	1.000	1.000	1.000	1.000		
1987		0.999	1.000	1.000	0.999	1.000	1.000	1.001	1.002	1.000	1.001	1.001	1.001	1.001	1.001	1.000			
1988	1.001	1.001	1.000	1.001	1.000	1.001	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.001				
1989	1.003	1.000	1.000	1.001	1.000	1.001	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000					
1990	1.000	1.001	1.000	0.999	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.001	1.000						
1991	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.001						
1992	0.998	1.001	1.001	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.001								
1993	0.999	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.001									
1994	1.001	1.001	1.002	1.000	1.001	1.001	0.999	1.001	1.001										
1995	1.003	1.001	0.998	1.001	1.000	1.001	1.000	1.001											
1996	1.003	1.000	1.000	1.000	1.001	1.001	1.002												
1997	1.000	1.000	1.000	1.000	1.001	1.001													
1998	1.003	1.001	1.001	1.000	1.001														
1999	1.000	1.000	1.002	1.002															
2000	1.002	1.001	1.001																
2001	1.001	1.002																	
2002	1.002																		
Selected (a)	1.001	1.001	1.000	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	1.001	
Cumulative	1.012	1.011	1.010	1.010	1.009	1.008	1.007	1.007	1.007	1.007	1.006	1.006	1.006	1.005	1.005	1.005	1.005	1.005	1.004

(b) The ULT/420Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 348-to-360 factors, excluding the 2016, 2017, and 2018 evaluations, and extrapolated to 80 development years.

Incurred Medical Loss Development Factors

Accident Year	Age-to-Age (in months) (b)															
	<u>24/12</u>	<u>36/24</u>	<u>48/36</u>	<u>60/48</u>	<u>72/60</u>	<u>84/72</u>	<u>96/84</u>	<u>108/96</u>	<u>120/108</u>	<u>132/120</u>	<u>144/132</u>	<u>156/144</u>	<u>168/156</u>	<u>180/168</u>	<u>192/180</u>	<u>204/192</u>
1994											1.011	1.018	1.008	1.009	1.021	1.011
1995										1.018	1.011	1.023	1.028	1.016	1.005	1.009
1996									1.019	1.019	1.014	1.024	1.018	1.013	1.014	1.005
1997								1.021	1.015	1.023	1.030	1.012	1.015	1.012	1.003	1.007
1998							1.022	1.024	1.038	1.023	1.020	1.017	1.004	1.014	1.008	1.012
1999						1.033	1.026	1.038	1.030	1.019	1.018	1.013	1.011	1.013	1.005	0.999
2000					1.038	1.029	1.044	1.028	1.017	1.024	1.018	1.018	1.012	1.006	0.999	0.995
2001				1.047	1.041	1.045	1.040	1.034	1.035	1.022	1.017	1.015	1.013	1.001	0.997	0.994
2002			1.059	1.039	1.056	1.040	1.036	1.029	1.028	1.022	1.014	1.010	0.999	0.997	1.000	0.999
2003		1.119	1.057	1.059	1.060	1.042	1.042	1.037	1.029	1.018	1.011	1.003	0.998	0.999	1.001	1.007
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	0.998	1.003	
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	1.000	1.000		
2006	1.460	1.196	1.103	1.081	1.066	1.048	1.040	1.022	1.012	1.000	1.001	1.006	1.000			
2007	1.518	1.204	1.124	1.081	1.070	1.050	1.032	1.018	1.004	1.008	1.001	1.004				
2008	1.527	1.212	1.129	1.092	1.061	1.041	1.026	1.010	1.005	1.002	1.005					
2009	1.604	1.227	1.140	1.087	1.061	1.030	1.016	1.007	1.006	1.009						
2010	1.620	1.245	1.134	1.077	1.045	1.025	1.012	1.008	1.010							
2011	1.667	1.222	1.125	1.069	1.034	1.016	1.010	1.011								
2012	1.592	1.188	1.092	1.056	1.031	1.015	1.016									
2013	1.559	1.150	1.086	1.039	1.022	1.015										
2014	1.523	1.159	1.079	1.035	1.028											
2015	1.511	1.146	1.064	1.031												
2016	1.498	1.124	1.046													
2017	1.440	1.119														
2018	1.452															
Selected (a)	1.452	1.119	1.046	1.031	1.028	1.015	1.016	1.011	1.010	1.006	1.005	1.004	1.001	1.000	1.001	1.001
Cumulative	1.979	1.363	1.218	1.164	1.129	1.099	1.082	1.065	1.054	1.044	1.037	1.032	1.028	1.027	1.027	1.026

(a) Selections are latest year for the 12-to-24 month through 96-to-108 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)

Accident Year	Age-to-Age (in months)																		ULT/420Inc (c)
	<u>216/204</u>	<u>228/216</u>	<u>240/228</u>	<u>252/240</u>	<u>264/252</u>	<u>276/264</u>	<u>288/276</u>	<u>300/288</u>	<u>312/300</u>	<u>324/312</u>	<u>336/324</u>	<u>348/336</u>	<u>360/348</u>	<u>372/360</u>	<u>384/372</u>	<u>396/384</u>	<u>408/396</u>	<u>420/408</u>	
1983						1.001	1.005	1.001	1.006	1.004	1.002	1.006	1.003	1.004	1.003	0.997	0.999	0.998	
1984					1.002	1.004	1.002	1.003	1.003	1.002	1.003	1.001	1.003	1.001	0.997	1.000	1.001	1.000	
1985				1.008	1.004	1.000	1.001	1.003	1.003	1.003	1.005	1.002	1.003	0.998	0.999	0.999	1.000	1.001	
1986			1.004	1.001	1.005	1.003	1.006	1.005	1.006	1.004	1.005	1.000	1.002	0.998	1.001	1.006	0.994		
1987		0.998	1.006	1.000	1.003	1.011	0.999	1.007	1.003	1.004	1.005	1.001	0.997	1.001	1.000	1.005			
1988	1.004	1.004	1.002	1.006	1.005	1.005	1.002	1.005	1.003	1.003	1.002	0.998	0.999	1.000	1.001				
1989	0.999	1.007	1.006	1.005	1.005	1.008	1.006	1.000	1.003	0.999	0.999	0.999	0.999	1.002					
1990	1.003	1.007	1.007	1.005	1.003	1.003	1.003	0.997	1.002	1.000	1.000	0.998	0.999						
1991	1.008	1.005	1.006	1.002	1.003	1.002	1.003	1.001	1.000	0.999	0.998	1.000							
1992	1.005	1.004	1.002	1.005	1.003	1.005	1.000	0.999	1.001	0.999	1.002								
1993	1.007	1.011	1.014	1.004	0.999	1.000	0.996	0.999	0.998	0.998									
1994	1.011	1.004	1.007	1.006	1.001	0.996	0.995	1.002	1.002										
1995	1.015	0.996	1.006	0.999	1.006	0.992	0.999	1.001											
1996	1.008	1.005	1.001	0.998	0.999	0.997	1.000												
1997	1.001	0.994	0.998	0.997	0.998	1.001													
1998	1.001	1.001	0.994	1.001	1.003														
1999	0.999	0.995	1.002	0.999															
2000	0.996	0.999	0.999																
2001	1.001	1.003																	
2002	1.002																		
Selected (a)	1.000	1.000	1.000	1.000	1.001	0.999	0.999	1.000	1.001	1.000	1.001	0.999	1.000	1.000	1.000	1.001	0.999	1.000	
Cumulative	1.025	1.025	1.026	1.026	1.026	1.025	1.026	1.027	1.028	1.027	1.027	1.026	1.027	1.027	1.027	1.027	1.025	1.027	1.027

(c) The ULT/420Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 348-to-360 factors, excluding the 2016, 2017, and 2018 evaluations, and extrapolated to 80 development years.

Paid Indemnity Loss Development Factors

Accident Year	Age-to-Age (in months)															
	<u>24/12</u>	<u>36/24</u>	<u>48/36</u>	<u>60/48</u>	<u>72/60</u>	<u>84/72</u>	<u>96/84</u>	<u>108/96</u>	<u>120/108</u>	<u>132/120</u>	<u>144/132</u>	<u>156/144</u>	<u>168/156</u>	<u>180/168</u>	<u>192/180</u>	<u>204/192</u>
1994											1.009	1.008	1.007	1.006	1.003	1.003
1995										1.010	1.012	1.008	1.007	1.005	1.005	1.003
1996									1.018	1.014	1.012	1.009	1.006	1.006	1.004	1.004
1997								1.025	1.018	1.016	1.012	1.008	1.007	1.006	1.006	1.005
1998							1.037	1.027	1.021	1.015	1.012	1.009	1.009	1.007	1.006	1.006
1999						1.055	1.036	1.025	1.018	1.015	1.011	1.009	1.008	1.007	1.006	1.004
2000					1.088	1.052	1.035	1.025	1.016	1.013	1.010	1.009	1.008	1.007	1.005	1.004
2001				1.145	1.077	1.051	1.034	1.024	1.017	1.014	1.012	1.011	1.008	1.007	1.006	1.005
2002			1.290	1.127	1.075	1.046	1.031	1.020	1.018	1.015	1.014	1.008	1.008	1.006	1.006	1.005
2003		1.696	1.249	1.128	1.072	1.043	1.030	1.026	1.023	1.021	1.015	1.012	1.009	1.008	1.007	1.007
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	1.008	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	1.010	1.010		
2006	2.866	1.539	1.229	1.135	1.090	1.068	1.050	1.035	1.026	1.018	1.016	1.012	1.011			
2007	2.905	1.547	1.246	1.140	1.092	1.066	1.046	1.033	1.027	1.020	1.016	1.013				
2008	2.927	1.577	1.271	1.150	1.092	1.060	1.041	1.027	1.023	1.018	1.015					
2009	3.069	1.616	1.280	1.156	1.092	1.061	1.043	1.031	1.023	1.021						
2010	3.157	1.628	1.281	1.147	1.091	1.060	1.038	1.027	1.022							
2011	3.208	1.613	1.266	1.144	1.087	1.056	1.041	1.027								
2012	3.137	1.597	1.262	1.137	1.087	1.051	1.035									
2013	3.169	1.606	1.260	1.129	1.072	1.044										
2014	3.229	1.635	1.257	1.129	1.071											
2015	3.278	1.618	1.244	1.119												
2016	3.235	1.586	1.230													
2017	3.185	1.569														
2018	3.109															
Selected (a)	3.109	1.569	1.230	1.119	1.071	1.044	1.035	1.027	1.023	1.020	1.016	1.013	1.010	1.009	1.007	1.006
Cumulative	9.187	2.955	1.883	1.531	1.368	1.278	1.224	1.182	1.151	1.126	1.104	1.087	1.073	1.063	1.054	1.046

(a) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors.

Paid Indemnity Loss Development Factors (Continued)

Accident Year	Age-to-Age (in months)																		420Inc/420Pd (b)	ULT/420Inc (c)
	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	396/384	408/396	420/408		
1983						1.003	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.006	
1984					1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001	1.000	1.001	1.005	
1985				1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.000	1.000	1.004	
1986			1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.001		1.004	
1987		0.999	1.001	1.001	1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001			1.005	
1988	1.001	1.001	1.002	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001				1.003	
1989	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001					1.003	
1990	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.001							
1991	1.002	1.002	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001								
1992	1.002	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001									
1993	1.002	1.003	1.003	1.002	1.002	1.001	1.001	1.001	1.001	1.001										
1994	1.004	1.003	1.003	1.003	1.002	1.002	1.002	1.001	1.001											
1995	1.005	1.005	1.003	1.003	1.002	1.002	1.002	1.003												
1996	1.005	1.004	1.003	1.003	1.002	1.003	1.003													
1997	1.004	1.003	1.003	1.002	1.003	1.003														
1998	1.006	1.004	1.003	1.003	1.003															
1999	1.004	1.003	1.003	1.003																
2000	1.004	1.004	1.003																	
2001	1.005	1.005																		
2002	1.005																			
Selected (a)	1.005	1.004	1.003	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	1.003	
Cumulative	1.040	1.035	1.031	1.028	1.025	1.023	1.020	1.018	1.016	1.015	1.014	1.013	1.012	1.011	1.010	1.009	1.008	1.008		1.004

- (b) Three-year averages of the 420Inc/420Pd factors are selected.
- (c) The ULT/420Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 348-to-360 factors, excluding the 2016, 2017, and 2018 evaluations, and extrapolated to 80 development years.

Paid Medical Loss Development Factors

Unadjusted (a) Accident Year	Age-to-Age (in months)															
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192
1994											1.017	1.018	1.014	1.017	1.013	1.012
1995										1.020	1.024	1.021	1.019	1.018	1.018	1.015
1996									1.029	1.025	1.027	1.023	1.020	1.018	1.016	1.013
1997								1.036	1.033	1.028	1.026	1.022	1.019	1.016	1.014	1.014
1998							1.047	1.039	1.033	1.032	1.030	1.021	1.019	1.019	1.015	1.017
1999						1.059	1.044	1.035	1.032	1.032	1.025	1.025	1.016	1.016	1.018	1.015
2000					1.079	1.056	1.042	1.038	1.031	1.027	1.023	1.020	1.020	1.017	1.013	1.010
2001				1.109	1.076	1.057	1.045	1.038	1.034	1.030	1.022	1.022	1.022	1.017	1.012	1.011
2002			1.168	1.112	1.072	1.054	1.046	1.034	1.032	1.024	1.023	1.018	1.016	1.012	1.011	1.010
2003		1.318	1.170	1.112	1.074	1.057	1.048	1.041	1.030	1.030	1.026	1.019	1.016	1.013	1.012	1.010
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	1.012	1.013	
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	1.014	1.013		
2006	2.340	1.399	1.220	1.140	1.099	1.068	1.056	1.042	1.034	1.025	1.020	1.015	1.015			
2007	2.416	1.413	1.230	1.142	1.097	1.075	1.057	1.041	1.031	1.022	1.020	1.015				
2008	2.325	1.421	1.241	1.148	1.103	1.072	1.051	1.035	1.027	1.018	1.017					
2009	2.408	1.447	1.251	1.160	1.104	1.067	1.046	1.032	1.024	1.020						
2010	2.479	1.468	1.265	1.152	1.096	1.066	1.043	1.030	1.025							
2011	2.580	1.470	1.248	1.145	1.095	1.058	1.041	1.029								
2012	2.561	1.468	1.247	1.143	1.087	1.056	1.039									
2013	2.492	1.464	1.238	1.130	1.077	1.048										
2014	2.518	1.462	1.226	1.121	1.076											
2015	2.533	1.439	1.218	1.111												
2016	2.480	1.410	1.197													
2017	2.373	1.391														
2018	2.378															
Adjusted (b) Accident Year	Age-to-Age (in months)															
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192
2001																1.012
2002															1.012	1.011
2003														1.014	1.013	1.011
2004													1.016	1.013	1.014	
2005												1.020	1.016	1.015		
2006											1.022	1.016	1.016			
2007										1.024	1.022	1.017				
2008									1.029	1.020	1.018					
2009								1.034	1.026	1.022						
2010							1.044	1.032	1.027							
2011						1.062	1.046	1.032								
2012					1.093	1.062	1.043									
2013				1.137	1.084	1.052										
2014			1.233	1.128	1.080											
2015		1.443	1.224	1.114												
2016	2.486	1.416	1.199													
2017	2.386	1.393														
2018	2.378															
Selected (c)	2.378	1.393	1.199	1.114	1.080	1.052	1.043	1.032	1.027	1.022	1.021	1.018	1.016	1.014	1.013	1.011
Cumulative Unadjusted for Impact of SB 1160	7.297	3.069	2.203	1.837	1.649	1.527	1.452	1.392	1.349	1.313	1.285	1.259	1.237	1.217	1.200	1.185
Cumulative Adjusted for Impact of SB 1160(d)	6.999	2.943	2.113	1.786	1.621	1.512	---	---	---	---	---	---	---	---	---	---

- (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. Factors are also adjusted for the impact of pharmaceutical cost reductions to bring the historical payments to the current pharmaceutical cost level.
- (c) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors.
- (d) The cumulative factors for 36, 48, 60, and 72 months are adjusted by -4.1%, -2.8%, -1.7%, and -1.0%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Paid Medical Loss Development Factors (Continued)

Unadjusted (a)		Age-to-Age (in months)																		
Accident Year	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	396/384	408/396	420/408	420Inc/420Pd (e)	ULT/420Inc (f)
1983						1.004	1.005	1.005	1.003	1.005	1.004	1.004	1.003	1.004	1.003	1.002	1.004	1.003	1.037	
1984					1.004	1.004	1.004	1.003	1.004	1.003	1.004	1.004	1.003	1.003	1.002	1.002	1.002	1.002	1.037	
1985				1.005	1.005	1.006	1.004	1.004	1.003	1.004	1.004	1.004	1.003	1.002	1.003	1.002	1.002	1.002	1.027	
1986			1.006	1.004	1.005	1.004	1.005	1.005	1.005	1.005	1.005	1.005	1.004	1.006	1.004	1.004	1.003		1.020	
1987		1.007	1.006	1.007	1.006	1.005	1.005	1.005	1.005	1.005	1.005	1.003	1.003	1.003	1.003	1.002			1.023	
1988	1.005	1.006	1.007	1.006	1.005	1.005	1.006	1.005	1.005	1.004	1.003	1.003	1.003	1.004	1.003				1.017	
1989	1.005	1.006	1.007	1.005	1.006	1.008	1.006	1.007	1.006	1.003	1.003	1.003	1.003	1.003					1.019	
1990	1.006	1.005	1.005	1.005	1.005	1.006	1.004	1.004	1.003	1.002	1.003	1.002	1.003							
1991	1.007	1.006	1.006	1.005	1.006	1.005	1.006	1.003	1.003	1.003	1.003	1.004								
1992	1.008	1.007	1.002	1.006	1.008	1.006	1.005	1.005	1.005	1.004	1.006									
1993	1.011	1.011	1.010	1.013	1.011	1.007	1.006	1.006	1.005	1.008										
1994	1.013	1.009	1.010	1.010	1.009	1.008	1.007	1.004	1.004											
1995	1.011	1.016	1.013	1.012	1.009	1.012	1.007	1.008												
1996	1.014	1.013	1.011	1.009	1.007	1.009	1.008													
1997	1.014	1.011	1.006	1.006	1.007	1.007														
1998	1.013	1.010	1.009	1.008	1.009															
1999	1.012	1.009	1.009	1.008																
2000	1.009	1.008	1.007																	
2001	1.010	1.010																		
2002	1.009																			
Adjusted (b)		Age-to-Age (in months)																		
Accident Year	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	396/384	408/396	420/408	420Inc/420Pd (e)	ULT/420Inc (f)
1983																		1.003	1.037	
1984																	1.002	1.002	1.037	
1985																1.002	1.002	1.002	1.027	
1986															1.005	1.004	1.003		1.020	
1987														1.003	1.004	1.002			1.023	
1988													1.003	1.004	1.003				1.017	
1989												1.003	1.004	1.003					1.019	
1990											1.003	1.002	1.003							
1991										1.003	1.004	1.004								
1992									1.006	1.004	1.006									
1993								1.007	1.005	1.009										
1994							1.008	1.005	1.005											
1995						1.014	1.008	1.010												
1996					1.008	1.010	1.009													
1997				1.007	1.008	1.008														
1998			1.009	1.009	1.010															
1999		1.010	1.010	1.009																
2000	1.010	1.009	1.007																	
2001	1.012	1.011																		
2002	1.010																			
Selected (c)	1.011	1.010	1.009	1.008	1.009	1.011	1.008	1.007	1.005	1.005	1.004	1.003	1.003	1.003	1.004	1.003	1.002	1.002	1.024	
Cumulative	1.172	1.159	1.148	1.138	1.129	1.119	1.107	1.098	1.090	1.084	1.078	1.074	1.071	1.067	1.063	1.059	1.056	1.054		1.027

(e) Six-year averages of the 420Inc/420Pd factors are selected.
(f) The ULT/420Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 348-to-360 factors, excluding the 2016, 2017, and 2018 evaluations, and extrapolated to 80 development years.

Selected Indemnity Development Factors - Paid to Age 264, Incurred from Age 264 to Ultimate

Accident Year	Age-to-Age (in months)																					264Inc/264Pd (b)
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192	216/204	228/216	240/228	252/240	264/252	
1993												1.004	1.004	1.004	1.004	1.003	1.002	1.003	1.003	1.002	1.002	1.012
1994											1.009	1.008	1.007	1.006	1.003	1.003	1.004	1.003	1.003	1.003	1.002	1.016
1995										1.010	1.012	1.008	1.007	1.005	1.005	1.003	1.005	1.005	1.003	1.003	1.002	1.020
1996									1.018	1.014	1.012	1.009	1.006	1.006	1.004	1.004	1.005	1.004	1.003	1.003	1.002	1.020
1997								1.025	1.018	1.016	1.012	1.008	1.007	1.006	1.006	1.005	1.004	1.003	1.003	1.002	1.003	1.018
1998							1.037	1.027	1.021	1.015	1.012	1.009	1.009	1.007	1.006	1.006	1.006	1.004	1.003	1.003	1.003	1.018
1999						1.055	1.036	1.025	1.018	1.015	1.011	1.009	1.008	1.007	1.006	1.004	1.004	1.003	1.003	1.003		
2000					1.088	1.052	1.035	1.025	1.016	1.013	1.010	1.009	1.008	1.007	1.005	1.004	1.004	1.004	1.003			
2001				1.145	1.077	1.051	1.034	1.024	1.017	1.014	1.012	1.011	1.008	1.007	1.006	1.005	1.005	1.005				
2002			1.290	1.127	1.075	1.046	1.031	1.020	1.018	1.015	1.014	1.008	1.008	1.006	1.006	1.005	1.005					
2003		1.696	1.249	1.128	1.072	1.043	1.030	1.026	1.023	1.021	1.015	1.012	1.009	1.008	1.007	1.007						
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	1.008	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	1.010	1.010								
2006	2.866	1.539	1.229	1.135	1.090	1.068	1.050	1.035	1.026	1.018	1.016	1.012	1.011									
2007	2.905	1.547	1.246	1.140	1.092	1.066	1.046	1.033	1.027	1.020	1.016	1.013										
2008	2.927	1.577	1.271	1.150	1.092	1.060	1.041	1.027	1.023	1.018	1.015											
2009	3.069	1.616	1.280	1.156	1.092	1.061	1.043	1.031	1.023	1.021												
2010	3.157	1.628	1.281	1.147	1.091	1.060	1.038	1.027	1.022													
2011	3.208	1.613	1.266	1.144	1.087	1.056	1.041	1.027														
2012	3.137	1.597	1.262	1.137	1.087	1.051	1.035															
2013	3.169	1.606	1.260	1.129	1.072	1.044																
2014	3.229	1.635	1.257	1.129	1.071																	
2015	3.278	1.618	1.244	1.119																		
2016	3.235	1.586	1.230																			
2017	3.185	1.569																				
2018	3.109																					
Selected (a)	3.107(c)	1.568(c)	1.212(c)	1.104(c)	1.059(c)	1.039(c)	1.035	1.027	1.023	1.020	1.016	1.013	1.010	1.009	1.007	1.006	1.005	1.004	1.003	1.003	1.003	1.019
Cumulative	8.814	2.837	1.809	1.493	1.352	1.277	1.229	1.188	1.156	1.131	1.109	1.092	1.078	1.067	1.058	1.051	1.045	1.040	1.036	1.033	1.030	

- (a) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent paid age-to-age factors. Paid development factors are selected to age 264, 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 264Inc/264Pd 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 264, Incurred from Age 264 to Ultimate (Continued)

Accident Year	Age-to-Age (in months)													
	<u>276/264</u>	<u>288/276</u>	<u>300/288</u>	<u>312/300</u>	<u>324/312</u>	<u>336/324</u>	<u>348/336</u>	<u>360/348</u>	<u>372/360</u>	<u>384/372</u>	<u>396/384</u>	<u>408/396</u>	<u>420/408</u>	<u>ULT/420Inc (c)</u>
1983	1.002	1.001	1.001	1.000	1.000	1.001	1.001	1.001	1.001	1.001	1.000	1.001	1.001	
1984	1.001	1.000	1.000	1.001	1.001	1.000	1.001	1.001	1.000	0.999	1.000	1.000	1.001	
1985	1.001	1.000	1.001	1.000	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	
1986	1.001	1.001	1.000	1.001	1.002	1.001	1.000	0.999	1.000	1.000	1.000	1.000		
1987	1.000	1.000	1.001	1.002	1.000	1.001	1.001	1.001	1.001	1.001	1.000			
1988	1.001	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.001				
1989	1.001	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000					
1990	1.000	1.000	1.000	1.000	1.000	1.000	1.001	1.000						
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.001							
1992	1.001	1.000	1.000	1.000	1.000	1.001								
1993	1.000	1.000	1.000	1.000	1.001									
1994	1.001	0.999	1.001	1.001										
1995	1.001	1.000	1.001											
1996	1.001	1.002												
1997	1.001													
1998														
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	1.001	
Cumulative	1.008	1.007	1.007	1.007	1.007	1.006	1.006	1.006	1.005	1.005	1.005	1.005	1.005	1.004

- (d) The ULT/420Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 348-to-360 factors, excluding the 2016, 2017, and 2018 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)						
<u>Year</u>	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							117,413
2011						118,023	118,184
2012					124,503	124,836	124,969
2013				132,239	132,845	133,085	133,293
2014			137,365	138,705	139,273	139,578	
2015		139,776	143,527	144,355	144,795		
2016	114,705	142,750	146,833	147,856			
2017	118,037	143,999	147,371				
2018	119,874	146,958					
2019	122,306						

B. Development of Total Reported Indemnity Claim Counts

Accident	Age-to-Age Development (in months):						
<u>Year</u>	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-Ult</u>
2011						1.001	
2012					1.003	1.001	
2013				1.005	1.002	1.002	
2014			1.010	1.004	1.002		
2015		1.027	1.006	1.003			
2016	1.244	1.029	1.007				
2017	1.220	1.023					
2018	1.226						
Latest Year	1.226	1.023	1.007	1.003	1.002	1.002	
Cumulative	1.277	1.042	1.018	1.011	1.008	1.006	1.004

Acc. Year	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Ult. Claim Counts	156,190	153,084	150,002	149,454	145,915	140,350	133,822

C. Closed Indemnity Claim Counts

Accident	Evaluated as of (in months)						
<u>Year</u>	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							105,808
2011						102,779	107,552
2012					103,251	110,335	115,029
2013				101,303	112,583	119,538	124,198
2014			90,512	108,398	120,018	126,684	
2015		70,676	97,992	116,338	127,170		
2016	32,398	76,266	104,229	122,000			
2017	35,866	80,944	107,816				
2018	37,352	82,823					
2019	38,393						

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 Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							89.7%
2011						86.6%	90.7%
2012					82.3%	87.9%	91.7%
2013				75.7%	84.1%	89.3%	92.8%
2014			64.5%	77.2%	85.5%	90.3%	
2015		48.4%	67.2%	79.7%	87.2%		
2016	21.7%	51.0%	69.7%	81.6%			
2017	23.9%	54.0%	71.9%				
2018	24.4%	54.1%					
2019	24.6%						

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

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							109,422
2011						107,092	110,113
2012					109,347	113,248	116,442
2013				109,239	116,630	120,791	124,198
2014			100,879	114,569	122,320	126,684	
2015		78,944	104,879	119,111	127,170		
2016	36,737	80,859	107,422	122,000			
2017	36,872	81,155	107,816				
2018	37,630	82,823					
2019	38,393						

F. Average Paid Indemnity per Closed Claim

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							18,412
2011						16,888	18,408
2012					15,144	17,050	18,343
2013				12,986	15,445	17,104	18,240
2014			10,179	13,784	16,343	17,936	
2015		6,177	10,887	14,485	16,884		
2016	2,493	6,545	11,027	14,468			
2017	2,591	6,644	11,132				
2018	2,872	7,019					
2019	3,113						

- (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 Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							19,736
2011						18,256	19,302
2012					16,770	17,841	18,817
2013				14,671	16,390	17,403	18,240
2014			12,135	15,088	16,877	17,936	
2015		7,333	12,119	15,065	16,884		
2016	2,743	7,131	11,579	14,468			
2017	2,646	6,671	11,132				
2018	2,888	7,019					
2019	3,113						

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

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							2,159,539
2011						1,955,091	2,125,437
2012					1,833,779	2,020,459	2,191,098
2013				1,602,655	1,911,560	2,102,095	2,265,429
2014			1,224,123	1,728,665	2,064,337	2,272,211	
2015		578,896	1,271,035	1,794,354	2,147,123		
2016	100,766	576,584	1,243,795	1,765,036			
2017	97,550	541,365	1,200,236				
2018	108,663	581,365					
2019	119,517						

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

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							498,665
2011						556,228	440,113
2012					647,455	523,609	417,463
2013				778,393	624,798	488,939	380,237
2014			899,209	792,172	618,847	491,890	
2015		779,669	900,673	761,630	591,053		
2016	311,212	769,030	862,526	710,096			
2017	317,153	768,513	849,735				
2018	339,707	808,530					
2019	354,882						

- (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 Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							42,970
2011						36,488	41,395
2012					30,466	36,108	41,998
2013				25,161	30,836	36,092	41,807
2014			19,192	26,138	32,140	38,149	
2015		11,283	19,780	27,185	33,535		
2016	3,781	11,567	20,245	27,463			
2017	3,860	12,188	21,482				
2018	4,117	12,607					
2019	4,229						

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

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							-155,293
2011						-157,374	-106,013
2012					-185,718	-105,184	-59,344
2013				-199,681	-124,793	-45,223	
2014			-198,965	-161,299	-73,985		
2015		-93,290	-136,223	-75,383			
2016	-16,406	-53,128	-64,643				
2017	-3,883	-2,572					
2018	-1,144						

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

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							343,372
2011						398,854	334,100
2012					461,736	418,425	358,119
2013				578,712	500,005	443,716	380,237
2014			700,244	630,873	544,862	491,890	
2015		686,380	764,450	686,247	591,053		
2016	294,806	715,902	797,883	710,096			
2017	313,270	765,941	849,735				
2018	338,563	808,530					
2019	354,882						

- (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 Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							2,502,912
2011						2,353,945	2,459,537
2012					2,295,515	2,438,883	2,549,218
2013				2,181,366	2,411,565	2,545,811	2,645,666
2014			1,924,367	2,359,538	2,609,198	2,764,101	
2015		1,265,276	2,035,484	2,480,601	2,738,176		
2016	395,572	1,292,486	2,041,678	2,475,132			
2017	410,820	1,307,306	2,049,971				
2018	447,226	1,389,895					
2019	474,399						

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2010						
2011						1.045
2012					1.062	1.045
2013				1.106	1.056	1.039
2014			1.226	1.106	1.059	
2015		1.609	1.219	1.104		
2016	3.267	1.580	1.212			
2017	3.182	1.568				
2018	3.108					
Latest Year	3.108	1.568	1.212	1.104	1.059	1.039
3-Year Average	3.186	1.585	1.219	1.105	1.059	1.043

O. Paid Indemnity Loss Development Factors (i)

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2011						1.056
2012					1.088	1.051
2013				1.129	1.072	1.044
2014			1.256	1.129	1.071	
2015		1.618	1.244	1.119		
2016	3.235	1.586	1.230			
2017	3.186	1.569				
2018	3.110					

(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 Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2011						-1.04%
2012					-2.31%	-0.55%
2013				-2.06%	-1.51%	-0.48%
2014			-2.36%	-2.02%	-1.11%	
2015		-0.56%	-2.00%	-1.36%		
2016	0.99%	-0.42%	-1.46%			
2017	-0.10%	-0.08%				
2018	-0.05%					

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2011						1.045
2012					1.062	1.045
2013				1.106	1.056	1.039
2014			1.227	1.106	1.059	
2015		1.609	1.219	1.104		
2016	3.267	1.579	1.212			
2017	3.182	1.568				
2018	3.107					
Latest Year	3.107	1.568	1.212	1.104	1.059	1.039
3-Year Average	3.185	1.585	1.219	1.105	1.059	1.043

(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 264, Incurred from Age 264 to Ultimate

Unadjusted (a)		Age-to-Age (in months)																				
Accident Year	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192	216/204	228/216	240/228	252/240	264/252	264Inc/264Pd (e)
1993											1.017	1.014	1.012	1.014	1.013	1.011	1.011	1.011	1.010	1.013	1.011	1.083
1994											1.024	1.021	1.019	1.018	1.018	1.015	1.011	1.016	1.013	1.012	1.009	1.091
1995									1.020	1.025	1.027	1.023	1.020	1.018	1.016	1.013	1.014	1.013	1.011	1.009	1.007	1.078
1996								1.036	1.033	1.028	1.026	1.022	1.019	1.016	1.014	1.014	1.014	1.011	1.006	1.006	1.007	1.069
1997							1.047	1.039	1.033	1.032	1.030	1.021	1.019	1.019	1.015	1.017	1.013	1.010	1.009	1.008	1.009	1.078
1998						1.059	1.044	1.035	1.032	1.032	1.025	1.025	1.016	1.016	1.018	1.015	1.012	1.009	1.009	1.008		
1999					1.079	1.056	1.042	1.038	1.031	1.027	1.023	1.020	1.020	1.017	1.013	1.010	1.009	1.008	1.007			
2000				1.109	1.076	1.057	1.045	1.038	1.034	1.030	1.022	1.022	1.022	1.017	1.012	1.011	1.010	1.010				
2001			1.168	1.112	1.072	1.054	1.046	1.034	1.032	1.024	1.023	1.018	1.016	1.012	1.011	1.010	1.009					
2002		1.318	1.170	1.112	1.074	1.057	1.048	1.041	1.030	1.030	1.026	1.019	1.016	1.013	1.012	1.010						
2003	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	1.012	1.013							
2004	2.251	1.345	1.209	1.138	1.095	1.073	1.054	1.049	1.038	1.031	1.021	1.019	1.014	1.013								
2005	2.340	1.399	1.220	1.140	1.099	1.068	1.056	1.042	1.034	1.025	1.020	1.015	1.015									
2006	2.416	1.413	1.230	1.142	1.097	1.075	1.057	1.041	1.031	1.022	1.020	1.015										
2007	2.325	1.421	1.241	1.148	1.103	1.072	1.051	1.035	1.027	1.018	1.017											
2008	2.408	1.447	1.251	1.160	1.104	1.067	1.046	1.032	1.024	1.020												
2009	2.479	1.468	1.265	1.152	1.096	1.066	1.043	1.030	1.025													
2010	2.580	1.470	1.248	1.145	1.095	1.058	1.041	1.029														
2011	2.561	1.468	1.247	1.143	1.087	1.056	1.039															
2012	2.492	1.464	1.238	1.130	1.077	1.048																
2013	2.518	1.462	1.226	1.121	1.076																	
2014	2.533	1.439	1.218	1.111																		
2015	2.480	1.410	1.197																			
2016	2.373	1.391																				
2017	2.378																					
2018																						
Adjusted (b)	Age-to-Age (in months)																					
Accident Year	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192	216/204	228/216	240/228	252/240	264/252	264Inc/264Pd (e)
1996																					1.008	1.078
1997																					1.007	1.069
1998																					1.008	1.078
1999																					1.010	
2000																		1.010	1.009	1.007		
2001																		1.009				
2002																		1.011				
2003																		1.010				
2004																						
2005																						
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2008																						
2009																						
2010																						
2011																						
2012																						
2013																						
2014																						
2015																						
2016																						
2017																						
2018																						
Selected (c)	2.378(e)	1.392(e)	1.188(e)	1.102(e)	1.068(e)	1.047(e)	1.043	1.032	1.027	1.022	1.021	1.018	1.016	1.014	1.013	1.011	1.011	1.010	1.009	1.008	1.009	1.075
Cumulative Unadjusted for Impact of SB 1160	6.927	2.913	2.092	1.761	1.598	1.496	1.429	1.370	1.328	1.292	1.264	1.239	1.217	1.198	1.182	1.166	1.153	1.141	1.130	1.120	1.111	
Cumulative Adjusted for Impact of SB 1160(f)	6.644	2.794	2.006	1.712	1.571	1.482	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

- (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. Factors are also adjusted for the impact of pharmaceutical cost reductions to bring the historical payments to the current pharmaceutical cost level.
- (c) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent paid age-to-age factors. Paid development factors are selected to age 264, 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 264Inc/264Pd 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 36, 48, 60, and 72 months are adjusted by -4.1%, -2.8%, -1.7%, and -1.0%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Selected Medical Development Factors - Paid to Age 264, Incurred from Age 264 to Ultimate (Continued)

Accident Year	Age-to-Age (in months)													ULT/420Inc (g)
	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	396/384	408/396	420/408	
1983	1.001	1.005	1.001	1.006	1.004	1.002	1.006	1.003	1.004	1.003	0.997	0.999	0.998	
1984	1.004	1.002	1.003	1.003	1.002	1.003	1.001	1.003	1.001	0.997	1.000	1.001	1.000	
1985	1.000	1.001	1.003	1.003	1.003	1.005	1.002	1.003	0.998	0.999	0.999	1.000	1.001	
1986	1.003	1.006	1.005	1.006	1.004	1.005	1.000	1.002	0.998	1.001	1.006	0.994		
1987	1.011	0.999	1.007	1.003	1.004	1.005	1.001	0.997	1.001	1.000	1.005			
1988	1.005	1.002	1.005	1.003	1.003	1.002	0.998	0.999	1.000	1.001				
1989	1.008	1.006	1.000	1.003	0.999	0.999	0.999	0.999	1.002					
1990	1.003	1.003	0.997	1.002	1.000	1.000	0.998	0.999						
1991	1.002	1.003	1.001	1.000	0.999	0.998	1.000							
1992	1.005	1.000	0.999	1.001	0.999	1.002								
1993	1.000	0.996	0.999	0.998	0.998									
1994	0.996	0.995	1.002	1.002										
1995	0.992	0.999	1.001											
1996	0.997	1.000												
1997	1.001													
1998														
Selected (c)	0.999	0.999	1.000	1.001	1.000	1.001	0.999	1.000	1.000	1.000	1.001	0.999	1.000	
Cumulative	1.025	1.026	1.027	1.028	1.027	1.027	1.026	1.027	1.027	1.027	1.027	1.025	1.027	1.027

- (g) The ULT/420Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 348-to-360 factors, excluding the 2016, 2017, and 2018 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 Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							117,413
2011						118,023	118,184
2012					124,503	124,836	124,969
2013				132,239	132,845	133,085	133,293
2014			137,365	138,705	139,273	139,578	
2015		139,776	143,527	144,355	144,795		
2016	114,705	142,750	146,833	147,856			
2017	118,037	143,999	147,371				
2018	119,874	146,958					
2019	122,306						

B. Development of Total Reported Indemnity Claim Counts

Accident Year	Age-to-Age Development (in months):						
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-Ult</u>
2011						1.001	
2012					1.003	1.001	
2013				1.005	1.002	1.002	
2014			1.010	1.004	1.002		
2015		1.027	1.006	1.003			
2016	1.244	1.029	1.007				
2017	1.220	1.023					
2018	1.226						
Latest Year	1.226	1.023	1.007	1.003	1.002	1.002	
Cumulative	1.277	1.042	1.018	1.011	1.008	1.006	1.004

Acc. Year	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Ult. Claim Counts	156,190	153,084	150,002	149,454	145,915	140,350	133,822

C. Closed Indemnity Claim Counts

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2010							105,808
2011						102,779	107,552
2012					103,251	110,335	115,029
2013				101,303	112,583	119,538	124,198
2014			90,512	108,398	120,018	126,684	
2015		70,676	97,992	116,338	127,170		
2016	32,398	76,266	104,229	122,000			
2017	35,866	80,944	107,816				
2018	37,352	82,823					
2019	38,393						

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)						
	12	24	36	48	60	72	84
2010							89.7%
2011						86.6%	90.7%
2012					82.3%	87.9%	91.7%
2013				75.7%	84.1%	89.3%	92.8%
2014			64.5%	77.2%	85.5%	90.3%	
2015		48.4%	67.2%	79.7%	87.2%		
2016	21.7%	51.0%	69.7%	81.6%			
2017	23.9%	54.0%	71.9%				
2018	24.4%	54.1%					
2019	24.6%						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							109,422
2011						107,092	110,113
2012					109,347	113,248	116,442
2013				109,239	116,630	120,791	124,198
2014			100,879	114,569	122,320	126,684	
2015		78,944	104,879	119,111	127,170		
2016	36,737	80,859	107,422	122,000			
2017	36,872	81,155	107,816				
2018	37,630	82,823					
2019	38,393						

F. Average Paid Medical per Closed Indemnity Claim

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							23,425
2011						20,220	22,413
2012					17,040	19,391	21,096
2013				13,615	16,510	18,543	19,934
2014			10,051	13,659	16,359	18,142	
2015		6,242	10,430	13,848	16,219		
2016	2,709	6,471	10,486	13,493			
2017	2,835	6,648	10,632				
2018	2,972	6,953					
2019	3,367						

- (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 Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							25,447
2011						22,192	23,713
2012					19,045	20,432	21,691
2013				15,593	17,665	18,907	19,934
2014			12,007	15,032	16,954	18,142	
2015		7,292	11,601	14,420	16,219		
2016	2,953	7,005	10,972	13,493			
2017	2,889	6,672	10,632				
2018	2,987	6,953					
2019	3,367						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							2,784,437
2011						2,376,609	2,611,143
2012					2,082,518	2,313,915	2,525,743
2013				1,703,418	2,060,217	2,283,827	2,475,768
2014			1,211,240	1,722,206	2,073,838	2,298,317	
2015		575,658	1,216,751	1,717,589	2,062,515		
2016	108,482	566,437	1,178,645	1,646,150			
2017	106,538	541,498	1,146,297				
2018	112,410	575,852					
2019	129,260						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							770,199
2011						779,632	626,295
2012					824,182	681,966	562,316
2013				890,651	725,876	578,107	462,604
2014			942,042	832,770	653,088	532,301	
2015		832,957	905,221	783,684	621,517		
2016	379,294	829,759	866,037	742,365			
2017	401,230	825,094	846,238				
2018	420,896	876,444					
2019	402,789						

- (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)						
	12	24	36	48	60	72	84
2010							66,368
2011						51,144	58,907
2012					38,781	47,029	56,571
2013				28,790	35,824	42,674	50,864
2014			20,106	27,478	33,918	41,283	
2015		12,054	19,880	27,972	35,263		
2016	4,608	12,481	20,328	28,712			
2017	4,883	13,085	21,394				
2018	5,100	13,666					
2019	4,800						

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)						
	12	24	36	48	60	72	84
2010							-239,853
2011						-220,582	-150,860
2012					-236,411	-136,995	-79,935
2013				-228,478	-144,982	-53,471	
2014			-208,442	-169,566	-78,079		
2015		-99,666	-136,911	-77,566			
2016	-19,995	-57,323	-64,906				
2017	-4,912	-2,761					
2018	-1,418						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							530,346
2011						559,050	475,435
2012					587,771	544,971	482,381
2013				662,173	580,894	524,636	462,604
2014			733,600	663,204	575,009	532,301	
2015		733,292	768,310	706,118	621,517		
2016	359,298	772,436	801,131	742,365			
2017	396,318	822,333	846,238				
2018	419,478	876,444					
2019	402,789						

- (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 Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							229,525
2011						216,042	219,568
2012					220,576	225,129	227,236
2013				221,313	227,721	230,564	233,122
2014			237,996	245,395	249,398	252,001	
2015		239,277	249,946	255,984	261,632		
2016	169,393	255,275	266,631	274,669			
2017	187,254	274,301	285,844				
2018	200,860	289,996					
2019	197,661						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2010							3,591,508
2011						3,417,014	3,582,137
2012					2,890,865	3,084,015	3,235,360
2013				2,586,904	2,868,833	3,039,027	3,171,494
2014			2,182,835	2,630,805	2,898,246	3,082,618	
2015		1,548,227	2,235,006	2,679,692	2,945,665		
2016	637,173	1,594,148	2,246,407	2,663,183			
2017	690,109	1,638,133	2,278,379				
2018	732,748	1,742,292					
2019	729,710						

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

Accident Year	Evaluated as of (in months)					
	12-24	24-36	36-48	48-60	60-72	72-84
2011						1.048
2012					1.067	1.049
2013				1.109	1.059	1.044
2014			1.205	1.102	1.064	
2015		1.444	1.199	1.099		
2016	2.502	1.409	1.186			
2017	2.374	1.391				
2018	2.378					
Latest Year	2.378	1.391	1.186	1.099	1.064	1.044

(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)					
	12-24	24-36	36-48	48-60	60-72	72-84
2011						1.059
2012					1.086	1.056
2013				1.129	1.076	1.048
2014			1.224	1.120	1.076	
2015		1.439	1.217	1.111		
2016	2.480	1.410	1.197			
2017	2.373	1.391				
2018	2.378					

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

Accident Year	Evaluated as of (in months)					
	12-24	24-36	36-48	48-60	60-72	72-84
2011						-1.04%
2012					-1.81%	-0.62%
2013				-1.77%	-1.52%	-0.45%
2014			-1.57%	-1.64%	-1.12%	
2015		0.34%	-1.52%	-1.08%		
2016	0.87%	-0.05%	-0.93%			
2017	0.05%	-0.04%				
2018	0.00%					

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

Accident Year	Evaluated as of (in months)					
	12-24	24-36	36-48	48-60	60-72	72-84
2011						1.051
2012					1.073	1.055
2013				1.117	1.068	1.047
2014			1.214	1.110	1.068	
2015		1.448	1.205	1.102		
2016	2.508	1.415	1.188			
2017	2.387	1.392				
2018	2.378					
Latest Year	2.378	1.392	1.188	1.102	1.068	1.047
3-Year Average	2.424	1.419	1.202	1.109	1.070	1.051

(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 December 31, 2019**

Accident Year	Development Factors			
	(1) Paid or Incurred Loss Ratio (a)	(2) Annual (b)	(3) Cumulative	(4) Projected Ultimate Loss Ratio (4) = (1) x (3)
1986	0.396	1.001	1.005	0.398
1987	0.346	1.000	1.005	0.348
1988	0.331	1.000	1.005	0.332
1989	0.343	1.000	1.005	0.345
1990	0.398	1.000	1.005	0.400
1991	0.425	1.000	1.006	0.427
1992	0.350	1.001	1.006	0.352
1993	0.288	1.000	1.006	0.289
1994	0.328	1.000	1.007	0.330
1995	0.473	1.000	1.007	0.476
1996	0.531	1.000	1.007	0.534
1997	0.600	1.000	1.007	0.605
1998	0.652	1.001	1.008	0.657
1999	0.672	1.003	1.030	0.692
2000	0.579	1.003	1.033	0.598
2001	0.478	1.003	1.036	0.496
2002	0.355	1.004	1.040	0.369
2003	0.234	1.005	1.045	0.244
2004	0.139	1.006	1.051	0.146
2005	0.118	1.007	1.058	0.125
2006	0.152	1.009	1.067	0.162
2007	0.207	1.010	1.078	0.224
2008	0.260	1.013	1.092	0.284
2009	0.301	1.016	1.109	0.333
2010	0.286	1.020	1.131	0.323
2011	0.261	1.023	1.156	0.302
2012	0.228	1.027	1.188	0.271
2013	0.190	1.035	1.229	0.234
2014	0.174	1.039	1.277	0.222
2015	0.161	1.059	1.352	0.217
2016	0.138	1.104	1.493	0.206
2017	0.116	1.212	1.809	0.210
2018	0.080	1.568	2.837	0.226
2019	0.029	3.107	8.814	0.259

- (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 December 31, 2019**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Reform Adjusted			
				<u>Development Factors</u>			
		Adjusted		<u>Cumulative</u>		Adjusted	Projected
Accident	Paid or Incurred	Paid or Incurred		Unadjusted for	Adjusted for	Developed	Ultimate
Year	<u>Loss Ratio (a)</u>	<u>Loss Ratio (b)</u>	<u>Annual (c)</u>	<u>Reforms (c)</u>	<u>Reforms (c)</u>	<u>Loss Ratio (d)</u>	<u>Loss Ratio</u>
						(2) x (5)	(1) + ((6) - (2))
1986	0.332	0.332	1.000	1.027	1.027	0.341	0.341
1987	0.315	0.315	0.999	1.025	1.025	0.323	0.323
1988	0.305	0.305	1.001	1.027	1.027	0.313	0.313
1989	0.326	0.326	1.000	1.027	1.027	0.334	0.334
1990	0.366	0.366	1.000	1.027	1.027	0.376	0.376
1991	0.384	0.384	1.000	1.027	1.027	0.394	0.394
1992	0.319	0.319	0.999	1.026	1.026	0.328	0.328
1993	0.266	0.266	1.001	1.027	1.027	0.273	0.273
1994	0.309	0.309	1.000	1.027	1.027	0.317	0.317
1995	0.454	0.454	1.001	1.028	1.028	0.466	0.466
1996	0.484	0.484	1.000	1.027	1.027	0.498	0.498
1997	0.545	0.545	0.999	1.026	1.026	0.560	0.560
1998	0.660	0.660	0.999	1.025	1.025	0.676	0.676
1999	0.668	0.595	1.009	1.111	1.111	0.661	0.734
2000	0.601	0.536	1.008	1.120	1.120	0.601	0.666
2001	0.530	0.475	1.009	1.130	1.130	0.537	0.592
2002	0.408	0.367	1.010	1.141	1.141	0.419	0.460
2003	0.259	0.234	1.011	1.153	1.153	0.270	0.295
2004	0.175	0.159	1.011	1.166	1.166	0.185	0.202
2005	0.170	0.155	1.013	1.182	1.182	0.183	0.199
2006	0.218	0.198	1.014	1.198	1.198	0.237	0.257
2007	0.303	0.276	1.016	1.217	1.217	0.336	0.363
2008	0.373	0.341	1.018	1.239	1.239	0.422	0.454
2009	0.429	0.397	1.021	1.264	1.264	0.502	0.534
2010	0.415	0.385	1.022	1.292	1.292	0.498	0.528
2011	0.349	0.326	1.027	1.328	1.328	0.433	0.456
2012	0.292	0.276	1.032	1.370	1.370	0.378	0.394
2013	0.229	0.218	1.043	1.429	1.429	0.312	0.322
2014	0.195	0.189	1.047	1.496	1.482	0.280	0.286
2015	0.173	0.170	1.068	1.598	1.571	0.267	0.270
2016	0.148	0.147	1.102	1.761	1.712	0.252	0.253
2017	0.129	0.129	1.188	2.092	2.006	0.258	0.258
2018	0.100	0.100	1.392	2.913	2.794	0.279	0.279
2019	0.045	0.045	2.378	6.927	6.644	0.301	0.301

- (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) Based on experience evaluated as of December 31, 2019. Reflects an adjustment for the pharmaceutical cost reductions to restate the historical medical paid-to-date ratios at a 2018 pharmaceutical cost level.
- (c) See Exhibits 2.6.1 and 2.6.2.
- (d) The developed medical loss ratios shown were derived based on an adjustment for pharmaceutical cost reductions. They are only for purposes of projecting future medical loss ratios and do not reflect true estimates of ultimate loss ratios for those accident years.

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)	(4) Annual Cost Impact on Indemnity (c)	(5) Composite Indemnity Adjustment Factor (d)	
1987	0.0	0.0	1.9	1.9	1.538	
1988	0.0	0.0	1.5	1.5	1.515	
1989	0.0	0.0	1.5	1.5	1.493	
1990	2.3	19.9	1.7	24.7	1.197	
1991	4.9	14.8	0.8	21.4	0.986	
1992	1.8	-8.3	1.6	-5.2	1.039	
1993	0.2	-18.1	0.4	-17.6	1.262	
1994	-5.1	0.2	0.6	-4.3	1.319	
1995	6.3	0.6	1.0	8.0	1.221	
1996	5.3	0.4	1.2	7.0	1.141	
1997	9.7	0.2	1.6	11.7	1.022	
1998	6.5	0.0	1.8	8.4	0.943	
1999	5.7	0.0	2.1	7.9	0.873	
2000	3.9	0.0	3.1	7.1	0.815	
2001	-0.3	0.0	0.2	-0.1	0.816	
2002	-0.7	0.0	0.4	-0.3	0.836	(e)
2003	7.3	0.0	1.2	8.6	0.833	(e)
2004	-6.0	-13.7	2.1	-17.2	1.141	(e)
2005	-31.6	-15.3	1.6	-41.2	1.546	
2006	5.6	-5.7	2.2	1.8	1.519	
2007	1.6	0.0	2.1	3.7	1.465	
2008	4.8	0.6	1.0	6.5	1.375	
2009	0.4	1.4	0.2	2.0	1.348	
2010	0.4	0.0	1.5	1.9	1.323	
2011	0.0	0.0	1.4	1.4	1.305	
2012	-0.8	0.0	2.1	1.3	1.289	
2013	1.4	0.2	0.6	2.3	1.260	
2014	5.8	1.5	1.7	9.2	1.154	
2015	-0.8	0.0	2.3	1.4	1.138	
2016	0.3	0.0	1.0	1.3	1.123	
2017	0.5	0.0	2.2	2.7	1.094	
2018	0.4	0.0	2.5	3.0	1.063	
2019	0.4	0.0	2.3	2.7	1.035	
2020	0.5	0.0	1.1	1.6		
4/1/2021	0.3 (Annual 0.4)	0.0	1.6 (Annual 2.1)	1.9		

- (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. Values for 2017 and prior have been updated to reflect a recent WCIRB reassessment of the impact of wage inflation on indemnity benefit levels.
- (c) $\{ [\text{Column (1)} / 100 + 1.0] \times [\text{Column (2)} / 100 + 1.0] \times [\text{Column (3)} / 100 + 1.0] - 1.0 \} \times 100$.
- (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 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)
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	0.919	0.081	0.0%	5.4%	0.4%	0.4%
2017	0.906	0.094	0.0%	2.2%	0.2%	0.2%
2018	0.905	0.095	0.0%	2.4%	0.2%	0.2%
2019	0.905	0.095	0.0%	3.8%	0.4%	0.4%
2020	0.905	0.095	0.0%	3.5%	0.3%	0.3%
4/1/2021	0.905	0.095	0.0% (Annual 0.0%)	2.3% (Annual 3.1%)	0.2%	0.2%

(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)
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	-2.0%	0.0%	-2.0%
2012	-4.4%	0.0%	-4.4%
2013	-8.2%	0.2%	-8.0%
2014	-5.9%	1.3%	-4.7%
2015	-2.0%	0.0%	-2.0%
2016	-0.5%	0.0%	-0.5%
2017	-0.4%	0.0%	-0.4%
2018	-0.3%	0.0%	-0.3%
2019	0.0%	0.0%	0.0%
2020	0.0%	0.0%	0.0%
4/1/2021	0.0%	0.0%	0.0%

- (a) Reflects the WCIRB's most recent estimates of the cost impact of legislation. Does not include the impact of the SB 1160 lien provisions on future medical costs as well as the estimated reductions to pharmaceutical costs attributable to SB 863, 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) $[\text{Column (1)} + 1.0] \times [\text{Column (2)} + 1.0] - 1.0$

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)
1987	3.8%	0.0%	3.8%	0.803
1988	3.8%	0.0%	3.8%	0.774
1989	3.0%	0.0%	3.0%	0.751
1990	3.7%	19.1%	23.5%	0.608
1991	3.6%	12.9%	16.9%	0.520
1992	3.0%	-7.9%	-5.2%	0.549
1993	2.7%	-18.7%	-16.5%	0.657
1994	-2.3%	-2.3%	-4.6%	0.688
1995	0.9%	0.5%	1.4%	0.679
1996	1.0%	0.4%	1.4%	0.669
1997	0.7%	0.2%	0.9%	0.663
1998	0.8%	12.6%	13.5%	0.585
1999	2.5%	12.6%	15.4%	0.506
2000	1.7%	7.0%	8.8%	0.465
2001	2.9%	6.6%	9.7%	0.424
2002	2.0%	-5.6%	-3.7%	0.441
2003	1.4%	-6.0%	-4.7%	0.462
2004	0.0%	-33.9%	-33.9%	0.699
2005	0.0%	-13.9%	-13.9%	0.812
2006	0.3%	-5.1%	-4.8%	0.853
2007	1.8%	0.1%	1.9%	0.837
2008	0.2%	0.5%	0.7%	0.831
2009	0.4%	1.0%	1.4%	0.820
2010	0.3%	0.0%	0.3%	0.817
2011	0.3%	-2.0%	-1.7%	0.831
2012	0.1%	-4.4%	-4.3%	0.869
2013	0.1%	-8.0%	-7.9%	0.944
2014	0.3%	-4.7%	-4.4%	0.987
2015	0.2%	-2.0%	-1.8%	1.005
2016	0.4%	-0.5%	-0.1%	1.006
2017	0.2%	-0.4%	-0.2%	1.008
2018	0.2%	-0.3%	-0.1%	1.009
2019	0.4%	0.0%	0.4%	1.005
2020	0.3%	0.0%	0.3%	
4/1/2021	0.2%	0.0%	0.2%	

- (a) See Exhibit 4.2, Column (6).
- (b) See Exhibit 4.3, Column (3).
- (c) $\text{Column (3)} = [1.0 + \text{Column (1)}] \times [1.0 + \text{Column (2)}] - 1.0$.
- (d) These factors adjust the annual impact shown in Column (3) to the 4/1/2021 level.

Annual Wage Level Changes

<u>Year</u>	<u>Annual Wage Level Change (a)</u>	<u>Factor to a 4/1/2021 Wage Level</u>
1987	5.6	3.157
1988	4.4	3.024
1989	4.3	2.899
1990	5.0	2.761
1991	2.3	2.699
1992	4.7	2.578
1993	1.2	2.547
1994	1.8	2.502
1995	2.9	2.432
1996	3.4	2.352
1997	4.7	2.246
1998	5.2	2.135
1999	6.2	2.011
2000	9.0	1.845
2001	0.6	1.834
2002	1.1	1.814
2003	3.6	1.751
2004	5.0	1.667
2005	3.2	1.616
2006	4.6	1.545
2007	4.5	1.478
2008	2.1	1.448
2009	0.5	1.440
2010	3.0	1.398
2011	3.0	1.358
2012	4.2	1.303
2013	0.7	1.294
2014	3.3	1.253
2015	4.4	1.200
2016	1.8	1.179
2017	4.2	1.131
2018	4.1	1.087
2019	3.9	1.046
Projected:		
2020	1.9	
4/1/2021	2.6	(Annual = 3.5)

- (a) Historical wage changes through 2018 are based on Bureau of Labor Statistics data. Forecasts for 2019 and forward are based on the average of wage level projections made by the UCLA Anderson School of Business as of March 2020 and those made by the California Department of Finance as of November 2019. The forecast for 2020 is based solely on the UCLA projections.

Premium Adjustment Factors

	(1)	(2a)	(2b)	(2c)	(3)	(4)	(5)	(6)	(7)
		Ratio of Industry Average Charged Rates to Advisory Pure Premium	Factor to Industry Average Filed Pure Premium Rate Level as of July 1, 2019 (c)	Factor to Adjust Insurer Premium to an Industry Average Filed Pure Premium Rate Level as of July 1, 2019 (d)	Adjustment to Remove Surcharge Premium (e)	Average Experience Modification (f)	Off-Balance Correction in Advisory January 1, 2019 Pure Premium Rates	Factor to Adjust for Impact of Premium Resulting from Audits (g)	Composite Premium Adjustment Factor (h)
Calendar Year	Factor to a 4/1/2021 Wage Level (a)	Pure Premium Rates (b)	Rate Level as of July 1, 2019 (c)	Rate Level as of July 1, 2019 (d)	Premium (e)	Modification (f)	Pure Premium Rates	Resulting from Audits (g)	Adjustment Factor (h)
1987	3.157	---	---	0.635	0.992	0.983	1.017	---	1.988
1988	3.024	---	---	0.568	0.993	0.963	1.017	---	1.740
1989	2.899	---	---	0.559	0.993	0.945	1.017	---	1.674
1990	2.761	---	---	0.545	0.991	0.942	1.017	---	1.556
1991	2.699	---	---	0.504	0.987	0.939	1.017	---	1.407
1992	2.578	---	---	0.484	0.982	0.940	1.017	---	1.282
1993	2.547	---	---	0.478	0.981	0.949	1.017	---	1.237
1994	2.502	---	---	0.547	0.986	0.948	1.017	---	1.401
1995	2.432	---	---	0.741	0.995	0.958	1.017	---	1.840
1996	2.352	1.023	0.787	0.769	1.000	0.935	1.017	---	1.903
1997	2.246	0.989	0.785	0.794	1.000	0.949	1.017	---	1.848
1998	2.135	0.965	0.818	0.848	1.000	0.959	1.017	---	1.856
1999	2.011	0.972	0.827	0.851	1.000	0.954	1.017	---	1.763
2000	1.845	1.005	0.750	0.746	1.000	0.970	1.017	---	1.395
2001	1.834	1.030	0.660	0.641	1.000	0.969	1.017	---	1.193
2002	1.814	1.157	0.591	0.511	1.000	0.991	1.017	---	0.919
2003	1.751	1.266	0.484	0.382	1.000	1.005	1.017	---	0.654
2004	1.667	1.397	0.492	0.352	1.000	0.981	1.017	---	0.588
2005	1.616	1.470	0.592	0.403	1.000	0.982	1.017	---	0.651
2006	1.545	1.447	0.763	0.527	1.000	0.956	1.017	---	0.838
2007	1.478	1.492	1.039	0.696	1.000	0.931	1.017	0.985	1.071
2008	1.448	1.426	1.237	0.867	1.000	0.946	1.017	0.991	1.293
2009	1.440	1.366	1.219	0.892	1.000	0.937	1.017	1.034	1.395
2010	1.398	1.384	1.195	0.863	1.000	0.941	1.017	1.005	1.268
2011	1.358	1.401	1.194	0.852	1.000	0.982	1.017	---	1.158
2012	1.303	1.223	0.984	0.805	1.000	1.000	1.017	---	1.031
2013	1.294	1.138	0.792	0.696	1.000	0.983	1.017	---	0.901
2014	1.253	1.126	0.730	0.648	1.000	0.961	1.017	---	0.830
2015	1.200	1.109	0.709	0.640	1.000	0.951	1.017	---	0.794
2016	1.179	1.148	0.772	0.672	1.000	0.949	1.017	---	0.821
2017	1.131	1.156	0.854	0.739	1.000	0.955	1.017	---	0.861
2018	1.087	1.196	0.966	0.808	1.000	0.956	1.017	---	0.903
2019	1.046	1.215	1.122	0.923	1.000	0.948	1.017	---	1.002

- (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 January 1, 2019 pure premium rate level and (2) an additional adjustment factor, which is the ratio of the average advisory January 1, 2019 pure premium rate (\$1.67) to the industry average filed pure premium rate as of July 1, 2019 (\$1.99).
- (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, 2019.
- (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.

2019 Accident Year Indemnity Claim Frequency Model
As of PY 2017 Preliminary 1st Set & March 2020 UCLA

AY	Annual % Changes Intra- Class Ind Freq	Annual Log Differences						
		Intra-Class Indemnity Frequency per \$M Exposure at PY 2017 Level			AY+1 Indemnity		Economic Variables (1st Prin. Comp.)	CalOSHA Dummy Variable
	Total	Total	Cumulative	Non-cum.	Benefit Level	Cumulative Injury Index		
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	-0.079	0.000
1982	-1.6%	-0.016	0.153	-0.022	0.352	0.175	-0.294	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	0.222	0.000
1985	2.0%	0.020	0.138	0.014	0.000	0.124	0.081	0.000
1986	-2.4%	-0.024	0.039	-0.028	0.000	0.067	0.078	0.000
1987	1.5%	0.015	0.053	0.013	0.000	0.041	0.151	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	-0.121	0.000
1991	0.3%	0.003	0.166	-0.018	0.023	0.184	-0.293	0.000
1992	-11.1%	-0.118	-0.272	-0.098	0.013	-0.174	-0.186	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	0.075	0.000
1997	-3.3%	-0.033	-0.023	-0.034	0.066	0.011	0.138	0.000
1998	-3.8%	-0.038	-0.040	-0.038	0.058	-0.002	0.079	0.000
1999	1.5%	0.014	0.100	0.008	0.040	0.092	0.128	0.000
2000	4.0%	0.039	0.071	0.037	-0.003	0.034	0.066	0.000
2001	-6.9%	-0.072	-0.018	-0.076	-0.007	0.059	-0.101	0.000
2002	-2.3%	-0.023	0.007	-0.026	0.060	0.033	-0.202	0.000
2003	-2.9%	-0.029	-0.005	-0.031	-0.065	0.026	-0.023	0.000
2004	-16.6%	-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	-0.019	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	1.2%	0.012	0.032	0.010	0.003	0.022	0.043	0.000
2012	4.7%	0.046	0.127	0.036	0.025	0.091	0.123	0.000
2013	0.4%	0.004	0.126	-0.013	0.071	0.139	0.151	0.000
2014	0.2%	0.002	0.051	-0.006	0.003	0.056	0.178	0.000
2015	-1.2%	-0.012	0.025	-0.018	0.002	0.043	0.194	0.000
2016	-2.4%	-0.025	0.062	-0.039	0.004	0.101	0.124	0.000
2017	-2.3%	-0.023	-0.042	-0.019	0.004	-0.023	0.137	0.000
2018*	-1.4%	-0.014	-0.085	0.000	0.003	-0.085	0.132	0.000
2019	-1.7%	-0.017	-0.017	-0.017	0.004	0.000	0.023	0.000
2020	-2.7%	-0.027	-0.027	-0.027	0.004	0.000	-0.076	0.000
2021	-2.0%	-0.021	-0.021	-0.021	0.004	0.000	-0.013	0.000
2022	-2.0%	-0.020	-0.020	-0.020	0.004	0.000	-0.012	0.000

Y = Hazardousness-Adjusted Noncumulative Indemnity Claim Frequency

Constant	-0.020			
Std Err of Y Est	0.039			
R Squared	0.571			
No. of Observations	40			
Degrees of Freedom	35			
X Coefficient(s)		0.178	0.275	0.103
Std Err of Coef.		0.072	0.060	0.043

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 2019; March 2020 UCLA Anderson Forecasts for 2020 on.

Regression is over AY 1979 through AY 2018. AY 2019 through AY 2022 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 2018 is preliminary and change is based on a comparison of 2018 accidents on 2017 policies to 2017 accidents on 2016 policies.

**Projection of Indemnity Severity Trends by Accident Year
Based on Experience as of December 31, 2019**

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	9,974	---	1.914	19,092	---
1991	10,921	9.5%	1.810	19,769	3.6%
1992	11,027	1.0%	1.750	19,300	-2.4%
1993	11,997	8.8%	1.740	20,872	8.1%
1994	12,973	8.1%	1.822	23,640	13.3%
1995	14,546	12.1%	1.697	24,689	4.4%
1996	16,320	12.2%	1.593	25,994	5.3%
1997	19,358	18.6%	1.429	27,664	6.4%
1998	21,230	9.7%	1.318	27,983	1.2%
1999	23,279	9.7%	1.221	28,433	1.6%
2000	24,721	6.2%	1.140	28,187	-0.9%
2001	27,210	10.1%	1.141	31,057	10.2%
2002	26,314	-3.3%	1.169	30,763	-0.9%
2003	25,980	-1.3%	1.165	30,278	-1.6%
2004	21,215	-18.3%	1.377	29,208	-3.5%
2005	19,183	-9.6%	1.580	30,318	3.8%
2006	20,917	9.0%	1.464	30,633	1.0%
2007	22,734	8.7%	1.412	32,096	4.8%
2008	24,827	9.2%	1.334	33,113	3.2%
2009	26,081	5.1%	1.326	34,578	4.4%
2010	25,591	-1.9%	1.301	33,293	-3.7%
2011	25,321	-1.1%	1.283	32,487	-2.4%
2012	24,787	-2.1%	1.267	31,408	-3.3%
2013	24,312	-1.9%	1.242	30,187	-3.9%
2014	25,132	3.4%	1.154	29,005	-3.9%
2015	25,367	0.9%	1.138	28,860	-0.5%
2016	24,712	-2.6%	1.123	27,761	-3.8%
2017	24,714	0.0%	1.094	27,039	-2.6%
2018	25,742	4.2%	1.063	27,357	1.2%
2019	26,760	4.0%	1.035	27,696	1.2%
(6) Estimated Annual Exponential Trend Based on 1990 to 2019:					1.2%
(7) Estimated Annual Exponential Trend Based on 2005 to 2019:					-1.3%
(8) Estimated Annual Exponential Trend Based on 2015 to 2019:					-1.0%
Selected Indemnity Severity Trend:					0.0%

(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 December 31, 2019**

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	8,733	---	0.911	7,958	---
1991	9,386	7.5%	0.894	8,390	5.4%
1992	9,479	1.0%	0.864	8,185	-2.4%
1993	10,462	10.4%	0.847	8,859	8.2%
1994	11,583	10.7%	0.890	10,307	16.3%
1995	13,274	14.6%	0.882	11,706	13.6%
1996	14,192	6.9%	0.873	12,392	5.9%
1997	16,889	19.0%	0.867	14,644	18.2%
1998	20,709	22.6%	0.764	15,820	8.0%
1999	23,464	13.3%	0.662	15,531	-1.8%
2000	26,219	11.7%	0.608	15,949	2.7%
2001	31,226	19.1%	0.555	17,316	8.6%
2002	31,496	0.9%	0.576	18,139	4.8%
2003	30,080	-4.5%	0.604	18,175	0.2%
2004	27,802	-7.6%	0.799	22,220	22.3%
2005	28,660	3.1%	0.799	22,905	3.1%
2006	31,238	9.0%	0.796	24,866	8.6%
2007	34,814	11.4%	0.781	27,196	9.4%
2008	37,544	7.8%	0.778	29,212	7.4%
2009	39,678	5.7%	0.775	30,749	5.3%
2010	39,780	0.3%	0.773	30,736	0.0%
2011	36,199 (c)	---	0.794	28,748 (c)	---
2012	34,061	-5.9%	0.839	28,566	-0.6%
2013	31,665	-7.0%	0.923	29,217	2.3%
2014	30,344	-4.2%	0.982	29,792	2.0%
2015	29,551	-2.6%	1.005	29,698	-0.3%
2016	28,341	-4.1%	1.006	28,511	-4.0%
2017	28,236	-0.4%	1.008	28,462	-0.2%
2018	29,523	4.6%	1.009	29,790	4.7%
2019	28,847	-2.3%	1.005	28,992	-2.7%

Selected Medical Severity Trend: 1.5%

- (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 (7).
- (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 December 31, 2019**

(1) Accident Year	MCCP Included				MCCP Removed Based on WCIRB Aggregate Calendar Year Data Calls (b)			
	(2) Estimated Ultimate Severity (a)	(3) Annual % Change	(4) Ultimate On-Level Severity (c)	(5) Annual % Change	(6) Estimated Ultimate Severity (a)	(7) Annual % Change	(8) Ultimate On-Level Severity (c)	(9) Annual % Change
2005	28,660	---	22,905	---	27,227	---	21,760	---
2006	31,238	9.0%	24,866	8.6%	29,364	7.8%	23,374	7.4%
2007	34,814	11.4%	27,196	9.4%	32,586	11.0%	25,455	8.9%
2008	37,544	7.8%	29,212	7.4%	34,353	5.4%	26,729	5.0%
2009	39,678	5.7%	30,749	5.3%	36,464	6.1%	28,259	5.7%
2010	39,780	0.3%	30,736	0.0%	36,521	0.2%	28,218	-0.1%
2011	39,644	-0.3%	31,484	2.4%	36,199	-0.9%	28,748	1.9%
2012	37,239	-6.1%	31,230	-0.8%	34,061	-5.9%	28,566	-0.6%
2013	34,707	-6.8%	32,024	2.5%	31,665	-7.0%	29,217	2.3%
2014	33,236	-4.2%	32,631	1.9%	30,344	-4.2%	29,792	2.0%
2015	32,290	-2.8%	32,451	-0.6%	29,551	-2.6%	29,698	-0.3%
2016	30,910	-4.3%	31,095	-4.2%	28,341	-4.1%	28,511	-4.0%
2017	30,861	-0.2%	31,108	0.0%	28,236	-0.4%	28,462	-0.2%
2018	32,474	5.2%	32,768	5.3%	29,523	4.6%	29,790	4.7%
2019	31,782	-2.1%	31,941	-2.5%	28,847	-2.3%	28,992	-2.7%

Estimated Annual Exponential Trend

Trend Based on 1990 to 2019:	5.5%	N/A
Trend Based on 2005 to 2019:	1.9%	1.6%
Trend Based on 2015 to 2019:	0.2%	0.0%

Selected Medical Severity Trend: 1.5%

(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 December 31, 2019**

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	0.398	1.567	2.386	0.261
1987	0.348	1.538	1.988	0.269
1988	0.332	1.515	1.740	0.289
1989	0.345	1.493	1.674	0.308
1990	0.400	1.197	1.556	0.307
1991	0.427	0.986	1.407	0.299
1992	0.352	1.039	1.282	0.286
1993	0.289	1.262	1.237	0.295
1994	0.330	1.319	1.401	0.310
1995	0.476	1.221	1.840	0.316
1996	0.534	1.141	1.903	0.320
1997	0.605	1.022	1.848	0.334
1998	0.657	0.943	1.856	0.334
1999	0.692	0.873	1.763	0.343
2000	0.598	0.815	1.395	0.350
2001	0.496	0.816	1.193	0.339
2002	0.369	0.836	0.919	0.336
2003	0.244	0.833	0.654	0.311
2004	0.146	1.141	0.588	0.283
2005	0.125	1.546	0.651	0.297
2006	0.162	1.519	0.838	0.294
2007	0.224	1.465	1.071	0.306
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.222	1.154	0.830	0.309
2015	0.217	1.138	0.794	0.311
2016	0.206	1.123	0.821	0.282
2017	0.210	1.094	0.861	0.267
2018	0.226	1.063	0.903	0.266
2019	0.259	1.035	1.002	0.268
				Projections (d)
2020				0.260
4/1/2021				0.256

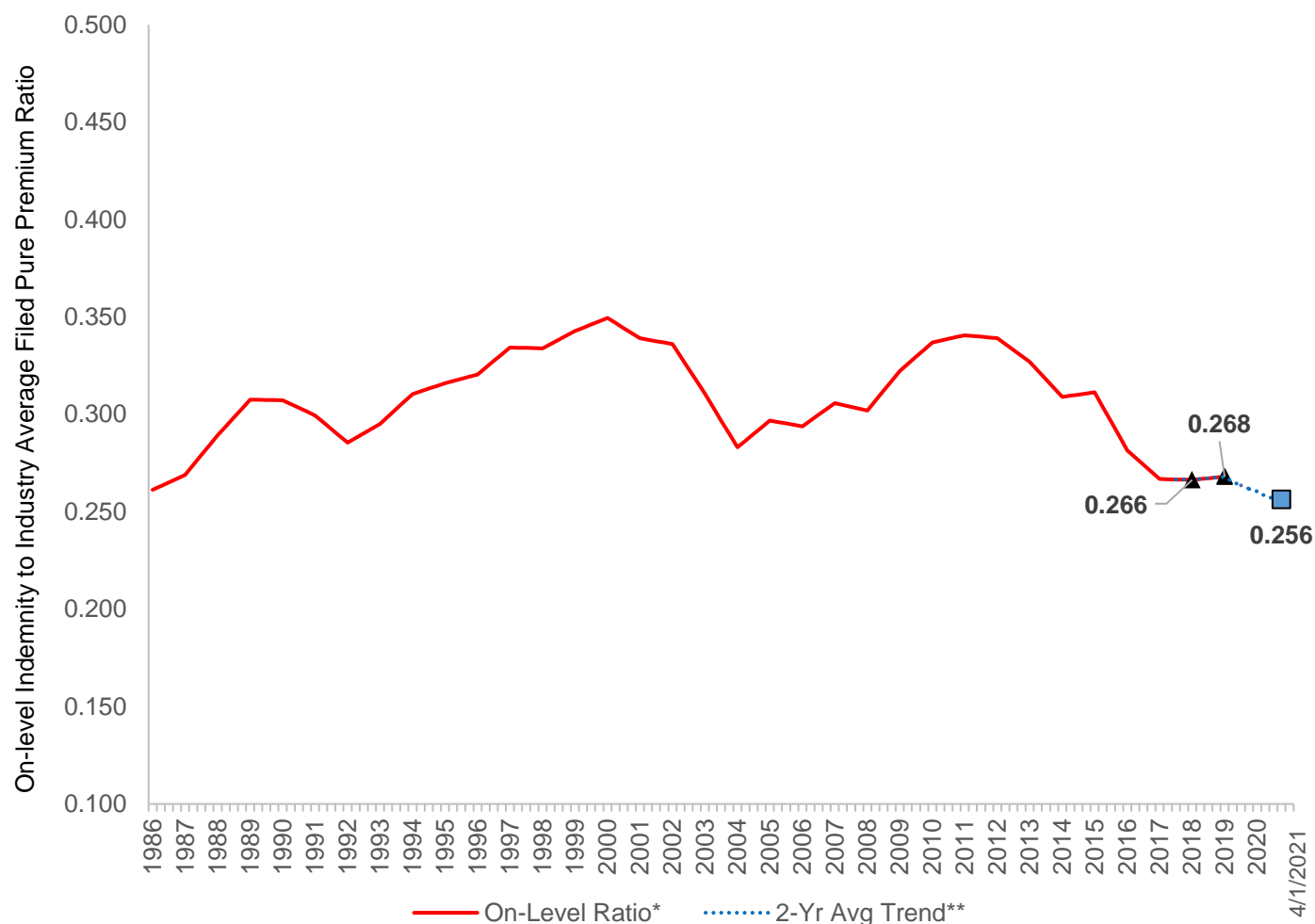
(a) See Exhibit 3.1.

(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 2019 from Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**On-Level Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of December 31, 2019**



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

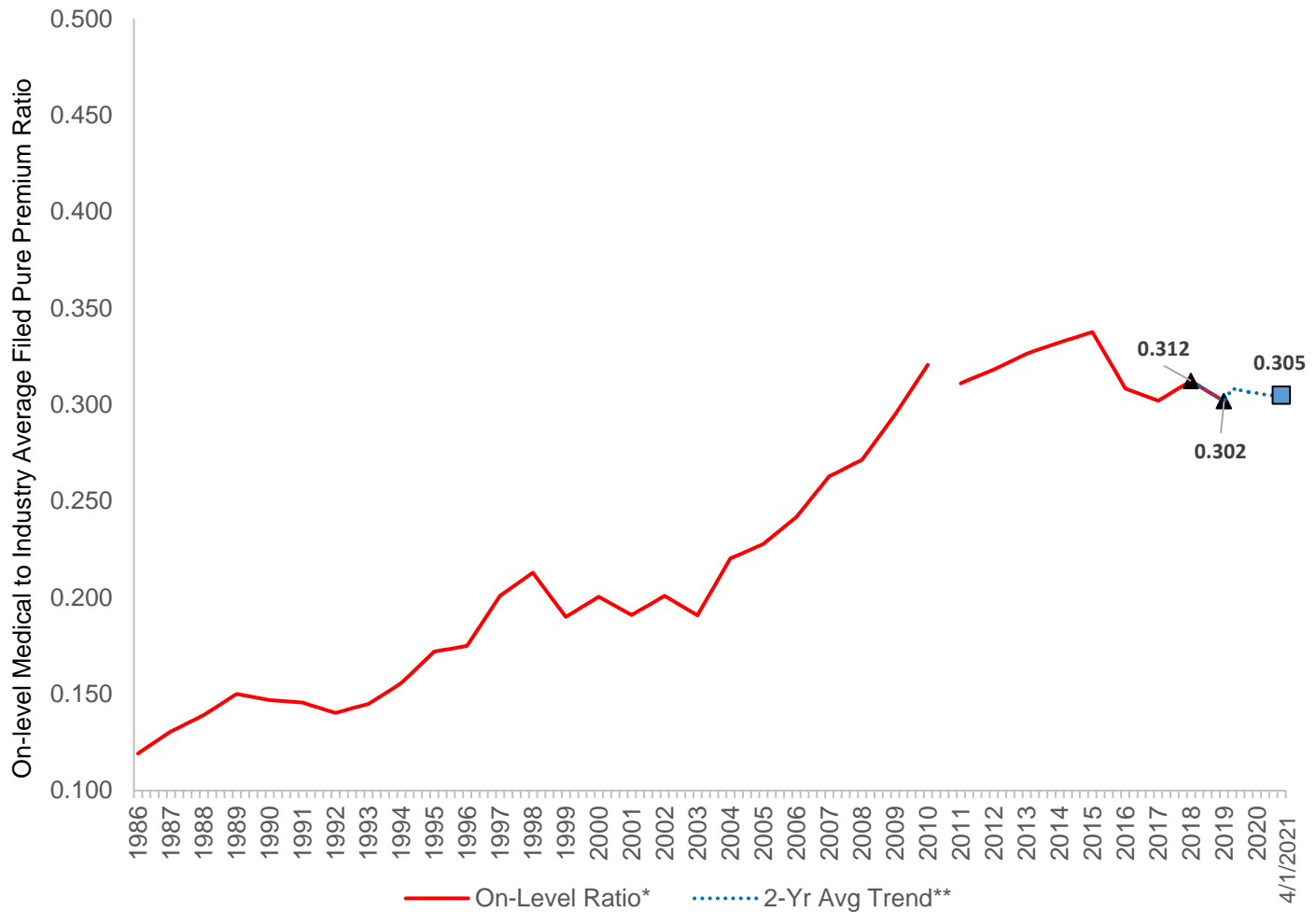
** The 4/1/2021 indemnity to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2018 and 2019 years.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of December 31, 2019**

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	0.341	0.834	2.386	0.119
1987	0.323	0.803	1.988	0.131
1988	0.313	0.774	1.740	0.139
1989	0.334	0.751	1.674	0.150
1990	0.376	0.608	1.556	0.147
1991	0.394	0.520	1.407	0.146
1992	0.328	0.549	1.282	0.140
1993	0.273	0.657	1.237	0.145
1994	0.317	0.688	1.401	0.156
1995	0.466	0.679	1.840	0.172
1996	0.498	0.669	1.903	0.175
1997	0.560	0.663	1.848	0.201
1998	0.676	0.585	1.856	0.213
1999	0.661	0.506	1.763	0.190
2000	0.601	0.465	1.395	0.200
2001	0.537	0.424	1.193	0.191
2002	0.419	0.441	0.919	0.201
2003	0.270	0.462	0.654	0.191
2004	0.185	0.699	0.588	0.220
2005	0.183	0.812	0.651	0.228
2006	0.237	0.853	0.838	0.242
2007	0.336	0.837	1.071	0.263
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.280	0.987	0.830	0.332
2015	0.267	1.005	0.794	0.338
2016	0.252	1.006	0.821	0.308
2017	0.258	1.008	0.861	0.302
2018	0.279	1.009	0.903	0.312
2019	0.301	1.005	1.002	0.302
				Projections (d)
2020				0.306
4/1/2021				0.305

- (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 2019 from Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect the paid MCCP costs. 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 December 31, 2019**



* On-level medical to industry average filed pure premium ratios (see Exhibit 7.3)

** The 4/1/2021 medical to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2018 and 2019 years.

**Indicated Loss to Industry Average Filed Pure Premium Ratios
For Policies with Effective Dates between July 1, 2020 and December 31, 2020
Based on Experience as of December 31, 2019**

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Projected Loss to Industry Average Filed Pure Premium Ratio (See Exhibits 7.1 and 7.3)	0.256	0.305	0.561

Quarterly Incurred Indemnity Loss Development Factors
Through December 31, 2019

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	2019
6/3	2.542	2.715	2.755	2.740	2.841	2.834	2.736	2.463	2.417	2.724	2.785	3.031	3.116	3.052	3.238	3.344	3.303	3.209	3.201	3.356	3.200	3.227
9/6	1.750	1.808	1.780	1.784	1.790	1.808	1.776	1.618	1.656	1.776	1.820	1.848	1.904	2.001	1.966	1.940	1.960	1.948	1.945	1.874	1.998	2.016
12/9	1.437	1.530	1.518	1.500	1.520	1.473	1.460	1.355	1.448	1.511	1.510	1.530	1.564	1.632	1.587	1.585	1.570	1.578	1.578	1.580	1.578	1.599
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	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	1.183	
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	1.138	1.122	
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	1.100	1.106	
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	1.078		
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	1.059		
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	1.047	1.047		
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	1.037	1.039		
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	1.028			
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	1.026			
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	1.024	1.021			
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	1.016	1.019			
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	1.015				
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	1.014	1.013				
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	1.011				
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	1.011	1.008				
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	1.010					
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	1.008					
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	1.006					
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	1.006	1.006					
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	1.007						
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	1.005	1.007						
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	1.005	1.005						
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	1.007	1.003						
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	1.004							
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	1.004							
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	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	1.003	1.003							

Source: WCIRB accident year experience calls

Quarterly Incurred Medical Loss Development Factors *
Through December 31, 2019

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	2019
6/3	2.561	2.661	2.536	2.624	2.797	2.805	2.671	2.530	2.584	2.662	2.782	2.892	2.992	2.757	2.853	2.843	2.921	2.863	3.019	3.199	2.891	2.830
9/6	1.705	1.733	1.713	1.725	1.768	1.762	1.703	1.670	1.650	1.744	1.717	1.807	1.800	1.827	1.833	1.819	1.840	1.884	1.755	1.741	1.820	1.844
12/9	1.418	1.461	1.463	1.447	1.570	1.425	1.400	1.375	1.453	1.443	1.466	1.454	1.488	1.521	1.484	1.500	1.482	1.451	1.487	1.448	1.459	1.472
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	1.191	
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	1.087	1.096	
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	1.069	1.063	
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	1.046	1.047	
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	1.036		
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	1.032	1.028		
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	1.026	1.028		
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	1.021	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	1.011			
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	1.017	1.010			
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	1.011			
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	1.008	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	1.008				
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	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	1.007				
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	1.007	1.006				
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	1.008					
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	1.006	1.010					
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	1.008					
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	1.005	1.003					
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	1.006						
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	1.003						
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	1.004	1.004						
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	1.003	1.002						
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	1.002							
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	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	1.005							
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	1.001	1.003							

Source: WCIRB accident year experience calls

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

Quarterly Paid Indemnity Loss Development Factors
Through December 31, 2019

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	2019
6/3	4.325	4.024	4.170	4.461	4.720	4.908	4.745	4.512	4.376	4.495	4.553	4.807	4.911	4.722	4.854	5.099	5.076	5.056	5.087	5.060	4.987	5.081
9/6	2.284	2.367	2.283	2.369	2.443	2.424	2.399	2.303	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	2.504
12/9	1.826	1.806	1.839	1.855	1.897	1.876	1.841	1.774	1.812	1.834	1.810	1.825	1.861	1.869	1.877	1.866	1.879	1.910	1.882	1.892	1.891	1.902
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	1.527	
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	1.353	
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	1.248	
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	1.205	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	1.159		
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	1.131		
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	1.104	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	1.088	1.083		
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	1.068			
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	1.059			
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	1.045			
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	1.041	1.040			
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	1.035				
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	1.031				
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	1.025				
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	1.025	1.023				
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	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	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	1.014					
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	1.014	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	1.012						
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	1.011						
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	1.010						
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	1.011	1.010						
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	1.010							
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	1.009							
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	1.008							
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	1.010	1.007							

Source: WCIRB accident year experience calls

Quarterly Paid Medical Loss Development Factors *
Through December 31, 2019

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	2019
6/3	6.375	5.955	5.518	6.168	7.221	7.127	7.617	5.563	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	4.984
9/6	2.369	2.406	2.356	2.432	2.694	2.577	2.483	2.236	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	2.286
12/9	1.728	1.739	1.749	1.857	1.882	1.825	1.759	1.666	1.716	1.765	1.731	1.723	1.756	1.746	1.763	1.736	1.750	1.705	1.752	1.737	1.719	1.795
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	1.425	
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	1.245	
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	1.173	
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	1.131	1.143	
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	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	1.092		
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	1.077		
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	1.067	1.065		
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	1.055			
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	1.048			
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	1.042			
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	1.040	1.038			
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	1.032				
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	1.029				
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	1.025				
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	1.022	1.021				
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	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	1.018					
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	1.016					
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	1.015	1.017					
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	1.013						
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	1.013						
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	1.011						
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	1.013	1.011						
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	1.010							
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	1.009							
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	1.010							
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	1.009	1.009							

Source: WCIRB accident year experience calls

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

Reported Indemnity Claim Count Development

Accident	Development															
Year	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
1994																1.000
1995															1.001	1.000
1996														1.000	1.000	1.000
1997													1.000	1.000	1.000	1.000
1998												1.001	1.000	1.000	1.000	1.000
1999											1.001	1.000	1.000	1.000	1.000	1.000
2000										1.000	1.000	1.001	1.000	1.000	1.000	1.000
2001									1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002								1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003							0.999	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2004						1.000	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	
2005					1.001	1.001	1.000	1.000	1.000	1.000	0.999	1.000	1.000	1.000		
2006				1.002	1.001	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000			
2007			1.006	1.004	1.002	1.000	1.001	1.000	1.000	1.000	1.000	1.000				
2008		1.022	1.011	1.005	1.003	1.001	1.001	1.001	1.000	1.000	1.000					
2009	1.189	1.028	1.011	1.006	1.004	1.001	1.001	1.000	1.000	1.000						
2010	1.215	1.029	1.011	1.006	1.002	1.002	1.001	1.000	1.000							
2011	1.229	1.032	1.013	1.005	1.002	1.001	1.001	1.001								
2012	1.244	1.034	1.010	1.005	1.003	1.001	1.001									
2013	1.248	1.025	1.010	1.005	1.002	1.002										
2014	1.215	1.027	1.010	1.004	1.002											
2015	1.236	1.027	1.006	1.003												
2016	1.244	1.029	1.007													
2017	1.220	1.023														
2018	1.226															
Latest Year																
Age-to-Age	1.226	1.023	1.007	1.003	1.002	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Age-to-Ultimate	1.277	1.042	1.018	1.011	1.008	1.006	1.004	1.003	1.003	1.002	1.002	1.002	1.002	1.002	1.002	1.002

Source: WCIRB accident year experience calls

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	1.007	1.001
2013	2.821	1.739	1.421	1.138	1.045	1.027	1.016	1.010	1.009	1.013	1.003	1.003	1.003	1.001	1.002
2014	2.778	1.723	1.421	1.130	1.045	1.037	1.015	1.010	1.008	1.004	1.003	1.003	1.003	1.002	1.002
2015	2.817	1.781	1.414	1.135	1.045	1.023	1.014	1.014	1.008	1.005	1.003	1.003	1.002	1.002	1.002
2016	2.733	1.717	1.410	1.144	1.045	1.027	1.017	1.012	1.010	1.005	1.004	1.003	1.002	1.002	1.002
2017	2.848	1.689	1.417	1.129	1.041	1.025	1.013	1.009	1.008	1.005	1.004				
2018	2.825	1.731	1.414	1.139	1.045	1.023	1.017								
2019	2.780	1.751	1.426												

Source: WCIRB accident year experience calls

Reported Indemnity Claim Settlement Ratios

Accident	Evaluated as of (in months):																
Year	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1994																	98.9%
1995																98.5%	98.7%
1996															98.2%	98.4%	98.6%
1997														97.7%	98.0%	98.2%	98.4%
1998													97.1%	97.5%	97.8%	98.0%	98.2%
1999												96.6%	97.0%	97.3%	97.7%	97.9%	98.1%
2000											95.5%	96.2%	96.7%	97.2%	97.5%	97.8%	98.0%
2001										93.6%	94.5%	95.3%	96.0%	96.5%	97.0%	97.4%	97.7%
2002									92.4%	93.7%	94.7%	95.8%	96.4%	96.9%	97.4%	97.7%	98.1%
2003								90.6%	92.4%	93.7%	95.2%	95.9%	96.4%	97.0%	97.5%	97.9%	98.3%
2004							88.2%	90.6%	92.4%	94.3%	95.3%	96.0%	96.8%	97.3%	97.8%	98.2%	
2005						85.4%	88.4%	90.7%	93.0%	94.4%	95.4%	96.4%	97.0%	97.6%	98.1%		
2006					81.0%	85.2%	88.2%	91.2%	93.0%	94.3%	95.5%	96.4%	97.1%	97.7%			
2007				73.5%	80.2%	84.6%	88.8%	91.3%	93.2%	94.8%	96.0%	96.8%	97.5%				
2008			61.8%	72.0%	79.1%	85.0%	88.8%	91.5%	93.7%	95.1%	96.2%	97.0%					
2009		46.2%	59.9%	70.6%	79.0%	84.5%	88.5%	91.8%	93.8%	95.3%	96.4%						
2010	26.9%	46.7%	60.6%	72.4%	80.5%	85.9%	90.1%	92.9%	94.8%	96.1%							
2011	27.5%	47.1%	62.1%	73.6%	81.6%	87.1%	91.0%	93.7%	95.4%								
2012	27.5%	47.8%	63.2%	74.9%	82.9%	88.4%	92.0%	94.4%									
2013	26.9%	48.1%	64.4%	76.6%	84.7%	89.8%	93.2%										
2014	26.4%	49.2%	65.9%	78.2%	86.2%	90.8%											
2015	26.8%	50.6%	68.3%	80.6%	87.8%												
2016	28.2%	53.4%	71.0%	82.5%													
2017	30.4%	56.2%	73.2%														
2018	31.2%	56.4%															
2019	31.4%																

Source: WCIRB accident year experience calls

Estimated Ultimate Indemnity Claim Settlement Ratios

Accident	Evaluated as of (in months):																
Year	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1994																	98.6%
1995																98.3%	98.4%
1996															97.9%	98.2%	98.4%
1997														97.4%	97.7%	97.9%	98.2%
1998													96.8%	97.2%	97.5%	97.8%	98.0%
1999												96.3%	96.7%	97.1%	97.5%	97.8%	98.0%
2000											95.2%	95.9%	96.4%	97.0%	97.4%	97.6%	97.9%
2001										93.3%	94.3%	95.0%	95.8%	96.3%	96.8%	97.2%	97.5%
2002									92.3%	93.6%	94.6%	95.6%	96.2%	96.7%	97.2%	97.6%	97.9%
2003								90.6%	92.4%	93.6%	95.0%	95.7%	96.2%	96.9%	97.3%	97.7%	98.1%
2004							88.3%	90.6%	92.3%	94.2%	95.2%	95.9%	96.6%	97.1%	97.6%	98.0%	
2005						85.3%	88.4%	90.7%	93.0%	94.4%	95.4%	96.2%	96.9%	97.4%	97.9%		
2006					80.6%	84.9%	88.0%	90.9%	92.8%	94.2%	95.4%	96.3%	97.0%	97.5%			
2007				72.8%	79.7%	84.3%	88.5%	91.1%	93.0%	94.6%	95.8%	96.6%	97.3%				
2008																	
2009			60.3%	71.1%	78.4%	84.5%	88.3%	91.1%	93.4%	94.9%	96.0%	96.8%					
2010		43.9%	58.5%	69.6%	78.3%	84.0%	88.2%	91.5%	93.5%	95.1%	96.2%						
2011	21.0%	44.3%	59.1%	71.4%	79.8%	85.4%	89.7%	92.6%	94.5%	95.9%							
2012	21.2%	44.6%	60.6%	72.7%	81.0%	86.6%	90.7%	93.4%	95.1%								
2013	20.9%	45.2%	61.7%	74.0%	82.3%	87.9%	91.7%	94.1%									
2014	20.6%	45.9%	63.0%	75.7%	84.1%	89.3%	92.8%										
2015	20.7%	46.9%	64.5%	77.2%	85.5%	90.3%											
2016	20.8%	48.4%	67.2%	79.7%	87.2%												
2017	21.7%	51.0%	69.7%	81.6%													
2018	23.9%	54.0%	71.9%														
2019	24.4%	54.1%															
2019	24.6%																

Source: WCIRB quarterly calls for experience

Quarterly Ultimate Settlement Ratios

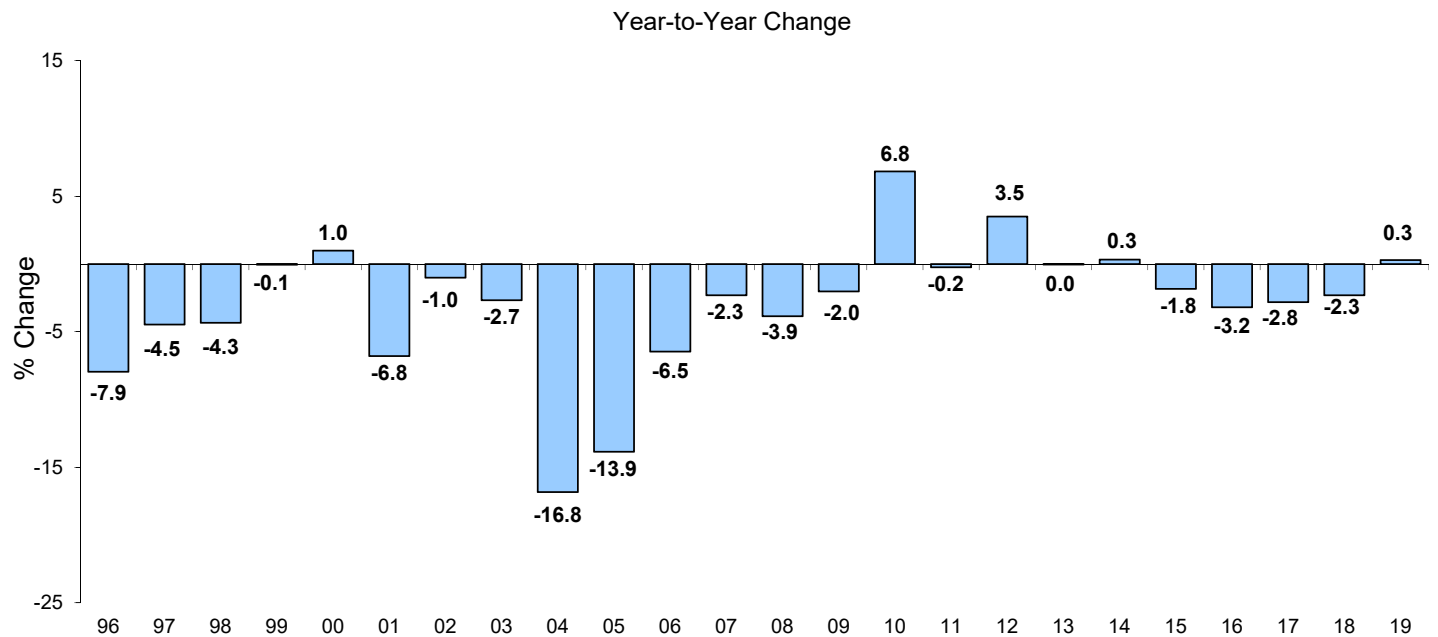
Accident Year	Evaluated as of (in months):															
	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>30</u>	<u>33</u>	<u>36</u>	<u>39</u>	<u>42</u>	<u>45</u>	<u>48</u>
2010	0.6%	4.7%	11.9%	21.1%	29.9%	35.9%	40.2%	44.5%	48.3%	52.2%	55.8%	59.3%	62.5%	65.9%	68.9%	71.8%
2011	0.8%	5.1%	12.0%	21.3%	29.7%	35.9%	40.3%	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%	40.8%	45.6%	49.8%	54.1%	58.3%	62.2%	65.6%	68.8%	71.7%	74.4%
2013	0.9%	5.1%	11.8%	21.0%	29.4%	36.0%	41.4%	46.4%	51.0%	55.5%	59.6%	63.6%	67.1%	70.5%	73.4%	76.2%
2014	0.8%	4.8%	11.8%	20.8%	29.6%	36.4%	42.1%	47.3%	52.0%	56.5%	60.8%	64.8%	68.2%	71.7%	74.6%	77.5%
2015	0.8%	4.8%	12.2%	21.2%	30.4%	37.8%	43.5%	48.8%	53.9%	59.0%	63.4%	67.5%	71.1%	74.4%	77.4%	80.0%
2016	0.8%	5.1%	12.3%	21.9%	31.7%	39.5%	45.5%	51.3%	56.3%	61.5%	65.9%	70.1%	73.7%	76.9%	79.3%	81.6%
2017	0.9%	5.6%	13.5%	24.2%	34.2%	42.1%	48.3%	54.2%	59.1%	64.0%	68.1%	71.9%				
2018	1.0%	5.8%	13.9%	24.6%	34.7%	42.6%	48.6%	54.1%								
2019	1.0%	5.9%	13.7%	24.6%												

Accident Year	Quarterly Incremental Change														
	<u>3-6</u>	<u>6-9</u>	<u>9-12</u>	<u>12-15</u>	<u>15-18</u>	<u>18-21</u>	<u>21-24</u>	<u>24-27</u>	<u>27-30</u>	<u>30-33</u>	<u>33-36</u>	<u>36-39</u>	<u>39-42</u>	<u>42-45</u>	<u>45-48</u>
2010	4.1%	7.2%	9.2%	8.8%	6.0%	4.3%	4.3%	3.8%	3.9%	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%	3.0%	2.7%
2013	4.2%	6.7%	9.1%	8.4%	6.6%	5.4%	5.0%	4.6%	4.5%	4.1%	3.9%	3.6%	3.4%	2.9%	2.8%
2014	4.1%	6.9%	9.1%	8.8%	6.7%	5.8%	5.1%	4.8%	4.5%	4.3%	4.0%	3.4%	3.5%	2.9%	2.8%
2015	4.0%	7.4%	9.0%	9.3%	7.4%	5.7%	5.3%	5.1%	5.1%	4.4%	4.1%	3.6%	3.4%	3.0%	2.6%
2016	4.2%	7.3%	9.6%	9.8%	7.8%	6.0%	5.8%	5.0%	5.2%	4.3%	4.3%	3.6%	3.2%	2.3%	2.4%
2017	4.8%	7.8%	10.7%	10.0%	7.9%	6.2%	5.9%	5.0%	4.9%	4.1%	3.8%				
2018	4.9%	8.1%	10.7%	10.1%	7.9%	6.0%	5.5%								
2019	4.9%	7.9%	10.8%												

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 78% to 99% of the total California workers' compensation insured market measured using 2019 earned premium levels).

Source: WCIRB quarterly calls for experience

California Workers' Compensation Estimated Indemnity Claim Frequency by Accident Year



Note:

The 2019 estimate is based on a comparison of claim counts based on WCIRB accident year experience as of December 31, 2019 relative to the estimated change in statewide employment. Prior years are based on unit statistical data.

Item AC20-04-01 12/31/2019 Loss Adjustment Expense Experience Review

The WCIRB's January 1, 2020 Pure Premium Rate Filing included a provision for loss adjustment expenses (LAE) of 36.4%. This amount reflected 14.7% for unallocated loss adjustment expenses (ULAE) and 21.7% for allocated loss adjustment expenses (ALAE), including the cost of medical cost containment programs (MCCP). This was based on ULAE data through calendar year 2018 and accident year ALAE and MCCP data evaluated as of March 31, 2019. The updated ULAE and ALAE projections, including MCCP costs, for the July 1, 2020 to December 31, 2020 policy period are summarized separately below.

ULAE Projection

As of this time, the WCIRB does not have available calendar year 2019 ULAE information. However, staff has computed a preliminary update to the ULAE projection based on updated wage, frequency, and loss projections as of December 31, 2019 using the same methodologies as those reflected in the January 1, 2020 Pure Premium Rate Filing. The projection of ULAE as a percentage of loss based on this approach, as shown in Table 1, is 15.2%.

**Table 1: ULAE to Loss Ratio Projections
for Policies Incepting July 1, 2020 through December 31, 2020**

ULAE Projection Method	ULAE Ratio
Paid ULAE per Open Indemnity Claim	16.1%
Paid ULAE to Paid Losses	14.2%
Average of Open Indemnity Claim-Based and Paid Loss-Based Projections	15.2%

ALAE Projection – Excluding MCCP

The ALAE provision reflected in the WCIRB's January 1, 2020 Pure Premium Rate Filing was based on a methodology that projects future ALAE as a function of the anticipated future number of indemnity claims and private insurer average ALAE per indemnity claim. The WCIRB has updated the ALAE projection based on ALAE data evaluated as of December 31, 2019 as well as updated frequency and loss projections. (The ALAE projection excludes MCCP costs, which are discussed separately below.)

Exhibit 1 shows paid ALAE amounts per reported indemnity claim on a private insurer basis. Exhibits 2.1 and 2.2 show statewide and private insurer annual ALAE severity growth percentages based on estimated ultimate accident year ALAE per indemnity claim, while Exhibit 3 shows private insurer annual growth percentages based on ratios of incremental calendar year paid ALAE per indemnity claims inventory.

Exhibits 4.1 through 4.4 show the updated ALAE projection excluding MCCP costs, which is based on statewide claim and loss projections and private insurer average ALAE per indemnity claim. In the January 1, 2020 Pure Premium Rate Filing, the WCIRB reflected an adjustment to the cumulative paid ALAE development factor for accident year 2017 to reflect the impact of an increase in claim settlement rates for accident year 2017. The ALAE projection in this analysis is primarily predicated on paid ALAE from accident years 2018 and 2019 (compared to 2017 and 2018 in the January 1, 2020 Pure Premium Rate Filing). As shown in Exhibit 11.2 of Item AC20-03-02, claim settlement rate changes for accident years 2018 and 2019 have been modest. As a result, staff does not recommend reflecting this adjustment in the projected paid ALAE development for accident years 2018 and 2019. In addition, given that the study of the impact of claim settlement rate changes on paid ALAE development was primarily based on

changes at 12 and 24 months,¹ staff does not recommend an adjustment to the projected ALAE development of older accident years at this time. Staff plans to review the impact of shifting claim settlement ratios with the Committee prior to the next annual pure premium rate filing.

The projection shown in Exhibit 4.4 was computed using a 2.0% ALAE severity trend selected based on the approximate average of the private insurer longer-term (post-2006) and shorter-term (five-year) growth rates of (a) estimated ultimate accident year ALAE per indemnity claim (Exhibit 2.2) and (b) incremental paid calendar year ALAE per open indemnity claim (Exhibit 3), which is consistent with the methodology used to select the ALAE severity trend in the last several pure premium rate filings.²

Effective in 2017, Senate Bill No. 1160 (SB 1160) and Assembly Bill No. 1244 (AB 1244) included several provisions related to lien filings. As discussed at prior meetings and in prior pure premium rate filings, liens incur significant LAE costs in addition to the settlement costs paid to the lien claimant. In the January 1, 2020 Pure Premium Rate Filing, the WCIRB estimated that SB 1160 and AB 1244 would reduce lien filings by 60%, resulting in a 9.6% overall decrease in ALAE. Liens are typically not filed and paid on claims until much later. As a result, while some of the impact of the reforms is already reflected in the emerging paid ALAE for accident years 2017 and later and in the ALAE development factors, most is not yet reflected. To reflect the full impact of these reforms, consistent with the January 1, 2020 Pure Premium Rate Filing, staff recommends including a separate adjustment to the projected ALAE ratio. This adjustment, which is shown in line (g) of Exhibit 4.4, is based on the full impact of a 9.6% reduction in ALAE costs judgmentally tempered by 40% based on the estimated average percentage of ultimate ALAE costs paid as of December 31, 2019 for accident years 2017 and 2018. (This approach resulted in a 25% tempering in the January 1, 2020 Pure Premium Rate Filing, which was based on March 31, 2019 ALAE experience.)

Based on this approach, the preliminary ALAE (excluding MCCC costs) projection is 16.8%. (This compares to a projected ALAE excluding MCCC costs to loss of 17.2% in the January 1, 2020 Pure Premium Rate Filing.)

ALAE Projection – MCCC

The ALAE provision reflected in the WCIRB's January 1, 2020 Pure Premium Rate Filing also included a provision for MCCC costs. The projection of MCCC costs was based on a methodology analogous to that used for ALAE excluding MCCC costs and using statewide claim and MCCC cost data. The WCIRB has updated the MCCC cost projection based on MCCC data evaluated as of December 31, 2019 as well as updated frequency and loss projections.

Exhibit 5 shows paid MCCC cost amounts per reported indemnity claim. Exhibit 6 shows annual MCCC severity growth percentages based on ratios of calendar year paid MCCC costs per indemnity claims inventory. Exhibit 7 shows annual MCCC severity growth percentages based on estimated accident year ultimate MCCC costs per indemnity claim. Exhibits 8.1 and 8.2 show the projection of MCCC costs in ALAE. A 0% MCCC severity trend was selected based on the approximate average rates of growth in (a) calendar year MCCC per indemnity claims inventory from 2009 through 2018 (Exhibit 6) and (b) estimated ultimate accident year MCCC costs per indemnity claim from 2013 through 2019 (Exhibit 7), which is consistent with the methodology used to select the MCCC severity trend in the last several pure premium rate filings.³ The projected ratio of MCCC to loss based on this methodology is 4.3%. (This compares to a projected MCCC costs to loss of 4.5% in the January 1, 2020 Pure Premium Rate Filing.)

The preliminary total projected LAE to loss ratio for policies incepting between July 1, 2020 and December 31, 2020 is 36.3%.

¹ See Item AC19-08-04 of the August 1, 2020 Actuarial Committee Agenda.

² The ALAE severity trend reflected in the January 1, 2020 Pure Premium Rate Filing was 2.5%.

³ The MCCC severity trend reflected in the January 1, 2020 Pure Premium Rate Filing was also 0%.

Average Paid ALAE^[1] per Reported Indemnity Claim - Private Insurers
As of December 31, 2019

Accident	Evaluated as of (in months):									
Year	12	24	36	48	60	72	84	96	108	120
2000								4,521	4,709	4,900
2001							5,480	5,704	5,977	6,144
2002						5,673	5,944	6,260	6,454	6,614
2003					5,475	5,917	6,315	6,597	6,809	7,015
2004				4,369	5,062	5,577	5,955	6,223	6,437	6,644
2005			3,023	3,987	4,698	5,219	5,591	5,899	6,162	6,330
2006		1,853	3,126	4,127	4,876	5,436	5,865	6,184	6,410	6,622
2007	575	1,978	3,323	4,419	5,230	5,864	6,378	6,697	6,978	7,190
2008	619	2,118	3,620	4,859	5,789	6,501	6,986	7,387	7,671	7,884
2009	675	2,406	4,083	5,460	6,484	7,203	7,783	8,196	8,490	8,713
2010	745	2,541	4,279	5,593	6,547	7,290	7,870	8,243	8,514	8,713
2011	753	2,563	4,188	5,522	6,537	7,325	7,837	8,205	8,454	
2012	758	2,555	4,332	5,728	6,766	7,451	7,905	8,227		
2013	777	2,790	4,582	5,936	6,851	7,426	7,827			
2014	879	2,992	4,769	6,056	6,865	7,394				
2015	951	3,067	4,846	6,028	6,769					
2016	933	3,157	4,897	6,015						
2017	1,016	3,279	4,936							
2018	1,110	3,376								
2019	1,113									

Accident	Annual Change									
Year	12	24	36	48	60	72	84	96	108	120
2001								26.2%	26.9%	25.4%
2002							8.5%	9.7%	8.0%	7.6%
2003						4.3%	6.2%	5.4%	5.5%	6.1%
2004					-7.5%	-5.7%	-5.7%	-5.7%	-5.5%	-5.3%
2005				-8.7%	-7.2%	-6.4%	-6.1%	-5.2%	-4.3%	-4.7%
2006			3.4%	3.5%	3.8%	4.2%	4.9%	4.8%	4.0%	4.6%
2007		6.8%	6.3%	7.1%	7.3%	7.9%	8.7%	8.3%	8.8%	8.6%
2008	7.8%	7.1%	8.9%	9.9%	10.7%	10.9%	9.5%	10.3%	9.9%	9.7%
2009	8.9%	13.6%	12.8%	12.4%	12.0%	10.8%	11.4%	11.0%	10.7%	10.5%
2010	10.4%	5.6%	4.8%	2.4%	1.0%	1.2%	1.1%	0.6%	0.3%	0.0%
2011	1.1%	0.9%	-2.1%	-1.3%	-0.1%	0.5%	-0.4%	-0.5%	-0.7%	
2012	0.7%	-0.3%	3.4%	3.7%	3.5%	1.7%	0.9%	0.3%		
2013	2.5%	9.2%	5.8%	3.6%	1.3%	-0.3%	-1.0%			
2014	13.2%	7.2%	4.1%	2.0%	0.2%	-0.4%				
2015	8.1%	2.5%	1.6%	-0.4%	-1.4%					
2016	-1.8%	2.9%	1.0%	-0.2%						
2017	8.9%	3.9%	0.8%							
2018	9.2%	3.0%								
2019	0.3%									

Annual Trend^[2]

All-Year	5.5%	5.0%	4.4%	3.8%	3.3%	3.2%	3.4%	4.3%	4.4%	4.5%
R ³	0.974	0.961	0.919	0.863	0.770	0.772	0.814	0.821	0.810	0.787
5-Year	5.0%	3.1%	1.8%	1.1%	0.8%	0.4%	0.2%	2.2%	5.0%	7.7%
R ³	0.865	0.995	0.887	0.626	0.459	0.522	0.178	0.515	0.771	0.946

^[1] All paid ALAE exclude the paid cost of medical cost containment programs.

^[2] Trend is based on exponential distribution.

Source: WCIRB and WCIRB accident year experience calls.

**Ratio of Accident Year Incremental Paid ALAE^[1] to Indemnity Claims Inventory^[2]
By Payment Year - Private Insurers**

Acc. Year	Payment Year Ending December 31													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1989	1,055	923	1,167	1,027	1,221	1,236	1,525	1,530	1,368	1,669	1,784	1,517	1,653	3,318
1990	1,198	1,086	1,406	1,138	1,341	1,386	1,584	1,777	1,496	1,551	1,906	1,680	1,745	1,936
1991	1,120	1,203	1,481	1,384	1,577	1,308	1,678	1,541	1,714	1,431	2,136	2,035	1,935	2,012
1992	1,485	1,507	1,647	1,477	1,718	1,434	1,579	1,633	1,501	1,925	1,596	1,738	1,964	2,034
1993	1,630	1,677	1,945	1,450	1,732	1,788	1,932	1,934	1,802	2,095	2,240	2,053	2,219	2,166
1994	1,784	1,748	1,864	1,389	1,514	1,774	1,830	1,812	1,804	1,775	1,862	1,587	1,795	1,539
1995	1,649	1,771	1,866	1,682	2,022	1,602	1,996	2,144	1,998	2,179	2,434	1,956	2,104	2,093
1996	2,006	2,003	2,040	1,938	1,755	1,868	2,035	2,244	2,008	2,174	2,144	1,921	2,176	2,221
1997	2,503	2,463	2,343	2,268	2,196	2,281	2,489	2,350	1,951	2,303	2,173	2,355	2,357	2,292
1998	2,604	2,405	2,426	2,374	2,398	2,338	2,401	2,362	2,306	2,324	2,453	2,509	2,516	2,010
1999	2,752	2,526	2,468	2,806	2,659	2,600	2,662	2,452	2,130	2,322	2,433	2,199	2,139	2,110
2000	2,861	2,658	2,699	2,806	2,773	2,781	2,841	2,670	2,530	2,798	2,669	2,449	2,387	2,135
2001	2,618	2,918	2,644	2,756	2,707	2,730	2,841	3,113	3,290	3,044	2,801	2,592	2,582	2,614
2002	2,746	3,081	2,881	2,976	2,949	3,029	2,959	3,285	3,428	3,193	3,171	3,024	2,961	2,977
2003	2,818	3,077	3,014	3,007	3,226	3,208	3,518	3,604	3,687	3,582	3,229	2,942	2,861	2,773
2004	2,562	2,919	3,062	3,170	3,256	3,156	3,084	3,462	3,556	3,487	3,113	2,948	2,962	2,859
2005	1,692	2,493	2,877	3,084	3,227	3,286	3,267	3,580	3,568	3,562	3,669	3,387	3,493	3,213
2006	529	1,815	2,675	2,969	3,220	3,478	3,468	3,489	3,511	3,566	3,193	3,184	3,060	2,786
2007		572	1,987	2,752	3,155	3,398	3,572	3,756	3,671	3,745	3,518	3,478	3,529	3,480
2008			620	2,095	2,976	3,480	3,559	3,716	3,840	3,952	3,698	3,708	3,637	3,794
2009				674	2,380	3,307	3,620	3,797	3,964	4,048	3,871	3,843	3,875	4,139
2010					746	2,542	3,411	3,684	3,888	4,137	4,351	4,029	4,079	4,117
2011						766	2,569	3,342	3,825	4,120	4,428	4,150	4,344	4,189
2012							773	2,593	3,610	4,036	4,260	4,181	4,151	4,284
2013								791	2,844	3,691	3,931	4,092	4,024	4,210
2014									909	3,031	3,631	3,964	3,963	4,164
2015										923	2,969	3,754	3,927	4,069
2016											933	3,137	3,880	4,031
2017												1,016	3,273	3,905
2018													1,110	3,329
2019														1,113
ALAE per														
Claim	1,915	1,979	2,047	2,160	2,318	2,480	2,563	2,639	2,797	2,906	2,918	2,946	2,991	3,010
Annual														
Change	3.4%	3.4%	3.4%	5.5%	7.3%	7.0%	3.4%	3.0%	6.0%	3.9%	0.4%	1.0%	1.5%	0.6%

<u>Estimated Annual Exponential Trend Based on Payment Year:</u>		<u>R²</u>
2006-2019	3.9%	0.947
<u>2015-2019</u>	<u>1.0%</u>	0.968
Average:	2.4%	

^[1] All paid ALAE exclude the paid cost of medical cost containment programs.

^[2] Indemnity claims inventory is the sum of indemnity claims open as of January 1 of Year N-1 and newly-reported indemnity claims between January 1 of year N-1 and December 31 of year N.

Source: WCIRB quarterly calls for experience.

Estimated Ultimate ALAE per Indemnity Claim - Private Insurers

Acc. Year	Paid ALAE ^[1] @12/31/19 (in \$000) (1)	Cumulative Development Factors ^[2] (2)	Estimated Ultimate ALAE (in \$000) (3)=(1)x(2)	Indemnity Claim Counts @12/31/19 (4)	Cumulative Count Development Factors ^[3] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5)	Estimated Ultimate ALAE per Indemnity Claim (7)=(3)/(6)x1000	Annual Change (8)
1992	320,055	1.045	334,353	142,042	1.000	142,084	2,353	---
1993	238,067	1.047	249,307	113,593	1.000	113,641	2,194	-6.8%
1994	220,590	1.051	231,808	105,489	1.001	105,557	2,196	0.1%
1995	243,386	1.054	256,584	101,397	1.001	101,493	2,528	15.1%
1996	289,962	1.060	307,268	103,197	1.001	103,332	2,974	17.6%
1997	366,953	1.065	390,840	104,857	1.001	105,013	3,722	25.2%
1998	505,575	1.071	541,393	112,485	1.002	112,688	4,804	29.1%
1999	555,959	1.076	598,391	116,428	1.002	116,669	5,129	6.8%
2000	660,324	1.082	714,606	118,453	1.002	118,732	6,019	17.3%
2001	784,074	1.089	853,554	114,003	1.003	114,290	7,468	24.1%
2002	822,387	1.096	901,481	113,028	1.003	113,335	7,954	6.5%
2003	831,237	1.104	917,285	108,444	1.003	108,792	8,432	6.0%
2004	714,272	1.111	793,384	99,514	1.004	99,875	7,944	-5.8%
2005	671,261	1.120	751,521	97,344	1.004	97,722	7,690	-3.2%
2006	738,420	1.131	835,240	104,324	1.004	104,740	7,974	3.7%
2007	814,559	1.143	931,156	107,463	1.005	107,950	8,626	8.2%
2008	864,571	1.159	1,002,187	105,677	1.005	106,225	9,435	9.4%
2009	898,029	1.179	1,058,656	100,950	1.006	101,530	10,427	10.5%
2010	947,868	1.204	1,141,452	108,785	1.006	109,463	10,428	0.0%
2011	954,769	1.234	1,177,913	112,937	1.007	113,746	10,356	-0.7%
2012	997,087	1.273	1,268,894	121,193	1.008	122,173	10,386	0.3%
2013	999,100	1.326	1,325,077	127,646	1.009	128,830	10,285	-1.0%
2014	965,141	1.401	1,351,896	130,523	1.011	131,973	10,244	-0.4%
2015	912,633	1.514	1,381,956	134,830	1.015	136,831	10,100	-1.4%
2016	839,768	1.708	1,434,620	139,605	1.020	142,386	10,076	-0.2%
2017	690,182	2.118	1,461,615	139,814	1.030	143,941	10,154	0.8%
2018	471,390	3.273	1,542,904	139,615	1.057	147,596	10,454	2.9%
2019	128,216	12.318	1,579,297	115,209	1.309	150,795	10,473	0.2%

Estimated Annual Exponential Trend Based on:

		R²
2006 to 2019	1.3%	0.432
2015 to 2019	1.1%	0.825
Average:	1.2%	

Notes:

- ^[1] All paid ALAE exclude the paid cost of medical cost containment programs.
^[2] Based on the latest year paid ALAE age-to-age development from Exhibit 4.2
^[3] Based on analogous Exhibit 4.1, applicable to private insurers only.

Reported Indemnity Claim Count Development - Statewide

Accident	Age-to-Age Development (in months):														
Year	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
1992															1.001
1993														1.001	1.000
1994													1.001	1.000	1.000
1995												1.001	1.000	1.004	1.001
1996											1.001	1.001	1.001	1.000	1.000
1997										1.001	1.000	1.000	1.000	1.000	1.000
1998									1.001	1.000	1.000	1.000	1.001	1.000	1.000
1999								1.001	1.002	1.000	1.000	1.000	1.000	1.000	1.001
2000							1.000	0.998	1.000	1.000	1.000	1.001	1.000	1.000	1.000
2001						0.999	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002					0.999	1.007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003				0.999	1.008	0.998	0.999	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000
2004			1.001	1.000	0.999	1.000	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2005		1.007	1.004	1.000	1.001	1.001	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2006	1.115	1.013	1.005	1.002	1.001	1.000	1.005	1.001	1.000	1.000	1.000	1.000	1.000		
2007	1.125	1.015	1.006	1.004	1.002	1.000	1.001	1.001	1.000	1.000	1.000	1.000			
2008	1.153	1.023	1.011	1.005	1.003	1.001	1.001	1.001	1.000	1.000	1.000				
2009	1.194	1.029	1.011	1.006	1.003	1.002	1.001	1.000	1.000	1.000					
2010	1.220	1.030	1.011	1.006	1.004	1.002	1.001	1.000	1.000						
2011	1.230	1.033	1.014	1.007	1.002	1.001	1.001	1.001							
2012	1.241	1.035	1.013	1.005	1.003	1.001	1.001								
2013	1.240	1.031	1.010	1.004	1.002	1.002									
2014	1.239	1.027	1.010	1.004	1.002										
2015	1.236	1.027	1.006	1.003											
2016	1.244	1.029	1.007												
2017	1.220	1.023													
2018	1.226														

I. Age-to-Age (Latest Year)

1.226	1.023	1.007	1.003	1.002	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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II. Age-to-Ultimate

1.278	1.042	1.018	1.011	1.008	1.006	1.004	1.004	1.003	1.003	1.003	1.002	1.002	1.002	1.002	1.002
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Accident	Age-to-Age Development (in months):														
Year	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
1989			1.001	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		1.001	0.999	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
1991	1.001	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
1992	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
1994	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	1.000	1.000	1.000	1.000	1.000						
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000							
1997	1.000	1.000	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										
2000	1.000	1.000	1.000	1.000											
2001	1.000	1.000	1.000												
2002	1.000	1.000													
2003	1.000														

I. Age-to-Age (Latest Year)

1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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II. Age-to-Ultimate

1.002	1.002	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000
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Source: WCIRB quarterly calls for experience.

Paid Allocated Loss Adjustment Expense Development - Private Insurers
As of December 31, 2020

Accident Year	Age-to-Age Development (in months):																
	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
1986								1.000	1.018	1.013	1.010	1.008	1.009	1.010	1.005	1.006	1.005
1987							1.035	1.025	1.016	1.012	1.009	1.012	1.009	1.006	1.006	1.004	1.004
1988						1.055	1.036	1.023	1.016	1.011	1.010	1.014	1.005	1.004	1.004	1.004	1.004
1989					1.110	1.063	1.064	1.030	1.018	1.012	1.008	1.004	1.006	1.005	1.004	1.005	1.005
1990				1.170	1.085	1.070	1.035	1.020	1.015	1.010	1.007	1.006	1.006	1.004	1.005	1.006	1.005
1991			1.303	1.131	1.083	1.054	1.027	1.019	1.012	1.017	1.008	1.005	1.002	1.005	1.007	1.004	1.004
1992		1.631	1.249	1.134	1.081	1.050	1.028	1.021	1.024	1.010	1.008	1.004	1.007	1.005	1.006	1.005	1.002
1993	3.143	1.624	1.281	1.148	1.082	1.053	1.034	1.035	1.020	1.014	1.011	1.010	1.011	1.010	1.009	1.004	1.007
1994	3.130	1.649	1.285	1.126	1.087	1.055	1.046	1.027	1.020	1.016	1.015	1.017	1.014	1.012	1.008	1.007	1.008
1995	3.401	1.698	1.258	1.180	1.081	1.058	1.038	1.031	1.025	1.021	1.020	1.017	1.016	1.011	1.012	1.008	1.009
1996	3.147	1.569	1.330	1.132	1.081	1.061	1.049	1.036	1.033	1.028	1.022	1.018	1.014	1.010	1.009	1.010	1.009
1997	2.994	1.675	1.231	1.132	1.092	1.067	1.052	1.042	1.035	1.027	1.021	1.017	1.013	1.012	1.012	1.010	1.008
1998	3.591	1.608	1.248	1.163	1.105	1.076	1.071	1.045	1.032	1.024	1.021	1.017	1.014	1.014	1.012	1.012	1.010
1999	3.351	1.720	1.319	1.158	1.116	1.086	1.064	1.042	1.034	1.029	1.021	1.018	1.016	1.013	1.013	1.010	1.010
2000	4.051	1.752	1.315	1.183	1.121	1.090	1.053	1.042	1.033	1.025	1.021	1.019	1.015	1.014	1.012	1.011	1.009
2001	3.939	1.768	1.357	1.182	1.118	1.078	1.054	1.039	1.028	1.024	1.020	1.017	1.017	1.014	1.011	1.009	1.008
2002	3.927	1.784	1.315	1.171	1.101	1.074	1.046	1.032	1.026	1.021	1.018	1.017	1.013	1.012	1.009	1.008	1.007
2003	4.109	1.707	1.324	1.159	1.107	1.062	1.045	1.034	1.029	1.023	1.020	1.017	1.013	1.010	1.008	1.007	
2004	4.040	1.713	1.319	1.169	1.101	1.069	1.048	1.036	1.030	1.025	1.020	1.015	1.012	1.010	1.008		
2005	3.840	1.698	1.336	1.181	1.113	1.079	1.056	1.044	1.035	1.027	1.022	1.016	1.014	1.010			
2006	3.750	1.736	1.330	1.186	1.120	1.081	1.060	1.046	1.035	1.025	1.019	1.014	1.011				
2007	4.027	1.716	1.340	1.194	1.126	1.088	1.060	1.044	1.032	1.023	1.018	1.014					
2008	4.015	1.758	1.367	1.199	1.126	1.085	1.060	1.040	1.029	1.021	1.017						
2009	4.322	1.775	1.354	1.199	1.126	1.083	1.054	1.037	1.027	1.022							
2010	4.300	1.737	1.342	1.190	1.120	1.076	1.049	1.034	1.024								
2011	4.225	1.729	1.351	1.196	1.109	1.072	1.048	1.032									
2012	4.338	1.773	1.344	1.174	1.105	1.063	1.042										
2013	4.542	1.706	1.297	1.161	1.087	1.056											
2014	4.322	1.635	1.285	1.140	1.081												
2015	4.041	1.630	1.255	1.128													
2016	4.254	1.603	1.240														
2017	3.979	1.546															
2018	3.763																

Latest Year

Age-to-Age	3.763	1.546	1.240	1.128	1.081	1.056	1.042	1.032	1.024	1.022	1.017	1.014	1.011	1.010	1.008	1.007	1.007
Cumulative	12.318	3.273	2.118	1.708	1.514	1.401	1.326	1.273	1.234	1.204	1.179	1.159	1.143	1.131	1.120	1.111	1.104

3-Year Arithmetics Average

Age-to-Age	3.999	1.593	1.260	1.143	1.091	1.064	1.046	1.034	1.027	1.022	1.018	1.015	1.012	1.010	1.008	1.008	1.008
Cumulative	14.355	3.590	2.254	1.789	1.565	1.434	1.348	1.288	1.246	1.213	1.187	1.166	1.149	1.135	1.124	1.115	1.106

Accident	Age-to-Age Development (in months):																
Year	<u>216-228</u>	<u>228-240</u>	<u>240-252</u>	<u>252-264</u>	<u>264-276</u>	<u>276-288</u>	<u>288-300</u>	<u>300-312</u>	<u>312-324</u>	<u>324-336</u>	<u>336-348</u>	<u>348-360</u>	<u>360-372</u>	<u>372-384</u>	<u>384-396</u>	<u>396-408</u>	<u>408-420</u>
1985	1.006	1.004	1.003	1.005	1.005	1.000	1.003	1.004	1.004	1.004	1.004	1.006	1.004	1.003	1.003	1.003	1.003
1986	1.005	1.005	1.006	1.005	1.000	1.004	1.005	1.005	1.006	1.006	1.007	1.006	1.005	1.004	1.003	1.004	
1987	1.005	1.006	1.007	1.000	1.003	1.006	1.005	1.004	1.005	1.006	1.005	1.004	1.004	1.003	1.003		
1988	1.005	1.005	1.012	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.003	1.003	1.003			
1989	1.004	1.004	1.003	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.003	1.003	1.005				
1990	1.004	1.002	1.003	1.003	1.003	1.003	1.003	1.002	1.003	1.002	1.002	1.002					
1991	1.002	1.003	1.003	1.003	1.003	1.003	1.002	1.003	1.003	1.002	1.002						
1992	1.005	1.004	1.003	1.003	1.003	1.003	1.003	1.002	1.003	1.002	1.002						
1993	1.006	1.006	1.006	1.005	1.005	1.005	1.004	1.004	1.003								
1994	1.007	1.006	1.006	1.005	1.005	1.004	1.004	1.003									
1995	1.009	1.008	1.008	1.008	1.006	1.006	1.005										
1996	1.008	1.007	1.007	1.006	1.006	1.005											
1997	1.008	1.007	1.007	1.006	1.005												
1998	1.010	1.008	1.007	1.005													
1999	1.008	1.007	1.005														
2000	1.007	1.006															
2001	1.007																

Latest Year

Age-to-Age	1.007	1.006	1.005	1.005	1.005	1.005	1.005	1.003	1.003	1.002	1.002	1.002	1.005	1.003	1.003	1.004	1.003
Cumulative	1.096	1.089	1.082	1.076	1.071	1.065	1.060	1.054	1.051	1.047	1.045	1.043	1.040	1.037	1.035	1.033	1.031

3-Year Arithmetics Average

Age-to-Age	1.007	1.007	1.006	1.005	1.006	1.005	1.005	1.003	1.003	1.002	1.002	1.002	1.004	1.003	1.003	1.003	1.003
Cumulative	1.098	1.090	1.083	1.076	1.070	1.064	1.059	1.054	1.050	1.047	1.045	1.043	1.040	1.037	1.035	1.033	1.031

Note: Factors in italics are based on an inverse power curve fit to the "3-Year Arithmetic Average" factors using the 108-to-120 through 336-to-348 valuations.
Source: WCIRB accident year experience calls. Excludes MCCC costs.

Quarterly Paid ALAE Loss Development Factors^[1] - Private Insurers

Age in Months		<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
3	- 6		7.976	7.570	5.434	9.136	8.769	8.693	8.584	6.234	9.866	8.946	8.934	8.191	7.885
6	- 9	2.427	3.016	2.765	2.630	3.023	3.176	3.213	3.058	3.163	3.173	3.144	3.064	3.161	3.139
9	- 12	2.022	2.078	2.021	2.034	2.077	2.165	2.115	2.133	2.158	2.107	2.101	2.137	2.091	2.121
12	- 15	1.653	1.627	1.687	1.724	1.737	1.701	1.713	1.784	1.744	1.734	1.776	1.701	1.672	
15	- 18	1.415	1.486	1.494	1.509	1.482	1.486	1.510	1.494	1.488	1.482	1.491	1.451	1.442	
18	- 21	1.357	1.328	1.289	1.326	1.334	1.343	1.338	1.349	1.332	1.309	1.309	1.311	1.289	
21	- 24	1.255	1.234	1.237	1.255	1.253	1.248	1.249	1.237	1.239	1.225	1.227	1.227	1.212	
24	- 27	1.187	1.191	1.190	1.197	1.189	1.186	1.205	1.187	1.177	1.184	1.167	1.150		
27	- 30	1.165	1.167	1.172	1.170	1.158	1.163	1.160	1.156	1.151	1.142	1.132	1.129		
30	- 33	1.128	1.119	1.135	1.138	1.133	1.131	1.130	1.123	1.116	1.110	1.109	1.099		
33	- 36	1.107	1.103	1.111	1.114	1.113	1.108	1.104	1.101	1.095	1.088	1.092	1.083		
36	- 39	1.093	1.090	1.097	1.094	1.091	1.095	1.093	1.085	1.085	1.073	1.068			
39	- 42	1.083	1.086	1.096	1.082	1.083	1.081	1.081	1.077	1.072	1.062	1.062			
42	- 45	1.063	1.069	1.069	1.074	1.069	1.068	1.070	1.061	1.057	1.054	1.049			
45	- 48	1.057	1.059	1.063	1.064	1.062	1.059	1.057	1.055	1.051	1.046	1.042			
48	- 51	1.050	1.050	1.052	1.053	1.053	1.051	1.050	1.047	1.041	1.036				
51	- 54	1.049	1.050	1.049	1.050	1.048	1.048	1.046	1.042	1.035	1.034				
54	- 57	1.038	1.043	1.045	1.043	1.040	1.043	1.038	1.035	1.031	1.027				
57	- 60	1.037	1.038	1.039	1.039	1.037	1.036	1.035	1.031	1.028	1.026				
60	- 63	1.032	1.032	1.034	1.034	1.032	1.031	1.031	1.025	1.023					
63	- 66	1.030	1.031	1.033	1.032	1.032	1.029	1.028	1.022	1.021					
66	- 69	1.027	1.029	1.028	1.029	1.028	1.024	1.024	1.021	1.018					
69	- 72	1.025	1.028	1.026	1.026	1.024	1.023	1.021	1.018	1.018					
72	- 75	1.022	1.023	1.023	1.022	1.021	1.021	1.019	1.016						
75	- 78	1.020	1.023	1.022	1.022	1.020	1.019	1.016	1.015						
78	- 81	1.019	1.020	1.020	1.020	1.017	1.017	1.015	1.013						
81	- 84	1.018	1.019	1.018	1.017	1.016	1.014	1.014	1.012						
84	- 87	1.016	1.016	1.016	1.015	1.014	1.014	1.011							
87	- 90	1.015	1.015	1.016	1.015	1.012	1.012	1.011							
90	- 93	1.014	1.014	1.014	1.012	1.012	1.012	1.012							
93	- 96	1.013	1.013	1.013	1.012	1.010	1.011	1.009							
96	- 99	1.012	1.011	1.011	1.010	1.010	1.008								
99	- 102	1.012	1.012	1.011	1.009	1.009	1.009								
102	- 105	1.012	1.011	1.009	1.009	1.008	1.007								
105	- 108	1.010	1.010	1.008	1.008	1.007	1.007								
108	- 111	1.009	1.009	1.008	1.008	1.006									
111	- 114	1.009	1.008	1.007	1.007	1.007									
114	- 117	1.008	1.007	1.007	1.007	1.006									
117	- 120	1.008	1.007	1.006	1.006	1.006									
120	- 123	1.007	1.006	1.006	1.006										

^[1] All paid allocated loss adjustment expense exclude the paid cost of medical cost containment programs.

Source: WCIRB quarterly calls for experience.

Projected Ratio of ALAE^[1] to Losses - Statewide

Based on Estimated Accident Year Indemnity Claim Frequency and Private Insurers ALAE Severity
for Policies with Effective Dates between July 1, 2020 and December 31, 2020

Acc. Year	Indemnity Claim Counts @12/31/19	Cumulative Count Development Factors ^[2]	Estimated Ultimate Ind. Counts (3)=(1)x(2)	Estimated Ult. ALAE per Indemnity Claim ^[3]	Estimated Ult. ALAE (in \$000) (5)=(3)x(4)
	(1)	(2)		(4)	(5)
1992	198,558	1.000	198,622	2,353	467,397
1993	156,201	1.000	156,269	2,194	342,823
1994	143,801	1.001	143,889	2,196	315,987
1995	135,244	1.001	135,357	2,528	342,195
1996	133,160	1.001	133,308	2,974	396,406
1997	137,416	1.001	137,589	3,722	512,081
1998	147,505	1.001	147,725	4,804	709,725
1999	148,704	1.002	148,956	5,129	763,990
2000	161,993	1.002	162,285	6,019	976,738
2001	185,700	1.002	186,038	7,468	1,389,389
2002	194,726	1.002	195,088	7,954	1,551,752
2003	184,260	1.002	184,631	8,432	1,556,730
2004	159,000	1.002	159,320	7,944	1,265,610
2005	139,566	1.002	139,848	7,690	1,075,485
2006	133,286	1.002	133,536	7,974	1,064,871
2007	130,329	1.002	130,590	8,626	1,126,451
2008	123,069	1.002	123,341	9,435	1,163,675
2009	113,746	1.003	114,036	10,427	1,189,054
2010	118,463	1.003	118,776	10,428	1,238,568
2011	120,591	1.003	120,969	10,356	1,252,718
2012	127,555	1.004	128,022	10,386	1,329,639
2013	135,486	1.004	136,078	10,285	1,399,620
2014	140,732	1.006	141,572	10,244	1,450,232
2015	144,847	1.008	146,042	10,100	1,474,986
2016	147,856	1.011	149,529	10,076	1,506,586
2017	147,371	1.018	150,077	10,154	1,523,921
2018	146,958	1.042	153,158	10,454	1,601,047
2019	122,306	1.278	156,252	10,473	1,636,452

Projected Based on 2-Year Average of 2018 and 2019:

	Ult. Ind. Counts ^[4]	Ult. ALAE per Ind. Counts ^[5]	Ultimate ALAE ^[6]
2020	150,488	10,779	1,622,150
4/1/2021	147,578	10,941	1,614,584

(a) Projected ALAE Incurred (\$000):	1,614,584
(b) Calendar Year 2019 Earned Premium ^[7] (\$000):	16,121,173
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[8] :	0.561
(d) Premium Adjustment Factor for Calendar Year 2019 ^[9] :	1.002
(e) Projected Losses (\$000): (b) x (c) x (d)	9,062,066
(f) Ratio of ALAE to Losses Prior to Impact of SB 1160 and AB 1244: (a)/(e)	17.8%
(g) Impact of SB 1160 and AB 1244 ^[10]	-5.8%
(h) Projected Ratio of ALAE to Losses after Impact of SB 1160 and AB 1244: (f) x [1.0 + (g)]	16.8%

Notes:

- [1] All paid ALAE exclude the paid cost of medical cost containment programs.
- [2] Based on the latest year indemnity claim count age-to-age development from Exhibit 4.1.
- [3] Based on estimated ultimate ALAE per indemnity for private insurers from Exhibit 2.
- [4] Estimated based on projected frequency trends for accident years 2019 to 2021. The estimated frequency changes are based on the projected growth in overall indemnity claim frequency. These frequency trends were then applied to the ultimate indemnity claim counts estimated from averaging 2018 and 2019.
- [5] Severity is projected by applying an annual growth rate of 2.0%, which is based on the approximate average of the private insurers selected rate of growth in (i) estimated ultimate accident year ALAE severities from Exhibit 3 and (ii) paid ALAE per open indemnity claim from Exhibit 2, to the ultimate ALAE severity estimated from averaging 2018 and 2019.
- [6] Column(3) x Column(4) / 1,000.
- [7] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid ALAE in column (1) and the indemnity claim counts in column (4) by accident year as of December 31, 2019.
- [8] See Exhibit 8 of Agenda Item AC20-03-02.
- [9] See Exhibit 5.2 of Agenda Item AC20-03-02.
- [10] Based on the WCIRB's most recent evaluation of SB 1160 and AB 1244 reflecting a 60% reduction in lien filings, offset by 40% to reflect the impact of the reforms in the emerging ALAE data.

Average Paid M CCP per Reported Indemnity Claim - Statewide

As of December 31, 2019

Accident	Evaluated as of (in months):							
<u>Year</u>	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
2012	674	1,361	1,744	1,990	2,097	2,208	2,285	2,338
2013	655	1,253	1,620	1,821	1,962	2,068	2,132	
2014	616	1,200	1,576	1,786	1,932	2,014		
2015	603	1,209	1,538	1,749	1,867			
2016	592	1,152	1,454	1,632				
2017	585	1,128	1,437					
2018	639	1,185						
2019	607							

Accident	Annual Change							
<u>Year</u>	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>
2013	-2.8%	-7.9%	-7.1%	-8.5%	-6.4%	-6.3%	-6.7%	
2014	-6.0%	-4.2%	-2.7%	-1.9%	-1.6%	-2.6%		
2015	-2.1%	0.7%	-2.4%	-2.1%	-3.3%			
2016	-1.9%	-4.7%	-5.5%	-6.7%				
2017	-1.1%	-2.1%	-1.1%					
2018	9.2%	5.1%						
2019	-5.0%							

Source: WCIRB accident year experience calls.

Paid MCCP per Indemnity Claims Inventory^[1] by Calendar Year - Statewide

Calendar Year	Paid MCCP per Indemnity Claim Adjusted to Remove IMR/IBR Fees	Year-to-Year Change
2008	\$848	50.8%
2009	\$808	-4.7%
2010	\$872	7.9%
2011	\$914	4.8%
2012	\$942	3.0%
2013	\$984	4.5%
2014	\$952	-3.3%
2015	\$1,059	11.2%
2016	\$1,000	-5.6%
2017	\$947	-5.2%
2018	\$978	3.3%

Estimated Annual Exponential Trend Based on:

2009-2018	1.9%
R^2	0.559

^[1] Indemnity claims inventory is the sum of indemnity claims open as of January 1 of Year N and newly-reported indemnity claims between January 1 of year N and December 31 of year N.

Source: WCIRB expense calls, aggregate indemnity and medical cost calls, and quarterly calls for experience.

Estimated Ultimate M CCP per Indemnity Claim - Statewide

Accident Year	Paid MCCP @12/31/19 (in \$000) (1)	Cumulative Development Factors ^[1] (2)	Estimated Ultimate MCCP (3)=(1)x(2) (4)	Indemnity Claim Counts @12/31/19 (4)	Cumulative Count Development Factors ^[2] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5) (6)=(4)x(5)	Estimated Ultimate MCCP per Indemnity Claim (7)=(3)/(6) x 1000 (7)=(3)/(6) x 1000	Annual change
2012	298,263	1.369	408,323	127,555	1.004	128,022	3,189	---
2013	288,843	1.403	405,131	135,486	1.004	136,078	2,977	-6.7%
2014	283,431	1.448	410,474	140,732	1.006	141,572	2,899	-2.6%
2015	270,491	1.513	409,377	144,847	1.008	146,042	2,803	-3.3%
2016	241,318	1.621	391,207	147,856	1.011	149,529	2,616	-6.7%
2017	211,842	1.833	388,255	147,371	1.018	150,077	2,587	-1.1%
2018	174,157	2.390	416,272	146,958	1.042	153,158	2,718	5.1%
2019	74,243	5.432	403,305	122,306	1.278	156,252	2,581	-5.0%

Estimated Annual Exponential Trend Based on:

2013 to 2019	-2.3%
2015 to 2019	-1.3%

Notes:

- [1] Based on MCCP development through 96 months from Exhibit 8.1. 96-to-ultimate development factors are based on selected paid medical development factors from Exhibit 3.2 of Agenda Item AC20-03-02.
- [2] Based on the latest year indemnity claim count age-to-age development from Exhibit 4.1.

Paid MCCP Development Factors - Statewide

Quarterly Development								
Age in Months	Accident Year							
	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
3 - 6	5.599	5.796	6.047	5.652	6.118	5.561	5.890	5.288
6 - 9	2.356	2.432	2.402	2.457	2.407	2.395	2.329	2.354
9 - 12	1.763	1.773	1.771	1.742	1.725	1.776	1.824	1.775
12 - 15	1.476	1.412	1.456	1.468	1.477	1.444	1.432	
15 - 18	1.277	1.253	1.299	1.282	1.244	1.258	1.239	
18 - 21	1.171	1.157	1.194	1.177	1.170	1.154	1.147	
21 - 24	1.128	1.121	1.128	1.120	1.125	1.122	1.116	
24 - 27	1.083	1.099	1.096	1.096	1.086	1.096		
27 - 30	1.077	1.081	1.073	1.073	1.077	1.071		
30 - 33	1.051	1.068	1.045	1.062	1.054	1.057		
33 - 36	1.045	1.054	1.036	1.047	1.053	1.051		
36 - 39	1.047	1.053	1.034	1.040	1.039			
39 - 42	1.036	1.043	1.026	1.040	1.032			
42 - 45	1.036	1.035	1.025	1.029	1.027			
45 - 48	1.031	1.027	1.019	1.028	1.026			
48 - 51	1.031	1.023	1.025	1.021				
51 - 54	1.025	1.023	1.025	1.020				
54 - 57	1.022	1.019	1.018	1.015				
57 - 60	1.017	1.016	1.016	1.014				
60 - 63	1.015	1.014	1.013					
63 - 66	1.016	1.017	1.013					
66 - 69	1.014	1.012	1.011					
69 - 72	1.011	1.011	1.009					
72 - 75	1.009	1.010						
75 - 78	1.010	1.009						
78 - 81	1.007	1.006						
81 - 84	1.008	1.006						
84 - 87	1.008							
Annual Development								
Age in Months	Accident Year							
	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	
12 - 24	2.491	2.292	2.446	2.476	2.423	2.343	2.273	
24 - 36	1.281	1.341	1.364	1.306	1.295	1.304		
36 - 48	1.160	1.168	1.144	1.143	1.131			
48 - 60	1.097	1.082	1.084	1.071				
60 - 72	1.055	1.054	1.045					
72 - 84	1.035	1.033						
84 - 96	1.025							
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-Ult.</u>
Age-to-Age ^[1]	2.273	1.304	1.131	1.071	1.045	1.033	1.025	
Age -to-Ult. ^[2]	5.432	2.390	1.833	1.621	1.513	1.448	1.403	1.369

Notes:

[1] Based on Latest Year.

[2] 96-to-Ult. is based on selected paid medical 96-to-ultimate development factor on Exhibit 3.2 of Agenda Item AC20-03-02.

Source: WCIRB quarterly calls for experience.

Projected Ratio of MCCC to Losses - Statewide

Based on Estimated Accident Year Indemnity Claim Frequency and MCCC Severity
for Policies with Effective Dates between July 1, 2020 and December 31, 2020

Accident Year	Paid MCCC @12/31/19 (in \$000) (1)	Cumulative Development Factors ^[1] (2)	Estimated Ultimate MCCC (3)=(1)x(2)	Indemnity Claim Counts @12/31/19 (4)	Cumulative Count Development Factors ^[2] (5)	Estimated Ultimate Ind. Counts (6)=(4)x(5)	Estimated Ultimate MCCC per Indemnity Claim (7)=(3)/(6) x 1000
2012	298,263	1.369	408,323	127,555	1.004	128,022	3,189
2013	288,843	1.403	405,131	135,486	1.004	136,078	2,977
2014	283,431	1.448	410,474	140,732	1.006	141,572	2,899
2015	270,491	1.513	409,377	144,847	1.008	146,042	2,803
2016	241,318	1.621	391,207	147,856	1.011	149,529	2,616
2017	211,842	1.833	388,255	147,371	1.018	150,077	2,587
2018	174,157	2.390	416,272	146,958	1.042	153,158	2,718
2019	74,243	5.432	403,305	122,306	1.278	156,252	2,581

Projected Based on 2-Year Average of 2018 and 2019:

	Ultimate MCCC ^[5]	Ult. Ind. Counts ^[3]	Ult.MCCC per Ind. Counts ^[4]
2020	398,722	150,488	2,650
4/1/2021	391,011	147,578	2,650

(a) Projected MCCC (\$000):	391,011
(b) Calendar Year 2019 Earned Premium ^[6] (\$000):	16,121,173
(c) Projected Loss to Industry Average Filed Pure Premium Ratio ^[7] :	0.561
(d) Premium Adjustment Factor for Calendar Year 2019 ^[8] :	1.002
(e) Projected Losses (\$000): (b) x (c) x (d)	9,062,066
(f) Projected Ratio of MCCC to Losses: (a)/(e)	4.3%

Notes:

- ^[1] Based on MCCC development through 96 months from Exhibit 8.1. 96-to-ultimate development factors is based on selected paid medical development factors from Exhibit 3.2 of Agenda Item AC20-03-02.
- ^[2] Based on the latest year indemnity claim count age-to-age development from Exhibit 4.1.
- ^[3] Estimated based on projected frequency trends for accident years 2019 to 2021. The estimated frequency changes are based on the projected growth in total or overall indemnity claim frequency. These frequency trends were then applied to the ultimate indemnity claim counts estimated from averaging 2018 and 2019.
- ^[4] Severity is projected by applying an annual growth rate of 0% to the ultimate MCCC severity estimated from averaging 2018 and 2019.
- ^[5] Column(6) x Column(7) / 1,000.
- ^[6] Based on the reported earned premium for calendar year 2019 from the same group of insurers that reported the paid MCCC in column (1) and the indemnity claim counts in column (4) by accident year as of December 31, 2019.
- ^[7] See Exhibit 8 of Agenda Item AC20-03-02.
- ^[8] See Exhibit 5.2 of Agenda Item AC20-03-02.

Item AC20-04-02 12/31/2019 Experience – Alternative Loss Projections

For a number of years, the WCIRB has included alternative loss development and trending methodology projections in its pure premium rate filing submissions.

Loss Development Methodologies

The loss development projections based on the methodology reflected in the WCIRB's summary analysis of December 31, 2019 experience, included in Item AC20-03-02 of this Agenda, were based on a combination of (a) latest year reform-adjusted paid loss development factors through 108 months with adjustments for changes in claim settlement rates applied through 84 months, (b) three-year average reform-adjusted paid loss development factors from 108 months through 264 months, and (c) six-year average (unadjusted) incurred loss development factors after 264 months. Attached for the Committee's review are a number of alternative loss development projections based on methodologies that have been included, for informational purposes, in prior pure premium rate filing materials or have been discussed at prior meetings. Specifically, alternative loss ratio projections, based on December 31, 2019 experience, derived using the following loss development methodologies and the trending methodology reflected in the analysis included in Item AC20-03-02 of this Agenda are included:¹

1. 3-Year Average Unadjusted Incurred Loss Development – Exhibits 1.1 through 1.3
2. Latest Year Unadjusted Incurred Loss Development – Exhibits 2.1 through 2.3
3. 3-Year Average Incurred Loss Development Adjusted for Changes in Case Reserve Levels – Exhibits 3.1 through 3.11
4. 3-Year Average Unadjusted Paid Loss Development – Exhibits 4.1 through 4.3
5. Latest Year Unadjusted Paid Loss Development – Exhibits 5.1 through 5.3
6. Latest Year Paid Loss Development Adjusted for Reforms – Exhibits 6.1 and 6.2
7. 3-Year Average Paid Loss Development Adjusted for Changes in Claim Settlement Rates and Reforms – Exhibits 7.1 through 7.3

A summary of the July 1, 2020 through December 31, 2020 policy period loss ratio projections based on the alternative loss development methodologies described above is shown in Table 1.

¹ All paid loss development methodologies reflect three-year average loss development factors applied after 108 months and six-year average incurred loss development factors applied after 264 months. All incurred loss development methodologies reflect six-year average loss development factors applied after 108 months. Methodologies adjusted for reforms include the impacts of SB 1160 and AB 1244 and changes in pharmaceutical cost levels.

**Table 1: Projected Loss Ratios for Policies Incepting between July 1, 2020 and December 31, 2020
Based on Alternative Loss Development Methodologies**

Loss Development Methodologies	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
4/2/2020 Agenda Methodology			
Latest Year Paid Adjusted for Reforms and Changes in Claim Settlement Rates	0.256	0.305	0.561
Alternative Methodologies			
<u>Incurred Methodologies</u>			
3-Year Average (Unadjusted)	0.263	0.282	0.545
Latest Year (Unadjusted)	0.256	0.274	0.530
3-Year Average Adjusted for Changes in Case Reserve Levels	0.259	0.287	0.546
<u>Paid Methodologies</u>			
3-Year Average (Unadjusted)	0.284	0.337	0.621
Latest Year (Unadjusted)	0.268	0.318	0.586
Latest Year Adjusted for Reforms	—	0.316	0.584
3-Year Average Adjusted for Changes in Claim Settlement Rates and Reforms	0.266	0.321	0.587
75% Applied to Latest Year Paid Adjusted for Reforms and Claim Settlement Rates and 25% Applied to 3-Year Average Unadjusted Incurred (for Medical) ²	—	0.299	0.555

Trending Methodologies

The trending projections reflected in the summary analysis of December 31, 2019 experience, included in Item AC20-03-02 of this Agenda, were based on the average of the latest two years' on-level loss ratios with separate projections of claim frequency and claim severity growth applied. The claim frequency growth estimates were based on the preliminary 12-month frequency change for accident year 2019 and the WCIRB's claim frequency model forecasts for accident years 2020 and 2021. The severity growth estimates of 0% for indemnity and 1.5% for medical were based on a review of longer-term and more recent indemnity and medical severity growth rates.

Attached for the Committee's review are a number of alternative trending projections based on methodologies that have been included, for informational purposes, in prior advisory pure premium rate filing materials or have been discussed at prior meetings. Specifically, alternative loss ratio projections, based on December 31, 2019 experience, derived using the loss development methodologies reflected in the analysis included in Item AC20-03-02 of this Agenda and the following trending methodologies have been included:

1. Separate Projections of Frequency and Severity (0% Indemnity; 1.5% Medical) Growth Applied to the Latest Year Only – Exhibits 8.1 and 8.2

² This methodology was reflected in the California Department of Insurance (CDI) Decision on the January 1, 2020 Pure Premium Rate Filing for the medical loss development projection.

2. Separate Projections of Frequency and the Long-Term (1990 to 2019) Average Severity Growth Applied to the Latest Two Years – Exhibits 9.1 and 9.2
3. Separate Projections of Frequency and the Short-Term (2015 to 2019) Average Severity Growth Applied to the Latest Two Years – Exhibits 10.1 and 10.2
4. Separate Projections of Frequency and Severity (-0.5% Indemnity; 2.5% Medical) Growth Applied to the Latest Two Years – Exhibits 11.1 and 11.2³
5. Long-Term (1990 to 2019) On-Level Loss Ratio Exponential Trend Applied to the Latest Two Years' Loss Ratios – Exhibits 12.1 and 12.2
6. Short-Term (2015 to 2019) On-Level Loss Ratio Exponential Trend Applied to the Latest Two Years' Loss Ratios – Exhibits 13.1 and 13.2

A summary of the July 1, 2020 through December 31, 2020 policy period loss ratio projections based on the alternative trending methodologies is shown in Table 2.

Table 2: Projected Loss Ratios for Policies Incepting between July 1, 2020 and December 31, 2020 Based on Alternative Trending Methodologies

Trending Methodologies	Indemnity Loss Ratio	Medical Loss Ratio	Total Loss Ratio
4/2/2020 Agenda Methodology			
Separate Projections of Frequency and Severity (0% Indemnity; 1.5% Medical) Applied to the Latest Two Years	0.256	0.305	0.561
Alternative Methodologies			
Separate Projections of Frequency and Severity (0% Indemnity; 1.5% Medical) Applied to the Latest Year	0.257	0.297	0.554
Separate Projections of Frequency and Long-Term (1990 to 2019) Severity Applied to the Latest Two Years	0.263	0.332	0.595
Separate Projections of Frequency and Short-Term (2015 to 2019) Severity Applied to the Latest Two Years	0.251	0.294	0.545
Separate Projections of Frequency and Severity (-0.5% Indemnity; 2.5% Medical) Applied to the Latest Two Years	0.254	0.312	0.566
Long-Term (1990 to 2019) On-level Loss Ratio Exponential Trend Applied to the Latest Two Years	0.265	0.333	0.598
Short-Term (2015 to 2019) On-level Loss Ratio Exponential Trend Applied to the Latest Two Years	0.247	0.293	0.540

³ This trending methodology was reflected in the January 1, 2020 Pure Premium Rate Filing.

**Developed Loss Ratio Unadjusted 3-Year Average Incurred Development Factors
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.274	1.005	1.027	0.281	0.406	1.004	1.032	0.419	0.700
2009	0.317	1.006	1.033	0.327	0.470	1.005	1.037	0.487	0.815
2010	0.301	1.007	1.040	0.313	0.449	1.006	1.044	0.469	0.783
2011	0.277	1.010	1.051	0.291	0.384	1.010	1.054	0.404	0.695
2012	0.245	1.013	1.064	0.261	0.325	1.009	1.063	0.346	0.607
2013	0.205	1.017	1.082	0.222	0.258	1.013	1.076	0.278	0.500
2014	0.192	1.022	1.106	0.212	0.225	1.015	1.093	0.246	0.458
2015	0.183	1.034	1.143	0.209	0.210	1.027	1.122	0.236	0.445
2016	0.166	1.054	1.206	0.200	0.192	1.035	1.162	0.223	0.423
2017	0.158	1.104	1.331	0.211	0.189	1.063	1.235	0.234	0.444
2018	0.139	1.250	1.664	0.230	0.183	1.130	1.395	0.255	0.486
2019	0.084	1.919	3.193	0.267	0.138	1.463	2.041	0.281	0.548

- (a) Based on AC20-03-02, Exhibit 1. 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. No adjustment has been made to MCCP costs in medical reserves.
- (b) Based on AC20-03-02, Exhibit 2.1.
- (c) Based on AC20-03-02, Exhibit 2.2.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Incurred Development Factors
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.281	1.375	1.293	0.299
2009	0.327	1.348	1.395	0.316
2010	0.313	1.323	1.268	0.327
2011	0.291	1.305	1.158	0.328
2012	0.261	1.289	1.031	0.326
2013	0.222	1.260	0.901	0.311
2014	0.212	1.154	0.830	0.295
2015	0.209	1.138	0.794	0.300
2016	0.200	1.123	0.821	0.274
2017	0.211	1.094	0.861	0.268
2018	0.230	1.063	0.903	0.271
2019	0.267	1.035	1.002	0.276
				Projected (d)
2020				0.267
4/1/2021				0.263

- (a) See Exhibit 1.1.
(b) Based on AC20-03-02, Exhibit 4.1.
(c) See AC20-03-02, Exhibit 5.2.
(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.2, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Incurred Development Factors
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.797	1.293	0.258
2009	0.487	0.786	1.395	0.275
2010	0.469	0.784	1.268	0.290
2011	0.404	0.806	1.158	0.281
2012	0.346	0.841	1.031	0.282
2013	0.278	0.922	0.901	0.284
2014	0.246	0.968	0.830	0.287
2015	0.236	0.989	0.794	0.294
2016	0.223	0.987	0.821	0.268
2017	0.234	0.985	0.861	0.268
2018	0.255	1.009	0.903	0.285
2019	0.281	1.005	1.002	0.282
				Projected (d)
2020				0.283
4/1/2021				0.282

- (a) See Exhibit 1.1.
- (b) Based on AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from AC20-03-02, Exhibit 6.4, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid M CCP costs. Accident years 2010 and prior do reflect paid M CCP costs. No adjustment has been made to M CCP costs in medical reserves.

**Developed Loss Ratio Unadjusted Latest Year Incurred Development Factors
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.274	1.005	1.027	0.281	0.406	1.004	1.032	0.419	0.700
2009	0.317	1.006	1.033	0.327	0.470	1.005	1.037	0.487	0.815
2010	0.301	1.007	1.040	0.313	0.449	1.006	1.044	0.469	0.783
2011	0.277	1.010	1.051	0.291	0.384	1.010	1.054	0.404	0.695
2012	0.245	1.012	1.063	0.261	0.325	1.011	1.065	0.347	0.607
2013	0.205	1.016	1.080	0.222	0.258	1.016	1.082	0.279	0.501
2014	0.192	1.021	1.103	0.212	0.225	1.015	1.099	0.247	0.459
2015	0.183	1.030	1.136	0.208	0.210	1.028	1.129	0.237	0.445
2016	0.166	1.049	1.192	0.198	0.192	1.031	1.164	0.223	0.421
2017	0.158	1.097	1.307	0.207	0.189	1.046	1.218	0.231	0.437
2018	0.139	1.243	1.625	0.225	0.183	1.119	1.363	0.249	0.474
2019	0.084	1.906	3.097	0.259	0.138	1.452	1.979	0.273	0.532

- (a) Based on AC20-03-02, Exhibit 1. 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. No adjustment has been made to MCCP costs in medical reserves.
- (b) Based on AC20-03-02, Exhibit 2.1.
- (c) Based on AC20-03-02, Exhibit 2.2.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Incurred Development Factors
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.281	1.375	1.293	0.299
2009	0.327	1.348	1.395	0.316
2010	0.313	1.323	1.268	0.327
2011	0.291	1.305	1.158	0.328
2012	0.261	1.289	1.031	0.326
2013	0.222	1.260	0.901	0.310
2014	0.212	1.154	0.830	0.295
2015	0.208	1.138	0.794	0.298
2016	0.198	1.123	0.821	0.271
2017	0.207	1.094	0.861	0.263
2018	0.225	1.063	0.903	0.265
2019	0.259	1.035	1.002	0.267
				Projected (d)
2020				0.259
4/1/2021				0.256

- (a) See Exhibit 2.1.
(b) Based on AC20-03-02, Exhibit 4.1.
(c) See AC20-03-02, Exhibit 5.2.
(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.2, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Incurred Development Factors
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.419	0.797	1.293	0.258
2009	0.487	0.786	1.395	0.275
2010	0.469	0.784	1.268	0.290
2011	0.404	0.806	1.158	0.281
2012	0.347	0.841	1.031	0.283
2013	0.279	0.922	0.901	0.286
2014	0.247	0.968	0.830	0.288
2015	0.237	0.989	0.794	0.296
2016	0.223	0.987	0.821	0.268
2017	0.231	0.985	0.861	0.264
2018	0.249	1.009	0.903	0.279
2019	0.273	1.005	1.002	0.274
				Projected (d)
2020				0.275
4/1/2021				0.274

- (a) See Exhibit 2.1.
- (b) Based on AC20-03-02, Exhibit 4.1.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from AC20-03-02, Exhibit 6.4, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid M CCP costs. Accident years 2010 and prior do reflect paid M CCP costs. No adjustment has been made to M CCP costs in medical reserves.

**Incurred Indemnity Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

A. Indemnity Case Reserves Per Open Claim

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													25,719
2003												34,670	34,743
2004											30,317	31,931	34,759
2005										27,313	28,034	30,573	33,298
2006									26,510	27,400	30,606	31,755	34,821
2007								26,267	27,921	30,972	32,405	35,062	42,482
2008							22,951	25,570	29,539	32,542	35,369	39,541	
2009						20,892	22,444	25,620	28,691	31,761	36,106		
2010					17,765	19,699	21,979	24,472	27,560	31,789			
2011				17,042	18,643	20,612	22,833	25,678	28,680				
2012			14,611	15,974	18,208	20,657	24,134	28,161					
2013		12,377	14,062	15,513	17,281	19,642	23,554						
2014	8,341	12,526	14,761	16,921	19,948	22,374							
2015	8,686	13,446	16,147	18,907	21,727								
2016	8,918	13,797	16,673	19,731									
2017	9,333	14,953	18,829										
2018	9,929	15,970											
2019	10,399												

B. Average Paid Indemnity per Closed Claim

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													21,840
2003												21,352	21,804
2004											17,040	17,524	17,964
2005										14,917	15,487	15,993	16,374
2006									15,779	16,536	17,219	17,701	18,157
2007								16,253	17,195	18,063	18,723	19,225	19,711
2008							17,002	18,254	19,240	19,975	20,637	21,163	
2009						16,400	18,101	19,448	20,403	21,212	21,950		
2010					14,683	16,708	18,412	19,627	20,474	21,187			
2011				12,232	14,924	16,888	18,408	19,546	20,410				
2012			9,146	12,589	15,144	17,050	18,343	19,387					
2013		5,342	9,556	12,986	15,445	17,104	18,240						
2014	2,131	5,630	10,179	13,784	16,343	17,936							
2015	2,340	6,177	10,887	14,485	16,884								
2016	2,493	6,545	11,027	14,468									
2017	2,591	6,644	11,132										
2018	2,872	7,019											
2019	3,113												

C. Annual Change of Average Paid Indemnity per Closed Claim

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2002													
2003													-0.2%
2004												-17.9%	-17.6%
2005											-9.1%	-8.7%	-8.8%
2006										10.9%	11.2%	10.7%	10.9%
2007									9.0%	9.2%	8.7%	8.6%	8.6%
2008								12.3%	11.9%	10.6%	10.2%	10.1%	
2009							6.5%	6.5%	6.0%	6.2%	6.4%		
2010						1.9%	1.7%	0.9%	0.3%	-0.1%			
2011					1.6%	1.1%	0.0%	-0.4%	-0.3%				
2012				2.9%	1.5%	1.0%	-0.4%	-0.8%					
2013			4.5%	3.2%	2.0%	0.3%	-0.6%						
2014		5.4%	6.5%	6.1%	5.8%	4.9%							
2015	9.8%	9.7%	7.0%	5.1%	3.3%								
2016	6.5%	6.0%	1.3%	-0.1%									
2017	3.9%	1.5%	1.0%										
2018	10.9%	5.7%											
2019	8.4%												

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

**Incurred Indemnity Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

D. Indemnity Case Reserves per Open Claim Adjusted by Paid Indemnity Severity Trend (a)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													47,071
2003												39,893	46,993
2004										28,031	28,031	32,740	38,717
2005										22,382	25,476	29,881	35,291
2006									22,173	24,812	28,324	33,072	39,133
2007								23,608	24,163	27,103	30,799	35,920	42,482
2008							21,954	26,515	27,036	29,972	33,947	39,541	
2009						20,458	23,373	28,248	28,671	31,828	36,106		
2010					18,894	20,842	23,775	28,508	28,770	31,789			
2011				16,683	19,205	21,066	23,770	28,391	28,680				
2012			15,469	17,169	19,487	21,269	23,686	28,161					
2013		12,154	16,162	17,710	19,875	21,337	23,554						
2014	7,120	12,810	17,216	18,798	21,030	22,374							
2015	7,816	14,053	18,414	19,755	21,727								
2016	8,328	14,891	18,651	19,731									
2017	8,654	15,115	18,829										
2018	9,594	15,970											
2019	10,399												

E. Indemnity Open Claim Counts

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													7,028
2003												7,616	6,670
2004											7,470	6,339	5,157
2005										7,817	6,384	5,096	4,157
2006									9,337	7,595	5,942	4,779	3,848
2007								11,269	8,862	6,752	5,260	4,212	3,320
2008							13,800	10,449	7,803	6,045	4,668	3,683	
2009						17,584	13,002	9,363	7,052	5,327	4,042		
2010					22,819	16,517	11,605	8,390	6,169	4,609			
2011				30,931	21,672	15,244	10,632	7,464	5,434				
2012			45,182	31,083	21,252	14,501	9,940	6,957					
2013		66,306	46,671	30,936	20,262	13,547	9,095						
2014	80,995	67,946	46,853	30,307	19,255	12,894							
2015	82,731	69,100	45,535	28,017	17,625								
2016	82,307	66,484	42,604	25,856									
2017	82,171	63,055	39,555										
2018	82,522	64,135											
2019	83,913												

F. Total Indemnity Case Reserves Adjusted by Paid Indemnity Severity Trend (in \$000) (b)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													330,822
2003												303,838	313,452
2004											209,390	207,547	199,666
2005										174,967	162,641	152,275	146,705
2006									207,022	188,450	168,307	158,053	150,585
2007								266,030	214,143	183,005	162,003	151,294	141,041
2008							302,978	277,058	210,964	181,180	158,464	145,628	
2009						359,724	303,903	264,491	202,188	169,546	145,942		
2010				431,157	344,248	275,908	239,186	177,484	146,516				
2011				516,010	416,201	321,133	252,724	211,914	155,848				
2012			698,930	533,655	414,141	308,417	235,436	195,914					
2013		805,887	754,290	547,889	402,701	289,047	214,221						
2014	576,673	870,378	806,644	569,726	404,935	288,493							
2015	646,657	971,046	838,502	553,465	382,930								
2016	685,465	990,007	794,589	510,170									
2017	711,098	953,073	744,770										
2018	791,700	1,024,227											
2019	872,600												

- (a) Latest evaluation of each accident year is unadjusted. Evaluations prior to the latest evaluation are determined by adjusting the latest accident year average indemnity case reserves by a different annual change applied at each individual accident year and maturity based on the change in paid losses per closed claim for that age and maturity (Item C)
- (b) Each amount is derived as the product of the indemnity open claim counts (Item E) and the adjusted average indemnity case reserves per open claim (Item D).
- Source: Accident year experience of insurers with available claim count data

**Incurred Indemnity Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

G. Paid Indemnity Loss on All Claims

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													4,684,245
2003												4,425,545	4,476,853
2004										3,057,334	3,101,655	3,135,355	
2005									2,370,527	2,419,539	2,455,625	2,487,514	
2006								2,408,402	2,471,921	2,517,278	2,557,909	2,589,327	
2007							2,475,108	2,555,457	2,624,824	2,676,307	2,718,337	2,753,934	
2008						2,482,226	2,583,865	2,655,111	2,716,084	2,764,247	2,804,601		
2009					2,251,453	2,386,697	2,490,876	2,567,842	2,626,204	2,680,729			
2010				2,121,098	2,308,352	2,446,776	2,540,160	2,609,064	2,667,565				
2011			1,854,349	2,110,271	2,291,910	2,419,938	2,519,359	2,587,950					
2012		1,548,223	1,945,868	2,211,052	2,404,799	2,527,398	2,616,744						
2013	1,039,468	1,663,918	2,093,893	2,363,619	2,533,548	2,645,666							
2014	346,992	1,112,287	1,820,535	2,286,288	2,580,265	2,764,101							
2015	370,818	1,216,216	1,967,544	2,446,747	2,738,176								
2016	391,984	1,268,200	2,011,854	2,475,132									
2017	410,067	1,306,272	2,049,971										
2018	446,982	1,389,895											
2019	474,399												

H. Adjusted Total Indemnity Incurred (in \$000) (c)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													5,015,068
2003											4,729,383	4,790,305	
2004										3,266,724	3,309,202	3,335,020	
2005									2,545,494	2,582,181	2,607,900	2,634,219	
2006								2,615,424	2,660,371	2,685,585	2,715,961	2,739,913	
2007							2,741,138	2,769,600	2,807,829	2,838,310	2,869,631	2,894,975	
2008						2,785,204	2,860,924	2,866,075	2,897,264	2,922,711	2,950,229		
2009					2,611,177	2,690,600	2,755,366	2,770,030	2,795,750	2,826,672			
2010				2,552,255	2,652,599	2,722,685	2,779,346	2,786,549	2,814,081				
2011			2,370,359	2,526,473	2,613,043	2,672,662	2,731,273	2,743,798					
2012		2,247,153	2,479,523	2,625,193	2,713,216	2,762,834	2,812,658						
2013	1,845,355	2,418,208	2,641,783	2,766,320	2,822,595	2,859,887							
2014	923,665	1,982,665	2,627,178	2,856,015	2,985,199	3,052,594							
2015	1,017,475	2,187,262	2,806,046	3,000,211	3,121,106								
2016	1,077,449	2,258,207	2,806,443	2,985,302									
2017	1,121,166	2,259,344	2,794,741										
2018	1,238,681	2,414,122											
2019	1,346,999												

I. Indemnity Incurred Loss Development Factors Based on Adjusted Total Indemnity Incurred

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												
2003												1.013
2004											1.013	1.008
2005										1.014	1.010	1.010
2006									1.017	1.009	1.011	1.009
2007								1.010	1.014	1.011	1.011	1.009
2008							1.027	1.002	1.011	1.009	1.009	
2009					1.030	1.024	1.005	1.009	1.011			
2010					1.039	1.026	1.021	1.003	1.010			
2011				1.066	1.034	1.023	1.022	1.005				
2012			1.103	1.059	1.034	1.018	1.018					
2013		1.310	1.092	1.047	1.020	1.013						
2014	2.147	1.325	1.087	1.045	1.023							
2015	2.150	1.283	1.069	1.040								
2016	2.096	1.243	1.064									
2017	2.015	1.237										
2018	1.949											
Latest Yea	1.949	1.237	1.064	1.040	1.023	1.013	1.018	1.005	1.010	1.011	1.009	1.009
3-Yr Avera	2.020	1.254	1.073	1.044	1.025	1.018	1.020	1.004	1.010	1.010	1.011	1.009

(c) Each amount is the sum of the adjusted total indemnity case reserves (Item F) and the total indemnity paid losses (Item G).

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

**Incurred Indemnity Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

J. Indemnity Incurred Loss Development Factors (d)

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												
2003												1.004
2004											1.006	1.003
2005										1.006	1.005	1.006
2006									1.009	1.007	1.004	1.005
2007								1.011	1.011	1.005	1.007	1.010
2008							1.019	1.012	1.009	1.006	1.007	
2009						1.023	1.019	1.014	1.009	1.011		
2010					1.042	1.026	1.016	1.012	1.013			
2011				1.056	1.037	1.022	1.018	1.012				
2012			1.106	1.064	1.041	1.023	1.016					
2013		1.247	1.109	1.054	1.032	1.022						
2014	1.920	1.279	1.114	1.059	1.030							
2015	1.969	1.260	1.101	1.049								
2016	1.941	1.246	1.097									
2017	1.911	1.243										
2018	1.906											

K. Impact of Adjustments to Common Case Reserve Level (e)

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												
2003												0.88%
2004											0.68%	0.46%
2005										0.88%	0.50%	0.45%
2006									0.80%	0.23%	0.74%	0.38%
2007								-0.11%	0.27%	0.63%	0.42%	-0.13%
2008							0.84%	-1.02%	0.14%	0.31%	0.23%	
2009						0.74%	0.45%	-0.90%	0.02%	-0.01%		
2010					-0.30%	0.05%	0.46%	-0.95%	-0.27%			
2011				0.96%	-0.22%	0.11%	0.37%	-0.74%				
2012			-0.23%	-0.47%	-0.71%	-0.49%	0.16%					
2013		5.06%	-1.52%	-0.69%	-1.10%	-0.81%						
2014	11.79%	3.56%	-2.43%	-1.30%	-0.70%							
2015	9.17%	1.83%	-2.91%	-0.79%								
2016	7.98%	-0.23%	-3.00%									
2017	5.45%	-0.45%										
2018	2.23%											

L. Indemnity Incurred Loss Development Factors Adjusted for Changes in Case Reserve Adequacy (f)

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												
2003												1.013
2004											1.014	1.008
2005										1.015	1.010	1.011
2006									1.017	1.009	1.011	1.009
2007								1.011	1.014	1.011	1.011	1.009
2008							1.028	1.002	1.010	1.009	1.009	
2009						1.032	1.024	1.005	1.009	1.011		
2010					1.042	1.027	1.021	1.002	1.009			
2011				1.071	1.035	1.023	1.022	1.004				
2012			1.110	1.058	1.034	1.018	1.018					
2013		1.323	1.094	1.048	1.021	1.013						
2014	2.191	1.324	1.088	1.045	1.023							
2015	2.149	1.283	1.069	1.041								
2016	2.096	1.243	1.064									
2017	2.015	1.237										
2018	1.949											
3-Year Average	2.020	1.255	1.074	1.045	1.026	1.018	1.020	1.004	1.010	1.010	1.011	1.009

(d) Development factors are from the same insurer mix as those which have been adjusted for case reserve level adequacy and applied in the calculation of the development factors in Item I.

(e) Each factor represents the change in age-to-age development factors from Item J to those in Item I.

(f) Each factor is the product of [1.0 + the impact of adjustments to common case reserve level (Item K)] and [the incurred indemnity age-to-age development factors from AC20-03-02, Exhibit 2.1.1].

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

**Incurred Medical Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

A. Medical Case Reserves Per Open Indemnity Claim

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													92,969
2003												87,069	88,378
2004											78,327	81,909	88,648
2005										73,010	76,309	86,305	88,737
2006									65,017	70,818	76,092	79,868	90,837
2007								60,319	68,802	76,154	88,306	93,725	106,075
2008							50,701	60,365	70,004	76,644	86,209	97,349	
2009						41,992	49,013	58,254	65,325	74,424	88,608		
2010					34,398	40,154	46,811	52,919	59,682	68,931			
2011				30,488	37,327	42,637	48,946	55,891	65,182				
2012			24,094	28,145	33,393	39,763	46,412	56,364					
2013		19,744	22,666	27,154	31,976	37,509	45,575						
2014	14,993	18,573	21,903	26,362	31,537	37,839							
2015	15,563	19,317	23,881	29,381	36,031								
2016	15,998	20,261	24,972	30,125									
2017	16,886	21,477	27,007										
2018	17,705	22,514											
2019	17,785												

B. Average Paid Medical Loss Per Closed Indemnity Claim (a)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													22,166
2003												20,860	21,595
2004											18,289	19,156	19,934
2005										17,965	19,077	20,056	20,764
2006									18,869	20,189	21,375	22,287	23,058
2007								19,989	21,643	23,143	24,212	25,144	26,027
2008							20,742	22,676	24,299	25,486	26,571	27,545	
2009						20,212	22,704	24,771	26,158	27,626	28,729		
2010					17,928	20,785	23,425	25,279	26,625	27,731			
2011				13,883	17,251	20,220	22,413	24,070	25,263				
2012			9,987	13,786	17,040	19,391	21,096	22,408					
2013		5,729	9,997	13,615	16,510	18,543	19,934						
2014	2,370	5,800	10,051	13,659	16,359	18,142							
2015	2,503	6,242	10,430	13,848	16,219								
2016	2,709	6,471	10,486	13,493									
2017	2,835	6,648	10,632										
2018	2,972	6,953											
2019	3,367												

C. Annual Change of Average Paid Medical per Closed Claim (b)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2002													
2003													-2.6%
2004												-8.2%	-7.7%
2005											4.3%	4.7%	4.2%
2006										12.4%	12.0%	11.1%	11.0%
2007									14.7%	14.6%	13.3%	12.8%	12.9%
2008								13.4%	12.3%	10.1%	9.7%	9.5%	
2009							9.5%	9.2%	7.7%	8.4%	8.1%		
2010						5.3%	5.2%	4.8%	4.5%	4.6%			
2011					3.7%	3.6%	2.9%	2.7%	2.6%				
2012				-2.2%	-2.8%	-3.8%	-4.1%	-4.4%					
2013			0.1%	-1.2%	-3.1%	-4.4%	-5.5%						
2014		1.2%	0.5%	0.3%	-0.9%	-2.2%							
2015	5.6%	7.6%	3.8%	1.4%	-0.9%								
2016	8.2%	3.7%	0.5%	-2.6%									
2017	4.6%	2.7%	1.4%										
2018	4.8%	4.6%											
2019	13.3%												

(a) Paid medical per closed claim severities for accident year 2010 and 2011 only reflect the paid cost of medical cost containment programs (MCCP) attributable to policies with effective dates prior to July 1, 2010.

(b) The annual changes for accident year 2010, 2011 and 2012 are based on paid medical per total claim for consistency and do not compare to the severities in item B.

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

**Incurred Medical Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

D. Medical Case Reserves per Open Claim Adjusted by Paid Medical Severity Trend (c)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													90,339
2003												73,725	88,011
2004											56,409	67,701	81,242
2005										42,846	58,839	70,882	84,625
2006									43,836	48,151	65,928	78,768	93,973
2007								44,208	50,279	55,196	74,678	88,866	106,075
2008							42,485	50,149	56,449	60,784	81,953	97,349	
2009						38,525	46,503	54,783	60,769	65,889	88,608		
2010					37,556	40,553	48,905	57,422	63,516	68,931			
2011				31,487	38,943	42,026	50,307	58,972	65,182				
2012			25,369	30,780	37,856	40,445	48,231	56,364					
2013		18,552	25,393	30,398	36,680	38,675	45,575						
2014	12,520	18,779	25,532	30,495	36,343	37,839							
2015	13,223	20,213	26,495	30,918	36,031								
2016	14,312	20,955	26,636	30,125									
2017	14,976	21,526	27,007										
2018	15,699	22,514											
2019	17,785												

E. Total Medical Case Reserves Adjusted by Paid Medical Severity Trend (in \$000) (d)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													634,922
2003												561,509	587,047
2004											421,377	429,167	418,974
2005										334,936	375,640	361,222	351,792
2006									409,278	365,721	391,754	376,435	361,608
2007								498,174	445,589	372,692	392,811	374,302	352,170
2008							586,310	524,014	440,477	367,440	382,558	358,535	
2009						677,400	604,647	512,941	428,543	350,991	358,153		
2010					856,991	669,820	567,539	481,768	391,828	317,705			
2011				973,928	843,984	640,647	534,861	440,171	354,200				
2012			1,146,201	956,744	804,509	586,494	479,416	392,125					
2013		1,230,125	1,185,107	940,393	743,201	523,933	414,504						
2014	1,014,015	1,275,988	1,196,251	924,222	699,776	487,901							
2015	1,093,923	1,396,751	1,206,442	866,238	635,047								
2016	1,177,952	1,393,139	1,134,790	778,921									
2017	1,230,589	1,357,316	1,068,253										
2018	1,295,494	1,443,929											
2019	1,492,418												

F. Paid Medical Loss on All Claims

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													5,228,217
2003												4,789,352	4,878,759
2004											3,751,193	3,840,952	3,908,499
2005										3,315,974	3,419,873	3,492,583	3,558,089
2006									3,371,562	3,486,484	3,573,170	3,646,143	3,700,639
2007								3,542,082	3,686,110	3,800,447	3,883,879	3,959,940	4,020,456
2008							3,476,376	3,653,078	3,781,564	3,884,023	3,955,052	4,021,333	
2009						3,180,482	3,392,806	3,548,718	3,663,174	3,750,409	3,827,179		
2010					2,978,552	3,261,460	3,478,316	3,623,894	3,729,043	3,820,429			
2011				2,445,280	2,801,507	3,073,865	3,256,406	3,393,006	3,492,409				
2012			1,976,084	2,457,319	2,804,144	3,046,646	3,216,179	3,341,181					
2013		1,379,136	2,017,923	2,491,220	2,812,394	3,025,244	3,171,494						
2014	571,472	1,429,479	2,089,809	2,558,745	2,865,835	3,082,618							
2015	597,466	1,513,420	2,177,265	2,650,739	2,945,665								
2016	636,460	1,578,568	2,225,604	2,663,183									
2017	690,162	1,637,485	2,278,379										
2018	732,758	1,742,292											
2019	729,710												

(c) Latest evaluation of each accident year is unadjusted. Evaluations prior to the latest evaluation are determined by adjusting the latest accident year average medical case reserves by a different annual change applied at each individual accident year and maturity based on the change in paid losses per closed claim for that age and maturity (Item C)

(d) Each amount is derived as the product of the indemnity open claim counts (Exhibit 3.2, Item E) and the adjusted average medical case reserves per open claim (Item D).

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

**Incurred Medical Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

G. Adjusted Total Medical Incurred (in \$000) (e)

Accident	Evaluated as of (in months)												
Year	12	24	36	48	60	72	84	96	108	120	132	144	156
2001													
2002													5,863,139
2003												5,350,860	5,465,807
2004										4,172,571		4,270,119	4,327,474
2005									3,650,910	3,795,513		3,853,805	3,909,881
2006								3,780,840	3,852,205	3,964,925		4,022,578	4,062,247
2007							4,040,257	4,131,699	4,173,138	4,276,690		4,334,242	4,372,626
2008						4,062,687	4,177,093	4,222,041	4,251,463	4,337,609		4,379,867	
2009					3,857,883	3,997,453	4,061,659	4,091,717	4,101,400	4,185,332			
2010				3,835,543	3,931,280	4,045,855	4,105,662	4,120,871	4,138,134				
2011			3,419,208	3,645,490	3,714,512	3,791,267	3,833,176	3,846,609					
2012		3,122,285	3,414,063	3,608,653	3,633,140	3,695,595	3,733,306						
2013	2,609,261	3,203,030	3,431,614	3,555,595	3,549,177	3,585,998							
2014	1,585,487	2,705,467	3,286,060	3,482,968	3,565,611	3,570,520							
2015	1,691,389	2,910,171	3,383,707	3,516,977	3,580,712								
2016	1,814,411	2,971,707	3,360,394	3,442,105									
2017	1,920,751	2,994,801	3,346,632										
2018	2,028,252	3,186,222											
2019	2,222,127												

H. Medical Incurred Loss Development Factors Based on Adjusted Total Medical Incurred

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												
2003												1.021
2004											1.023	1.013
2005										1.040	1.015	1.015
2006									1.019	1.029	1.015	1.010
2007								1.023	1.010	1.025	1.013	1.009
2008							1.028	1.011	1.007	1.020	1.010	
2009						1.036	1.016	1.007	1.002	1.020		
2010					1.025	1.029	1.015	1.004	1.004			
2011				1.066	1.019	1.021	1.011	1.004				
2012			1.093	1.057	1.007	1.017	1.010					
2013		1.228	1.071	1.036	0.998	1.010						
2014	1.706	1.215	1.060	1.024	1.001							
2015	1.721	1.163	1.039	1.018								
2016	1.638	1.131	1.024									
2017	1.559	1.117										
2018	1.571											
Latest Yea	1.571	1.117	1.024	1.018	1.001	1.010	1.010	1.004	1.004	1.020	1.010	1.009
3-Yr Avera	1.589	1.137	1.041	1.026	1.002	1.016	1.012	1.005	1.005	1.022	1.013	1.011

I. Medical Incurred Loss Development Factors (f)

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												
2003												1.003
2004											1.006	1.001
2005										1.005	1.006	0.999
2006									1.012	1.000	1.001	1.006
2007								1.018	1.004	1.008	1.001	1.004
2008							1.026	1.010	1.005	1.002	1.005	
2009						1.028	1.016	1.007	1.006	1.009		
2010					1.043	1.025	1.012	1.007	1.010			
2011				1.066	1.031	1.014	1.009	1.010				
2012			1.087	1.055	1.031	1.015	1.015					
2013		1.144	1.083	1.039	1.021	1.015						
2014	1.507	1.158	1.078	1.034	1.028							
2015	1.511	1.146	1.064	1.031								
2016	1.498	1.124	1.046									
2017	1.440	1.119										
2018	1.452											

(e) Each amount is the sum of the adjusted total medical case reserves (Item E) and the total medical paid losses (Item F).

(f) Development factors are from the same insurer mix as those which have been adjusted for case reserve level adequacy and applied in the calculation of the development factors in Item H.

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

**Incurred Medical Loss Development Factors
Adjusted for Changes in Case Reserve Adequacy**

J. Impact of Adjustments to Common Case Reserve Level (g)

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												
2003												1.85%
2004											1.78%	1.22%
2005										3.42%	0.88%	1.60%
2006									0.73%	2.90%	1.39%	0.43%
2007								0.50%	0.56%	1.69%	1.20%	0.47%
2008							0.23%	0.05%	0.24%	1.79%	0.46%	
2009						0.76%	0.02%	0.01%	-0.32%	1.11%		
2010					-1.71%	0.44%	0.32%	-0.35%	-0.57%			
2011				0.06%	-1.21%	0.63%	0.22%	-0.60%				
2012			0.57%	0.23%	-2.36%	0.22%	-0.49%					
2013		7.29%	-1.08%	-0.25%	-2.25%	-0.45%						
2014	13.22%	4.91%	-1.64%	-1.03%	-2.59%							
2015	13.87%	1.44%	-2.32%	-1.22%								
2016	9.35%	0.57%	-2.11%									
2017	8.28%	-0.10%										
2018	8.16%											

K. Medical Incurred Loss Development Factors Adjusted for Changes in Case Reserve Adequacy (h)

Accident	Age-to-Age Development (in months):											
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156
2002												1.022
2003												1.013
2004											1.024	1.015
2005										1.040	1.015	1.010
2006									1.019	1.029	1.015	1.009
2007								1.023	1.010	1.025	1.013	1.011
2008							1.028	1.010	1.007	1.020	1.010	
2009						1.038	1.016	1.007	1.003	1.020		
2010					1.027	1.029	1.015	1.004	1.004			
2011				1.070	1.022	1.022	1.012	1.005				
2012			1.098	1.058	1.007	1.017	1.011					
2013		1.234	1.074	1.036	0.999	1.010						
2014	1.724	1.216	1.061	1.024	1.001							
2015	1.721	1.162	1.039	1.018								
2016	1.638	1.130	1.024									
2017	1.559	1.118										
2018	1.571											
3-Year Average	1.589	1.137	1.042	1.026	1.002	1.017	1.013	1.006	1.005	1.022	1.013	1.011

(g) Each factor represents the change in age-to-age development factors from Item I to those in Item H.

(h) Each factor is the product of [1.0 + the impact of adjustments to common case reserve level (Item J)] and [the incurred Medical age-to-age development factors from AC20-03-02, Exhibit 2.2.1].

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

Developed Loss Ratio 3-Year Average Incurred Development Factors Adjusted for Changes in Average Case Reserve Levels Based on Experience as of December 31, 2019									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Incurred Loss Ratio Ex IBNR (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.274	1.009	1.031	0.282	0.406	1.011	1.040	0.422	0.704
2009	0.317	1.011	1.042	0.330	0.470	1.013	1.053	0.494	0.825
2010	0.301	1.010	1.052	0.317	0.449	1.022	1.076	0.484	0.801
2011	0.277	1.010	1.063	0.294	0.384	1.005	1.081	0.415	0.709
2012	0.245	1.004	1.067	0.262	0.325	1.006	1.087	0.354	0.615
2013	0.205	1.020	1.089	0.224	0.258	1.013	1.101	0.284	0.508
2014	0.192	1.018	1.109	0.213	0.225	1.017	1.119	0.252	0.465
2015	0.183	1.025	1.137	0.208	0.210	1.002	1.122	0.236	0.444
2016	0.166	1.044	1.187	0.197	0.192	1.026	1.151	0.221	0.418
2017	0.158	1.073	1.274	0.201	0.189	1.042	1.199	0.227	0.429
2018	0.139	1.254	1.598	0.221	0.183	1.137	1.364	0.249	0.471
2019	0.084	2.020	3.228	0.270	0.138	1.589	2.167	0.299	0.568

- (a) Based on AC20-03-02, Exhibit 1. 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. No adjustment has been made to MCCP costs in medical reserves.
- (b) Age-to-age factors for developing accident years 2008 to 2019 were adjusted for changes in indemnity case reserve levels based on 3-year average selections (see Exhibit 3.4, Item L).
- (c) Age-to-age factors for developing accident years 2008 to 2019 were adjusted for changes in medical case reserve levels based on 3-year average selections (see Exhibit 3.8, Item K).

Projected On-Level Accident Year Indemnity Loss to Industry Average Filed Pure Premium Ratios Using 3-Year Average Incurred Development Factors Adjusted for Changes in Average Case Reserve Levels Based on Experience as of December 31, 2019				
	(1)	(2)	(3)	(4)
Accident Year	Developed Indemnity Loss Ratio (a)	Composite Indemnity Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.282	1.375	1.293	0.300
2009	0.330	1.348	1.395	0.319
2010	0.317	1.323	1.268	0.331
2011	0.294	1.305	1.158	0.332
2012	0.262	1.289	1.031	0.327
2013	0.224	1.260	0.901	0.313
2014	0.213	1.154	0.830	0.296
2015	0.208	1.138	0.794	0.298
2016	0.197	1.123	0.821	0.270
2017	0.201	1.094	0.861	0.256
2018	0.221	1.063	0.903	0.261
2019	0.270	1.035	1.002	0.279
				Projected (d)
2020				0.263
4/1/2021				0.259

- (a) See Exhibit 3.9.
(b) Based on AC20-03-02, Exhibit 4.1.
(c) See AC20-03-02, Exhibit 5.2.
(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.2, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using 3-Year Average Incurred Development Factors
Adjusted for Changes in Average Case Reserve Levels
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)
Accident Year	Developed Medical Loss Ratio (a)	Composite Medical Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.797	1.293	0.260
2009	0.494	0.786	1.395	0.279
2010	0.484	0.784	1.268	0.299
2011	0.415	0.806	1.158	0.289
2012	0.354	0.841	1.031	0.289
2013	0.284	0.922	0.901	0.291
2014	0.252	0.968	0.830	0.294
2015	0.236	0.989	0.794	0.294
2016	0.221	0.987	0.821	0.266
2017	0.227	0.985	0.861	0.260
2018	0.249	1.009	0.903	0.279
2019	0.299	1.005	1.002	0.300
<hr/>				
				Projected (d)
2020				0.288
4/1/2021				0.287

- (a) See Exhibit 3.9.
- (b) Based on AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from AC20-03-02, Exhibit 6.4, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid M CCP costs. Accident years 2010 and prior do reflect paid M CCP costs. No adjustment has been made to M CCP costs in medical reserves.

**Developed Loss Ratio Unadjusted 3-Year Average Paid Development Factors
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Paid Loss Ratio (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Paid Loss Ratio (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.260	1.013	1.092	0.284	0.373	1.016	1.226	0.457	0.741
2009	0.301	1.016	1.109	0.333	0.429	1.019	1.249	0.536	0.870
2010	0.286	1.020	1.131	0.323	0.415	1.020	1.274	0.529	0.852
2011	0.261	1.023	1.156	0.302	0.349	1.025	1.306	0.455	0.758
2012	0.228	1.028	1.189	0.272	0.292	1.030	1.346	0.393	0.664
2013	0.190	1.038	1.234	0.235	0.229	1.041	1.401	0.320	0.555
2014	0.174	1.050	1.296	0.226	0.195	1.054	1.477	0.287	0.513
2015	0.161	1.077	1.396	0.224	0.173	1.080	1.595	0.275	0.500
2016	0.138	1.126	1.571	0.217	0.148	1.121	1.787	0.265	0.482
2017	0.116	1.244	1.954	0.227	0.129	1.214	2.169	0.280	0.506
2018	0.080	1.591	3.109	0.248	0.100	1.413	3.066	0.307	0.554
2019	0.029	3.176	9.875	0.291	0.045	2.410	7.390	0.335	0.625

- (a) Based on AC20-03-02, Exhibit 1. 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.
- (b) Age-to-age factors are selected as three-year averages based on AC20-03-02, Exhibit 2.5.
- (c) Age-to-age factors are selected as three-year averages based on AC20-03-02, Exhibit 2.6. These factors have not been adjusted for any reforms.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Paid Development Factors
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.272	1.289	1.031	0.340
2013	0.235	1.260	0.901	0.328
2014	0.226	1.154	0.830	0.314
2015	0.224	1.138	0.794	0.321
2016	0.217	1.123	0.821	0.296
2017	0.227	1.094	0.861	0.288
2018	0.248	1.063	0.903	0.292
2019	0.291	1.035	1.002	0.300
				Projected (d)
2020				0.289
4/1/2021				0.284

- (a) See Exhibit 4.1.
(b) Based on AC20-03-02, Exhibit 4.1.
(c) See AC20-03-02, Exhibit 5.2.
(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.2, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted 3-Year Average Paid Development Factors
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.457	0.797	1.293	0.282
2009	0.536	0.786	1.395	0.302
2010	0.529	0.784	1.268	0.327
2011	0.455	0.806	1.158	0.317
2012	0.393	0.841	1.031	0.321
2013	0.320	0.922	0.901	0.328
2014	0.287	0.968	0.830	0.335
2015	0.275	0.989	0.794	0.343
2016	0.265	0.987	0.821	0.319
2017	0.280	0.985	0.861	0.320
2018	0.307	1.009	0.903	0.343
2019	0.335	1.005	1.002	0.336
				Projected (d)
2020				0.338
4/1/2021				0.337

- (a) See Exhibit 4.1.
- (b) Based on AC20-03-02, Exhibit 4.1.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from AC20-03-02, Exhibit 6.4, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Developed Loss Ratio Unadjusted Latest Year Paid Development Factors
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Indemnity				Medical				
Accident Year	Reported Paid Loss Ratio (a)	Annual Development Factor (b)	Cumulative Development Factor	Developed Loss Ratio (1) x (3)	Reported Paid Loss Ratio (a)	Annual Development Factor (c)	Cumulative Development Factor	Developed Loss Ratio (5) x (7)	Total Developed Loss Ratio (4) + (8)
2008	0.260	1.013	1.092	0.284	0.373	1.016	1.226	0.457	0.741
2009	0.301	1.016	1.109	0.333	0.429	1.019	1.249	0.536	0.870
2010	0.286	1.020	1.131	0.323	0.415	1.020	1.274	0.529	0.852
2011	0.261	1.023	1.156	0.302	0.349	1.025	1.306	0.455	0.758
2012	0.228	1.027	1.188	0.271	0.292	1.029	1.344	0.392	0.664
2013	0.190	1.035	1.229	0.234	0.229	1.039	1.397	0.319	0.553
2014	0.174	1.044	1.283	0.223	0.195	1.048	1.464	0.285	0.508
2015	0.161	1.071	1.374	0.221	0.173	1.076	1.575	0.272	0.493
2016	0.138	1.119	1.538	0.212	0.148	1.111	1.750	0.259	0.471
2017	0.116	1.230	1.891	0.219	0.129	1.197	2.095	0.270	0.489
2018	0.080	1.569	2.968	0.237	0.100	1.391	2.913	0.291	0.528
2019	0.029	3.109	9.227	0.272	0.045	2.378	6.928	0.314	0.585

- (a) Based on AC20-03-02, Exhibit 1. 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.
- (b) Age-to-age factors are selected as latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors based on AC20-03-02, Exhibit 2.5.
- (c) Age-to-age factors are selected as latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors based on AC20-03-02, Exhibit 2.6.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Paid Development Factors
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.223	1.154	0.830	0.310
2015	0.221	1.138	0.794	0.316
2016	0.212	1.123	0.821	0.290
2017	0.219	1.094	0.861	0.279
2018	0.237	1.063	0.903	0.279
2019	0.272	1.035	1.002	0.281
				Projected (d)
2020				0.273
4/1/2021				0.268

- (a) See Exhibit 5.1.
(b) Based on AC20-03-02, Exhibit 4.1.
(c) See AC20-03-02, Exhibit 5.2.
(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.2, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Unadjusted Latest Year Paid Development Factors
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.457	0.797	1.293	0.282
2009	0.536	0.786	1.395	0.302
2010	0.529	0.784	1.268	0.327
2011	0.455	0.806	1.158	0.317
2012	0.392	0.841	1.031	0.320
2013	0.319	0.922	0.901	0.327
2014	0.285	0.968	0.830	0.332
2015	0.272	0.989	0.794	0.339
2016	0.259	0.987	0.821	0.312
2017	0.270	0.985	0.861	0.309
2018	0.291	1.009	0.903	0.326
2019	0.314	1.005	1.002	0.315
				Projected (d)
2020				0.319
4/1/2021				0.318

- (a) See Exhibit 5.1.
- (b) Based on AC20-03-02, Exhibit 4.1.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from AC20-03-02, Exhibit 6.4, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

Developed Loss Ratios Adjusted for the Impact of SB 1160
Based on Paid Latest Year Selections
Based on Experience as of December 31, 2019

	(1)	(2)	(3)	(4)
		Medical		
		Adjusted		
Accident Year	Paid Loss Ratio (a)	Development Factors		Developed Loss Ratio
		Annual (b)	Cumulative (b)	(1) x (3)
2008	0.341	1.018	1.239	0.422
2009	0.397	1.021	1.264	0.502
2010	0.385	1.022	1.292	0.498
2011	0.326	1.027	1.328	0.433
2012	0.276	1.032	1.370	0.378
2013	0.218	1.043	1.429	0.312
2014	0.189	1.052	1.489	0.281
2015	0.170	1.080	1.596	0.271
2016	0.147	1.114	1.758	0.258
2017	0.129	1.199	2.080	0.267
2018	0.100	1.393	2.897	0.290
2019	0.045	2.378	6.890	0.312

- (a) Based on AC20-03-02, Exhibit 1. 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.
- (b) Based on AC20-03-02, Exhibit 2.6.1 and includes adjustments for SB 1160. Does not reflect any adjustment for changes in claim settlement rates.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Using Adjusted for the Impact of SB 1160
Based on Paid Latest Year Selections**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.281	0.987	0.830	0.334
2015	0.271	1.005	0.794	0.343
2016	0.258	1.006	0.821	0.317
2017	0.267	1.008	0.861	0.313
2018	0.290	1.009	0.903	0.324
2019	0.312	1.005	1.002	0.313
				Projected (d)
2020				0.317
4/1/2021				0.316

- (a) See Exhibit 6.1.
- (b) Based on AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from AC20-03-02, Exhibit 6.4, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Developed Loss Ratios Adjusted for the Impact of Reforms and Changes in Claim Settlement Rates
Based on 3-Year Average Selections
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Indemnity				Medical					
					Adjusted					
Accident	Reported	Annual	Cumulative	Developed	Paid	Paid	Annual	Cumulative	Developed	Total
Year	Loss Ratio (a)	Factor (b)	Factor	Loss Ratio	Loss Ratio (a)	Loss Ratio (c)	Factor (d)	Factor	Loss Ratio	Developed
				(1) x (3)					(6) x (8)	(4) + (9)
2008	0.260	1.013	1.092	0.284	0.373	0.341	1.018	1.239	0.422	0.706
2009	0.301	1.016	1.109	0.333	0.429	0.397	1.021	1.264	0.502	0.835
2010	0.286	1.020	1.131	0.323	0.415	0.385	1.022	1.292	0.498	0.820
2011	0.261	1.023	1.156	0.302	0.349	0.326	1.027	1.328	0.433	0.736
2012	0.228	1.027	1.188	0.271	0.292	0.276	1.032	1.370	0.378	0.649
2013	0.190	1.035	1.229	0.234	0.229	0.218	1.043	1.429	0.312	0.545
2014	0.174	1.043	1.282	0.223	0.195	0.189	1.051	1.488	0.281	0.504
2015	0.161	1.059	1.358	0.218	0.173	0.170	1.070	1.579	0.268	0.486
2016	0.138	1.105	1.500	0.207	0.148	0.147	1.109	1.733	0.255	0.461
2017	0.116	1.219	1.830	0.212	0.129	0.129	1.202	2.055	0.264	0.476
2018	0.080	1.585	2.901	0.231	0.100	0.100	1.419	2.916	0.292	0.523
2019	0.029	3.185	9.240	0.272	0.045	0.045	2.424	7.069	0.320	0.592

- (a) Based on AC20-03-02, Exhibit 1. 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.
- (b) Age-to-age factors for developing accident years 2014 to 2019 were adjusted for changes in claim settlement rates based on 3-year average selections (see AC20-03-02, Exhibit 2.5.8, Item Q).
- (c) See AC20-03-02, Exhibit 3.2, Column (2).
- (d) Based on AC20-03-02, Exhibits 2.6.1 and includes adjustments for SB 1160. Age-to-age factors for developing accident years 2014 to 2019 were adjusted for changes in claim settlement rates based on 3-year average selections (see AC20-03-02, Exhibit 2.6.8, Item R).

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Adjusted for the Impact of Reforms and Changes in Claim Settlement Rates
Based on 3-Year Average Selections
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)
Accident Year	Developed Indemnity Loss Ratio (a)	Composite Indemnity Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.223	1.154	0.830	0.310
2015	0.218	1.138	0.794	0.312
2016	0.207	1.123	0.821	0.283
2017	0.212	1.094	0.861	0.270
2018	0.231	1.063	0.903	0.272
2019	0.272	1.035	1.002	0.281
				Projected (d)
2020				0.270
4/1/2021				0.266

(a) See Exhibit 7.1.

(b) Based on AC20-03-02, Exhibit 4.1.

(c) See AC20-03-02, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.2, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Adjusted for the Impact of Reforms and Changes in Claim Settlement Rates
Based on 3-Year Average Selections
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)
Accident Year	Developed Medical Loss Ratio (a)	Composite Medical Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.281	0.987	0.830	0.334
2015	0.268	1.005	0.794	0.339
2016	0.255	1.006	0.821	0.312
2017	0.264	1.008	0.861	0.309
2018	0.292	1.009	0.903	0.326
2019	0.320	1.005	1.002	0.321
				Projected (d)
2020				0.322
4/1/2021				0.321

- (a) See Exhibit 7.1.
- (b) Based on AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual medical severity trend from AC20-03-02, Exhibit 6.4, the actual frequency trend for accident year 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 to 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Severity Trends
Applied to Accident Year 2019
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)
Accident Year	Developed Indemnity Loss Ratio (a)	Composite Indemnity Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.222	1.154	0.830	0.309
2015	0.217	1.138	0.794	0.311
2016	0.206	1.123	0.821	0.282
2017	0.210	1.094	0.861	0.267
2018	0.226	1.063	0.903	0.266
2019	0.259	1.035	1.002	0.268
				Projected (d)
2020				0.261
4/1/2021				0.257

(a) See AC20-03-02, Exhibit 3.1.

(b) See AC20-03-02, Exhibit 4.1.

(c) See AC20-03-02, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.2, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2019 on-level ratio.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Severity Trends
Applied to Accident Year 2019
Based on Experience as of December 31, 2019**

	(1)	(2)	(3)	(4)
Accident Year	Developed Medical Loss Ratio (a)	Composite Medical Adjustment Factor (b)	Composite Premium Adjustment Factor (c)	On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.280	0.987	0.830	0.332
2015	0.267	1.005	0.794	0.338
2016	0.252	1.006	0.821	0.308
2017	0.258	1.008	0.861	0.302
2018	0.279	1.009	0.903	0.312
2019	0.301	1.005	1.002	0.302
				Projected (d)
2020				0.298
4/1/2021				0.297

- (a) See AC20-03-02, Exhibit 3.2.
- (b) See AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated annual indemnity severity trend from AC20-03-02, Exhibit 6.4, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2019 on-level ratio.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Long-Term Severity Trends
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.222	1.154	0.830	0.309
2015	0.217	1.138	0.794	0.311
2016	0.206	1.123	0.821	0.282
2017	0.210	1.094	0.861	0.267
2018	0.226	1.063	0.903	0.266
2019	0.259	1.035	1.002	0.268
				Projected (d)
2020				0.265
4/1/2021				0.263

(a) See AC20-03-02, Exhibit 3.1.

(b) See AC20-03-02, Exhibit 4.1.

(c) See AC20-03-02, Exhibit 5.2.

(d) These on-level ratios were projected based on the 1990-2019 annual indemnity severity trend of 1.2%, the actual frequency change for 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Long-Term Severity Trends
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.280	0.987	0.830	0.332
2015	0.267	1.005	0.794	0.338
2016	0.252	1.006	0.821	0.308
2017	0.258	1.008	0.861	0.302
2018	0.279	1.009	0.903	0.312
2019	0.301	1.005	1.002	0.302
				Projected (d)
2020				0.324
4/1/2021				0.332

- (a) See AC20-03-02, Exhibit 3.2.
- (b) See AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on the 1990-2019 annual medical severity trend of 5.5%, the actual frequency change for 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCC costs. Accident years 2010 and prior do reflect paid MCCC costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Short-Term Severity Trends
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.222	1.154	0.830	0.309
2015	0.217	1.138	0.794	0.311
2016	0.206	1.123	0.821	0.282
2017	0.210	1.094	0.861	0.267
2018	0.226	1.063	0.903	0.266
2019	0.259	1.035	1.002	0.268
				Projected (d)
2020				0.257
4/1/2021				0.251

(a) See AC20-03-02, Exhibit 3.1.

(b) See AC20-03-02, Exhibit 4.1.

(c) See AC20-03-02, Exhibit 5.2.

(d) These on-level ratios were projected based on the 2015-2019 annual indemnity severity trend of -1.0%, the actual frequency change for 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Short-Term Severity Trends
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.280	0.987	0.830	0.332
2015	0.267	1.005	0.794	0.338
2016	0.252	1.006	0.821	0.308
2017	0.258	1.008	0.861	0.302
2018	0.279	1.009	0.903	0.312
2019	0.301	1.005	1.002	0.302
				Projected (d)
2020				0.299
4/1/2021				0.294

- (a) See AC20-03-02, Exhibit 3.2.
- (b) See AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on the 2015-2019 annual medical severity trend of 0.0%, the actual frequency change for 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Severity Trends
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.222	1.154	0.830	0.309
2015	0.217	1.138	0.794	0.311
2016	0.206	1.123	0.821	0.282
2017	0.210	1.094	0.861	0.267
2018	0.226	1.063	0.903	0.266
2019	0.259	1.035	1.002	0.268
				Projected (d)
2020				0.258
4/1/2021				0.254

(a) See AC20-03-02, Exhibit 3.1.

(b) See AC20-03-02, Exhibit 4.1.

(c) See AC20-03-02, Exhibit 5.2.

(d) These on-level ratios were projected based on an estimated indemnity severity trend of -0.5%, the actual frequency change for 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Separate Applications of Frequency and Severity Trends
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.280	0.987	0.830	0.332
2015	0.267	1.005	0.794	0.338
2016	0.252	1.006	0.821	0.308
2017	0.258	1.008	0.861	0.302
2018	0.279	1.009	0.903	0.312
2019	0.301	1.005	1.002	0.302
				Projected (d)
2020				0.311
4/1/2021				0.312

- (a) See AC20-03-02, Exhibit 3.2.
- (b) See AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected based on an estimated medical severity trend of 2.5%, the actual frequency change for 2019 from AC20-03-02, Exhibit 12, and projected frequency trends for accident years 2020 and 2021 from AC20-03-02, Exhibit 6.1; these trends were then separately applied to the 2018 and 2019 on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid M CCP costs. Accident years 2010 and prior do reflect paid M CCP costs.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Long-Term Exponential Loss Ratio Trend
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
1990	0.400	1.197	1.556	0.307
1991	0.427	0.986	1.407	0.299
1992	0.352	1.039	1.282	0.286
1993	0.289	1.262	1.237	0.295
1994	0.330	1.319	1.401	0.310
1995	0.476	1.221	1.840	0.316
1996	0.534	1.141	1.903	0.320
1997	0.605	1.022	1.848	0.334
1998	0.657	0.943	1.856	0.334
1999	0.692	0.873	1.763	0.343
2000	0.598	0.815	1.395	0.350
2001	0.496	0.816	1.193	0.339
2002	0.369	0.836	0.919	0.336
2003	0.244	0.833	0.654	0.311
2004	0.146	1.141	0.588	0.283
2005	0.125	1.546	0.651	0.297
2006	0.162	1.519	0.838	0.294
2007	0.224	1.465	1.071	0.306
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.222	1.154	0.830	0.309
2015	0.217	1.138	0.794	0.311
2016	0.206	1.123	0.821	0.282
2017	0.210	1.094	0.861	0.267
2018	0.226	1.063	0.903	0.266
2019	0.259	1.035	1.002	0.268
				Projected (d)
2020				0.266
4/1/2021				0.265

(a) See AC20-03-02, Exhibit 3.1.

(b) See AC20-03-02, Exhibit 4.1.

(c) See AC20-03-02, Exhibit 5.2.

(d) These on-level ratios were projected by separately applying an exponential trend of approximately -0.3% based on the 1990 to 2019 on-level indemnity to industry average filed pure premium ratios to each of the 2018 and 2019 on-level indemnity to industry average filed pure premium ratios. Each stated projection is equal to the average of the corresponding trended on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Long-Term Exponential Loss Ratio Trend
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)	(5) On-Level Medical to Industry Average Filed Pure Premium Ratio (f)
1990	0.376	0.608	1.556	0.147	0.147
1991	0.394	0.520	1.407	0.146	0.146
1992	0.328	0.549	1.282	0.140	0.140
1993	0.273	0.657	1.237	0.145	0.145
1994	0.317	0.688	1.401	0.156	0.156
1995	0.466	0.679	1.840	0.172	0.172
1996	0.498	0.669	1.903	0.175	0.175
1997	0.560	0.663	1.848	0.201	0.201
1998	0.676	0.585	1.856	0.213	0.213
1999	0.661	0.506	1.763	0.190	0.190
2000	0.601	0.465	1.395	0.200	0.200
2001	0.537	0.424	1.193	0.191	0.191
2002	0.419	0.441	0.919	0.201	0.201
2003	0.270	0.462	0.654	0.191	0.191
2004	0.185	0.699	0.588	0.220	0.220
2005	0.183	0.812	0.651	0.228	0.228
2006	0.237	0.853	0.838	0.242	0.242
2007	0.336	0.837	1.071	0.263	0.263
2008	0.422	0.831	1.293	0.271	0.271
2009	0.502	0.820	1.395	0.295	0.295
2010	0.498	0.817	1.268	0.321	0.321
2011	0.433	0.831	1.158	0.311	0.341
2012	0.378	0.869	1.031	0.318	0.348
2013	0.312	0.944	0.901	0.326	0.358
2014	0.280	0.987	0.830	0.332	0.364
2015	0.267	1.005	0.794	0.338	0.369
2016	0.252	1.006	0.821	0.308	0.336
2017	0.258	1.008	0.861	0.302	0.330
2018	0.279	1.009	0.903	0.312	0.343
2019	0.301	1.005	1.002	0.302	0.332

Projected (d)

2020	0.324
4/1/2021	0.333

- (a) See AC20-03-02, Exhibit 3.2.
- (b) See AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected by separately applying an exponential trend of approximately 3.6% based on the 1990 to 2019 on-level medical to industry average filed pure premium ratios (including MCCP costs) to each of the 2018 and 2019 on-level indemnity to industry average filed pure premium ratios. Each stated projection is equal to the average of the corresponding trended on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.
- (f) Medical costs include the MCCP cost for all accident years for selecting the loss ratio trend.

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Short-Term Exponential Loss Ratio Trend
Based on Experience as of December 31, 2019**

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) x (2) ÷ (3)
2008	0.284	1.375	1.293	0.302
2009	0.333	1.348	1.395	0.322
2010	0.323	1.323	1.268	0.337
2011	0.302	1.305	1.158	0.341
2012	0.271	1.289	1.031	0.339
2013	0.234	1.260	0.901	0.327
2014	0.222	1.154	0.830	0.309
2015	0.217	1.138	0.794	0.311
2016	0.206	1.123	0.821	0.282
2017	0.210	1.094	0.861	0.267
2018	0.226	1.063	0.903	0.266
2019	0.259	1.035	1.002	0.268
				Projected (d)
2020				0.253
4/1/2021				0.247

- (a) See AC20-03-02, Exhibit 3.1.
- (b) See AC20-03-02, Exhibit 4.1.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected by separately applying an exponential trend of approximately -3.5% based on the 2015 to 2019 on-level indemnity to industry average filed pure premium ratios to each of the 2018 and 2019 on-level indemnity to industry average filed pure premium ratios. Each stated projection is equal to the average of the corresponding trended on-level ratios.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Short-Term Exponential Loss Ratio Trend
Based on Experience as of December 31, 2019**

Accident Year	(1) Developed Medical Loss Ratio (a)	(2) Composite Medical Adjustment Factor (b)	(3) Composite Premium Adjustment Factor (c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1) x (2) ÷ (3)
2008	0.422	0.831	1.293	0.271
2009	0.502	0.820	1.395	0.295
2010	0.498	0.817	1.268	0.321
2011	0.433	0.831	1.158	0.311
2012	0.378	0.869	1.031	0.318
2013	0.312	0.944	0.901	0.326
2014	0.280	0.987	0.830	0.332
2015	0.267	1.005	0.794	0.338
2016	0.252	1.006	0.821	0.308
2017	0.258	1.008	0.861	0.302
2018	0.279	1.009	0.903	0.312
2019	0.301	1.005	1.002	0.302
				Projected (d)
2020				0.297
4/1/2021				0.293

- (a) See AC20-03-02, Exhibit 3.2.
- (b) See AC20-03-02, Exhibit 4.4.
- (c) See AC20-03-02, Exhibit 5.2.
- (d) These on-level ratios were projected by separately applying an exponential trend of approximately -2.1% based on the 2015 to 2019 on-level medical to industry average filed pure premium ratios to each of the 2018 and 2019 on-level indemnity to industry average filed pure premium ratios. Each stated projection is equal to the average of the corresponding trended on-level ratios.
- (e) Accident years 2011 and subsequent do not reflect paid MCCP costs. Accident years 2010 and prior do reflect paid MCCP costs.

Item AC20-04-03 2021 Experience Rating Plan Changes

In 2020, staff is beginning a multi-phase evaluation of experience rating. The first phase of this research, which is detailed below, is to update the credibility methodology for determination of D-ratios as well as the expected loss ranges that determine the primary thresholds used to calculate experience modifications using the most current experience available. As part of this phase, staff will also validate that the updated findings are consistent with earlier research that led to the implementation of the current variable split plan that originally became effective in 2017.

Future research phases include revisiting the eligibility threshold for experience rating, studying the efficacy of experience rating as a safety incentive and evaluating potential alternative plan structures for employers near or below the current eligibility threshold.

Background

In 2013, WCIRB staff began a multi-year research effort to enhance the efficacy of the experience rating plan. At the time, the California Experience Rating Plan included a single primary threshold of \$7,000. Earlier, as part of the January 1, 2013 Regulatory Filing process, the WCIRB had updated the credibility values for the plan and found that 100% primary credibility was indicated for eligible employers of all sizes, suggesting that the \$7,000 single threshold may have been too low. Further, WCIRB research found that by varying the primary threshold based on the employer's size, as measured by the three-year expected losses, plan predictive accuracy was significantly increased, plan volatility was reduced and the plan formula could be dramatically simplified. As a result, the WCIRB filed and the Insurance Commissioner approved a variable split experience rating plan to be effective January 1, 2017 with primary thresholds ranging from \$4,500 to \$75,000.

To address concerns that some employers may not be fully reporting small claims, the experience rating plan was further updated effective in 2019 to exclude the first \$250 of all claims. At this time, the experience rating formula and experience rating worksheet were both simplified to no longer reference primary and excess credibility values.

D-Ratio Credibilities

Currently, classification expected loss rates and D-ratios by classification are updated annually as part of the WCIRB's regulatory filing process. The D-ratios are estimates of the share of each classification's limited (to \$175,000) losses below a primary threshold and are used in conjunction with classification expected loss rates to calculate expected losses below the primary threshold (expected primary losses). Currently, D-ratios are promulgated for each classification at each of ninety-two primary thresholds ranging from \$4,500 to \$75,000.

The promulgated D-ratios are calculated using the most recent available unit statistical data. Since some classifications have limited statistical experience, the final values are credibility-weighted empirical classification D-ratios, using empirical retro hazard group (RHG) D-ratios as the complement of credibility.

To evaluate the D-ratio credibility process, staff reviewed hindsight actual D-ratios for the three-year experience periods used in policy year 2010 through 2014 experience modifications. Prior to 2017, the D-ratio credibility formula was based on a limited fluctuation methodology with a single K of 411, in which N is the number of indemnity claims for the experience period. With the transition to a variable primary threshold plan, a shifted log-logistic curve was used to fit the relationship across the policy years and classification size. During that process, staff explored a number of alternative selections for full credibility and the 95th percentile of this curve was selected as the value of coefficient of variation corresponding to full credibility. This process was performed for each of the ninety-two primary thresholds.

The expected volatility for a fully credible classification was then used to determine indicated credibilities as (full credibility D-ratio CV/ classification D-ratio CV). Under this construct, about one-quarter to one-third of classifications are expected to have fully credible D-ratios for their three-year experience periods, varying by the amount of the primary threshold. The constant of 411 used prior to 2017 was derived using this process, but only for the single threshold value of \$7,000.

To retrospectively test the results of this approach in this current update, staff applied this methodology, using data from the three-year experience periods used to project the five policy years 2013 through 2017 experience modifications. Using this data, some indicated credibility constants were much higher than the current values. Furthermore, the pattern of indicated credibility constants across primary thresholds was inconsistent with the current values. Staff then applied the current methodology to all available five projection year periods. The indicated credibility constants and coefficient of variation of the aggregate D-ratio for the seventeen five projection year periods from 1997-2001 through 2013-2017 were inconsistent over time and are shown in Exhibit 1.

Staff found that indications using the current methodology were extremely sensitive to the selection of the coefficient of variation used as a full credibility standard. Additionally, staff viewed the use of the 95th percentile as problematic since the use of the 90th or 100th percentile are equally justifiable and would result in significantly different indications. Given the issues with applying the methodology used in prior analyses to the current set of data, staff revisited the credibility calculation altogether.

As mentioned, the current methodology uses limited fluctuation credibility, which assumes the volume of data is sufficient for the central limit theorem to apply. Staff investigated the use of Bühlmann credibility. This type of credibility does not make distributional assumptions about the underlying data. Additionally, it is the best least squares linear predictor.

Bühlmann credibility takes the form $\frac{N}{N+K}$, where N is the number of observations and K is a constant term. The constant term K is determined by the relationship between the in-group and between-group variance of the underlying data. Specifically, the constant is the ratio of the expected value of the process variance (EPV) to the variance of the hypothetical mean (VHM), or $K = \frac{EPV}{VHM}$.

In order to apply this method, the D-ratio was computed for each claim in the underlying experience. The mean and variance of each classification's D-ratio distribution were then used to calculate EPV and VHM. If we were computing a severity distribution, each claim observation would contribute equally to the classification mean. However, D-ratios from individual claims do not contribute equally to the classification D-ratio. Here, each claim must be weighted by its losses, limited to \$175,000 with the first \$250 removed. Claims with incurred values below \$250 are excluded from the calculation. Each claim's weight can be equivalently expressed as limited losses relative to the aggregate mean limited losses. Staff preferred this representation as the sum of the weights is equal to the total claim count.

The weighted means from each classification were used to calculate EPV and VHM. The EPV was calculated as the weighted mean of the classification weighted variances and the VHM was calculated as the weighted variance of the classification weighted means. The resulting ratio represents a total claim count. Staff used the relative severity of indemnity claims to adjust the resulting constants so that they represent indemnity claim counts. This was done to prevent a classification with few indemnity claims and a high number of medical-only claims from receiving too much credibility.

Staff used this method to calculate credibility constants for all available projection years and for all current primary thresholds, as well as for thresholds as low as \$2,000 and as high as \$170,000 in order to investigate patterns over time and across thresholds. For all projection years, the pattern of credibility constants by primary threshold was both extremely smooth and consistent over time. These results are shown in Exhibit 2.

The indicated credibility constants for any primary threshold will vary over time as the in-class and between-class variability of the data changes. Changes in the credibility constants over time were consistent across primary thresholds. The annual indicated constants for select primary thresholds are shown in Exhibit 3.

When credibility constants are high, the underlying data is less believable. With this methodology this happens if EPV is high, VHM is low, or both. When EPV is high, the loss distribution of a typical class is highly variable and this method gives more weight to the complement. When VHM is low, D-ratios do not differ much by classification and again this method gives more weight to the complement. Graphs of EPV and VHM over time are shown in Exhibit 4. The changes in Exhibit 3 are directly caused by changes in the relationship between EPV and VHM.

The credibilities resulting from the current formula and the Bühlmann indications are shown for select primary thresholds in Exhibit 5 for the most recent projection year. The Bühlmann credibility is typically higher than the current values, except for high indemnity counts.

Since each classification will have a different credibility for each primary threshold, it is mathematically possible for a classification's calculated D-ratio to decrease from one primary threshold to the next. Staff calculated pro-forma D-ratios for all classifications, projection years, and primary thresholds and no such reversals occurred.

Since the updated method generally increases credibility, there is a chance that medium-sized classifications with data that is materially different from their complement could experience large changes in D-ratios. Staff confirmed that changes for large classifications are immaterial and that changes in D-ratios for medium-sized classifications are not biased upward or downward. The distribution of changes in D-ratios due to the methodology is shown for select primary thresholds in Exhibit 6.

Staff considered smoothing the indicated constants for any projection year across primary thresholds. However, since the results of the methodology were already so smooth, staff saw no benefit in adding an unnecessary step to the process. Staff is recommending the use of this credibility approach for experience rating D-ratios beginning in 2021.

Update to Primary Thresholds

In developing the initial variable split plan's optimal primary thresholds by employer size, staff calculated the maximum efficiency¹ indicated primary threshold for projection policy years 2010 through 2013, using primary credibility of 100% and excess credibility of 0% for employers of all sizes.² The optimal primary threshold was calculated for 28 expected loss cohorts of employers. The optimization of the primary threshold for each cohort and projection year was performed independently. The results of these optimizations were then smoothed with a cubic function using the log of the four-year median optimal primary threshold as the independent (y) variable and the log of the four-year median expected losses as the independent (x) variable. The smoothed values were used to determine the ranges of expected losses corresponding to each of the ninety-two possible primary thresholds published in the Experience Rating Plan.

Staff began this current update of the expected loss ranges for primary thresholds by validating that previous research findings still held. This updated study used data for 21 policy projection years, ranging from 1997 to 2017. For this study, staff expanded the set of employers from 28 cohorts totaling 100,000 employers per year to 38 cohorts totaling 150,000 employers. Many of these additional employers were of insufficient size to qualify for experience rating under the current eligibility threshold. Including the experience of these employers was intended to determine whether patterns were consistent for

¹ Efficiency is measured as the reduction in squared error between any potential experience modification and loss ratios for the projection year, measured against a modification of 100%. Efficiencies are calculated by cohort with each observation contributing equal weight.

² See Item AC14-06-02 of the June 11, 2014 WCIRB Actuarial Committee and the corresponding minutes for more information.

employers with expected loss levels below the current eligibility standards as part of the intended evaluation of experience rating eligibility later this year. Staff also increased the number of tested primary thresholds. On the low end, thresholds as low as \$2,000 were tested. On the high end, thresholds as high as \$170,000 were tested. These thresholds were added to ensure that results were not breaking down for the smallest and largest employers. For policy projection years that were previously tested, the previous and updated databases are largely the same. They differ slightly in that the D-ratio credibility procedure recommended above was used for the updated analysis.

Staff began by finding the primary and excess credibility values that maximized efficiency for each projection year, cohort and primary threshold. This model allows the primary threshold, primary credibility, and excess credibility to take any value (not restricted to be between 0 and 1) and does not require any relationship between primary and excess credibility or for credibility values or primary thresholds to follow a pattern by employer size. This model will be referred to as the saturated model. Updated findings were consistent with prior results, with smoothly increasing indicated primary thresholds, 100% indicated primary credibilities, and 0% indicated excess credibilities. These results are shown in Exhibit 7.

The next step was to find maximum efficiency indicated primary thresholds with 100% primary credibility and 0% excess credibility. This process simply involves calculating the efficiency for each subset using the simplified experience modification formula and the appropriate actual primary and expected excess losses. These indications follow a smooth pattern for all studied projection years and are shown in Exhibit 8.

To determine the final indicated primary thresholds, staff again smoothed these results across cohorts using four-year median values of expected losses and the indicated primary threshold by cohort. This mitigates the impact of both atypical years and outlier cohort results in the determination of the final expected loss ranges. To smooth the primary thresholds for the initial implementation of the variable split plan effective in 2017, a cubic fit was used as it better smoothed the results for the single four-year period that was parameterized. After examining the data for all available four-year periods, staff recommends a logistic curve as more appropriate for this update. The cubic fit adds a very small increase in fit, which does not justify the additional parameter (3 for the logistic curve vs. 4 for the cubic curve). Additionally, using a cubic curve does not allow for extrapolation as the value can grow or decrease without bound as expected losses increase. The logistic curve has a lower asymptote of zero by definition and an upper asymptote equaling the fitted parameter K. This would be the primary threshold as expected losses get arbitrarily large. The four-year median and smoothed values are shown in Exhibit 9. The current and most recent available expected loss ranges for the current primary thresholds are shown in Exhibit 10.

During the process of determining the credibility values that maximize efficiency, staff tried multiple algebraically equivalent specifications of the modification formula to find the method that could be optimized the fastest, given the volume of years, cohorts, and thresholds to be tested. While testing one of these specifications, primary and excess credibilities were not restricted to be between 0% and 100%. In the resulting parameterizations, it was not uncommon to find primary credibility greater than 100% and excess credibility less than 0%. Thinking of the possible credibility values on an x-y plane with primary credibility as the x-axis and excess credibility as the y-axis, the subset of possible values would be the unit square. In cases in which the unrestricted credibilities fell outside of this range, the restricted values would be the point on the unit square that was tangent to an ellipse centered at the unrestricted indication. The axes of this ellipse are determined by the correlation between primary and excess losses. This is illustrated in Exhibit 11.

Staff had not previously examined the correlation between primary and excess losses. In the case of highly collinear explanatory variables (here actual primary and actual excess losses), it is generally inappropriate to fit coefficients (here primary and excess credibility) for both variables simultaneously. For practical purposes, this was not an issue for the selected plan as both primary and excess credibility were restricted to specific values. However, this caused staff to revisit excess credibility in the case in which primary credibility is restricted to 100%. When excess credibility is restricted to [0%, 100%], most indicated values are at or very close to 0%, with some larger indications for the largest cohorts of

employers. This is consistent with findings from the initial development of the plan. When excess credibility is unrestricted, indicated values are centered around 0% and approximately equally likely to be positive or negative. These are shown in Exhibit 12. The clustering of 0% indications were the result of restricting values that are actually negative. The scale of the indications, positive or negative, increases with expected losses. This is not primarily due to increasing employer size, but because the largest five cohorts contain only 200 employers and the next four largest contain 1,000 employers while the rest contain 5,000 employers each.

A histogram showing unrestricted excess credibility indications with primary credibility set to 100% are shown in Exhibit 13. An analogous histogram showing unrestricted primary credibility indications with excess credibility set to 0% are shown in Exhibit 14. In light of these findings, staff feels that no excess credibility is indicated for employers of any size.

Exhibit 15 shows the plan efficiency for the current plan, the saturated model, the model with indicated primary thresholds and 100%/0% restricted credibility, and the final model with smoothed primary thresholds. In line with previous findings, there is only a small decline in performance when comparing the final smoothed version to the saturated model.

The final smoothed primary threshold values have tended to move upward over time. The smoothed threshold values are shown in Exhibit 16. These changes are partially explained by increases in claim severity.³ There is a greater than 50% correlation between annual changes in severity and annual changes in the primary threshold for medium to large employers. Changes in the thresholds for small and very large employers are not correlated with changes in claim severity and may be more related to claim frequency or demographic shifts over time. These correlations are shown in Exhibit 17.

Impact of Recommended Changes on Employer Experience Modifications

Exhibit 18 shows the loss ratios before and after application of the experience modification with the proposed adjustment to D-ratio credibility methodology and updated primary thresholds. Exhibit 18.1 shows the distributions by quintile for the 100,000 largest risks each year for each projection year from 2013 through 2017. Each bar represents 20% of the risks, sorted from lowest to highest experience modification. As expected, the modifications calculated using the updated methodologies reflect a significant improvement over the unmodified loss ratios. Exhibits 18.2 through 18.6 show the distributions by quintile for risks representing approximately 20% of the expected loss in the period. Exhibit 18.2 shows the modified loss ratio distribution across quintiles of experience modifications for the largest risks representing 20% of expected loss in the system. Exhibits 18.3 through 18.6 show similar results for the next four groups of risks by expected loss sizes. Regardless of the size of the risks, the modified loss ratios show a significant flattening over the unmodified loss ratios.

Exhibit 19 shows histograms of the distribution of issued modification changes from policy year 2017-2018, 2018-2019, and 2019-2020. From 2017-2018 and 2019-2020, the changes were based on changes in the underlying loss and payroll distribution of individual risks as well as the regular annual updates.

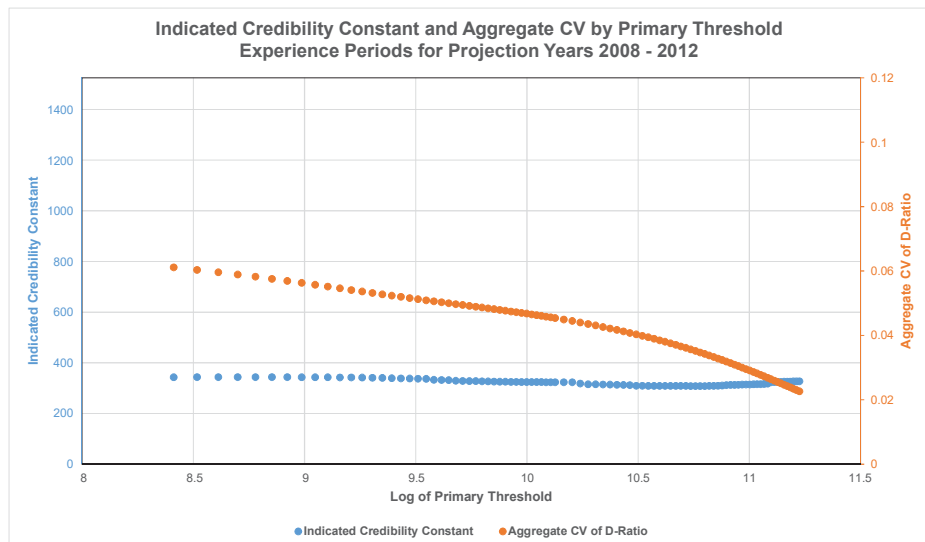
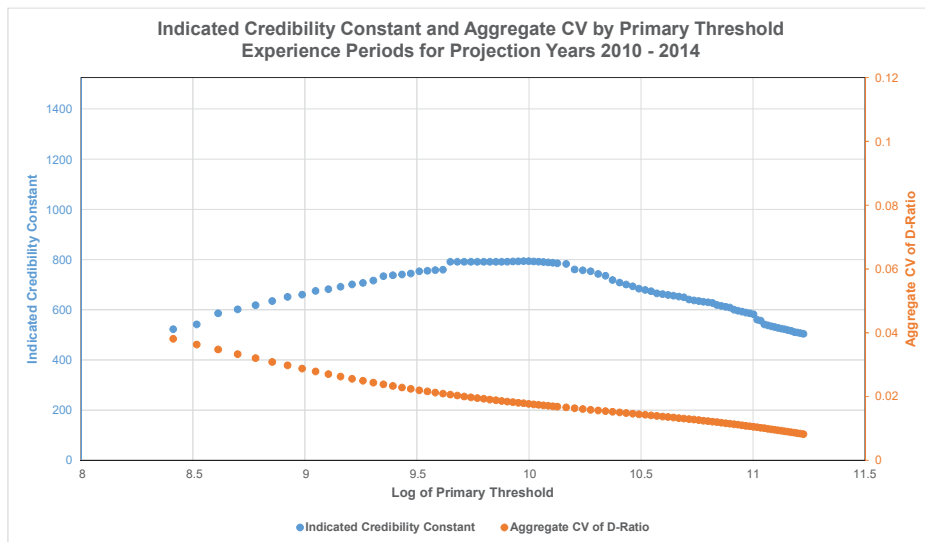
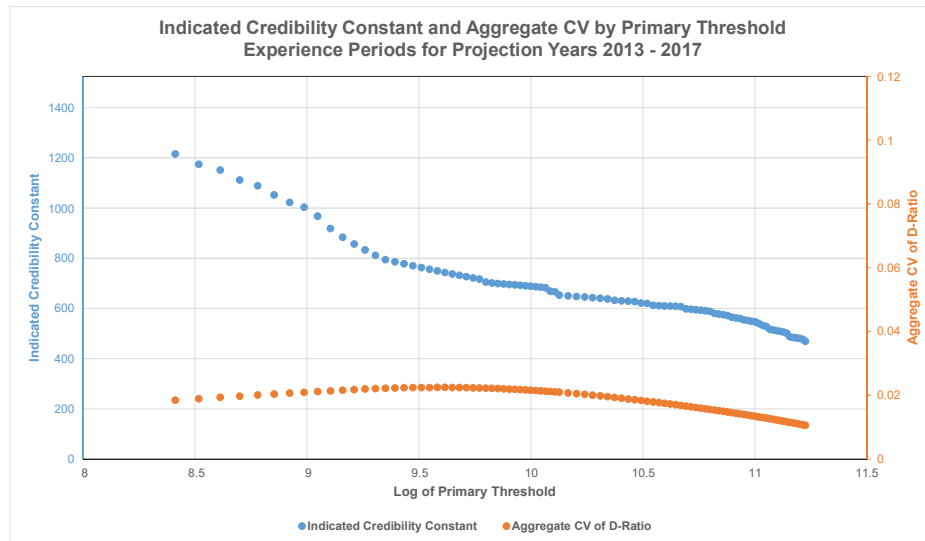
Exhibit 20 shows histograms of the estimated impact from the change in the D-ratio credibility based on actual modifications issued in 2019 and 2020. The mode is 0% and 96.6% of employers have an estimated change of no more than one percentage point. Claim free risks are more likely to have no impact from the change. The results are similar across size of employer.

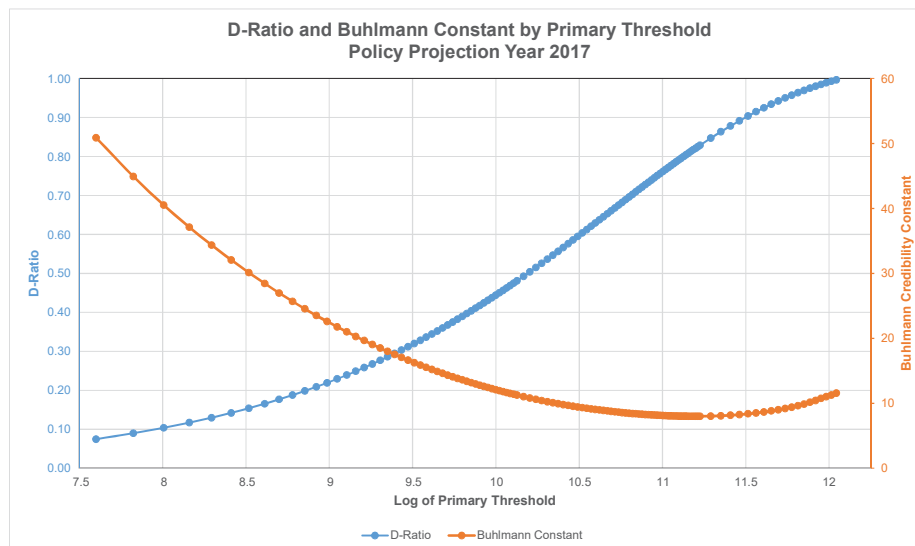
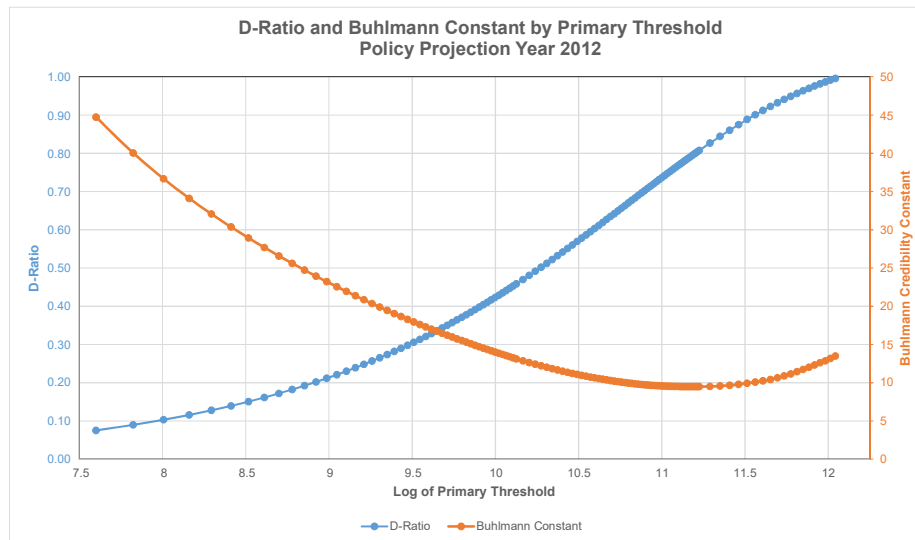
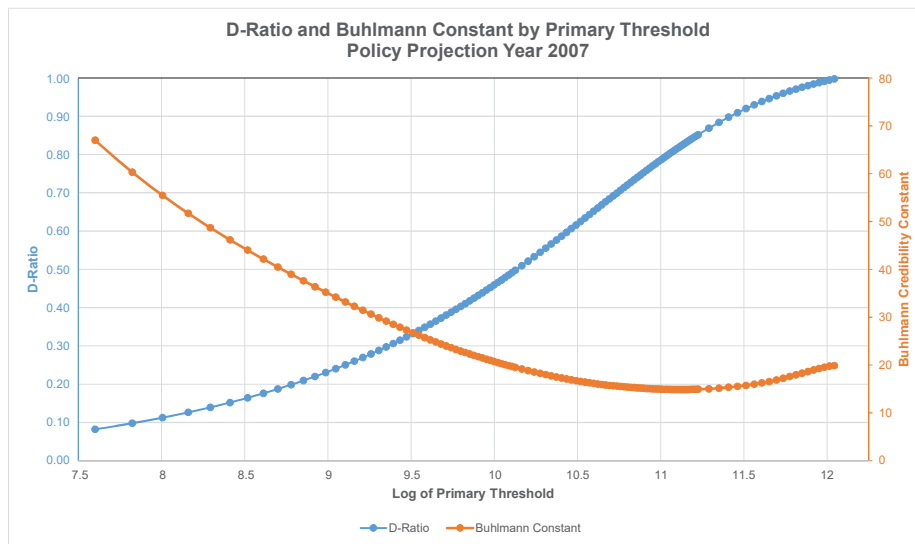
Exhibit 21 shows histograms of the impact from updates to the primary threshold over one, two, three, four, and five years. For any given primary threshold, the maximum efficiency expected loss range tends to decrease over time which would indicate that the dislocation from a primary threshold update would increase over time. However, there is volatility in the impact and it does not consistently increase with an additional year in between updates.

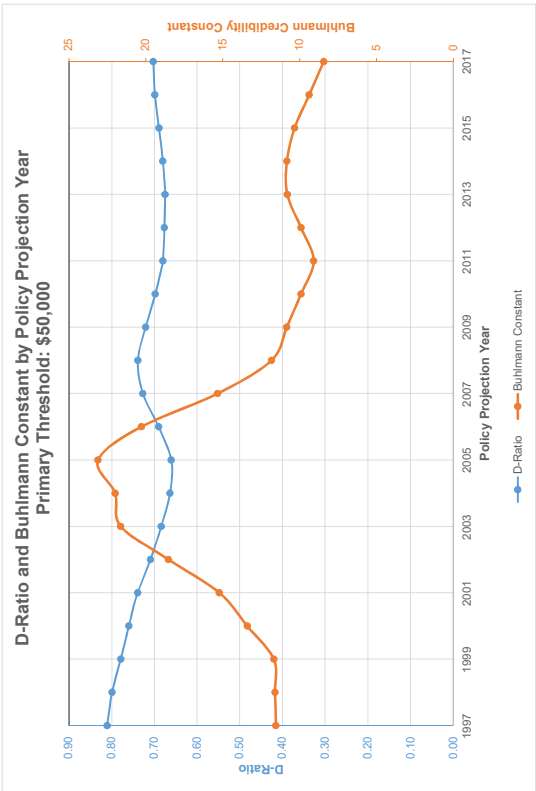
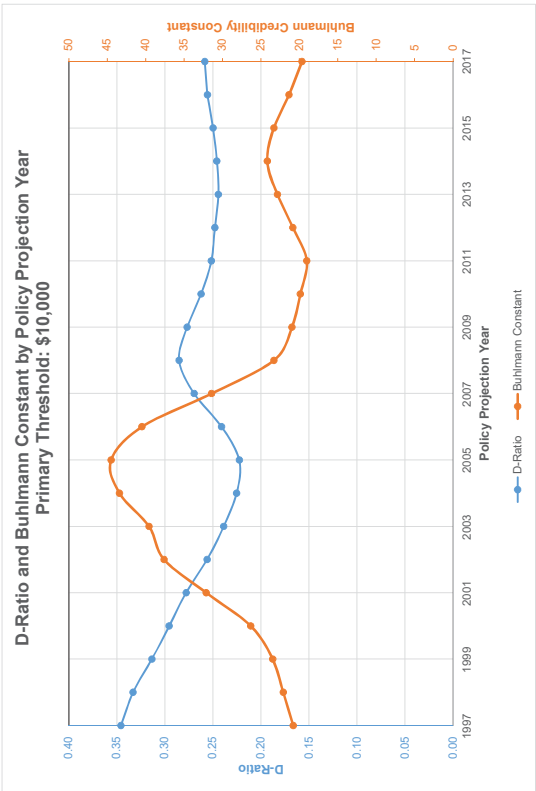
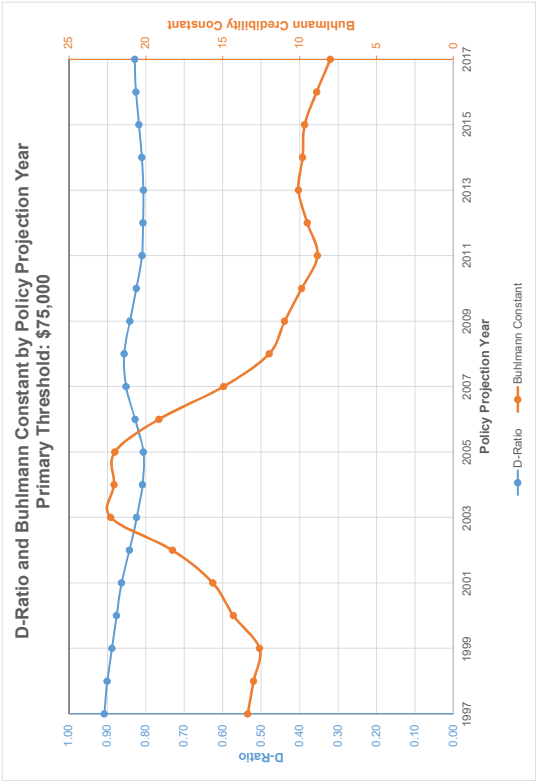
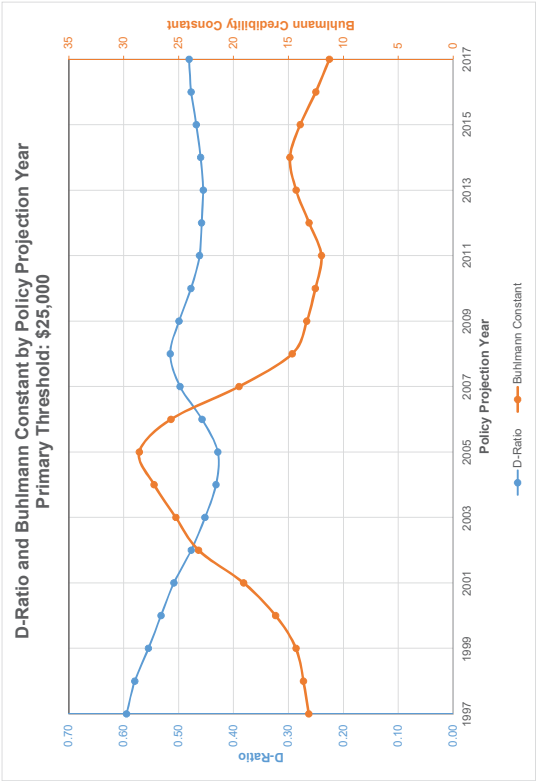
³ Claim severity limited to \$175,000 during the experience period, with the first \$250 of each claim removed.

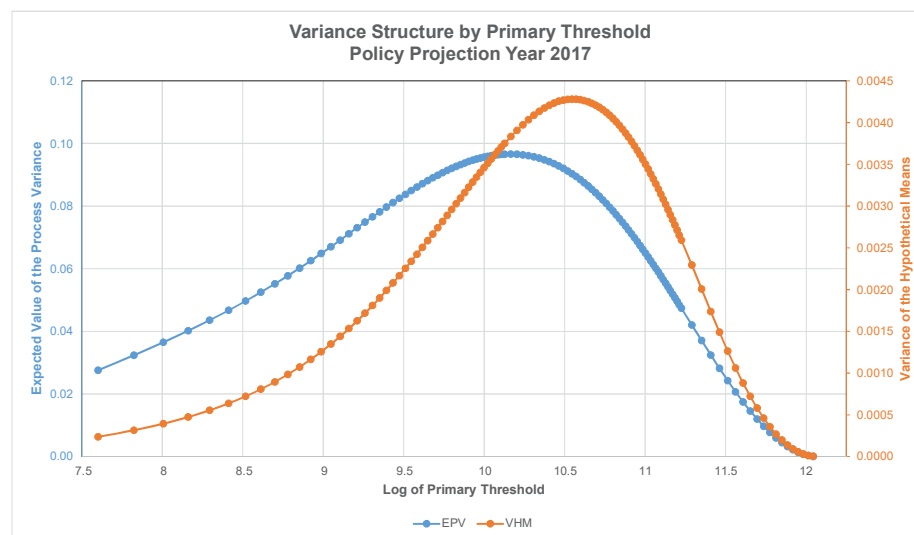
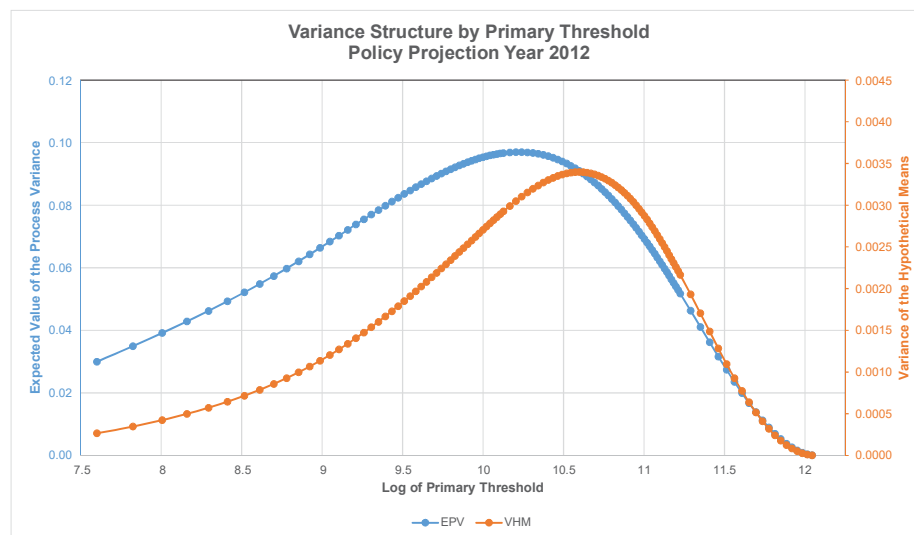
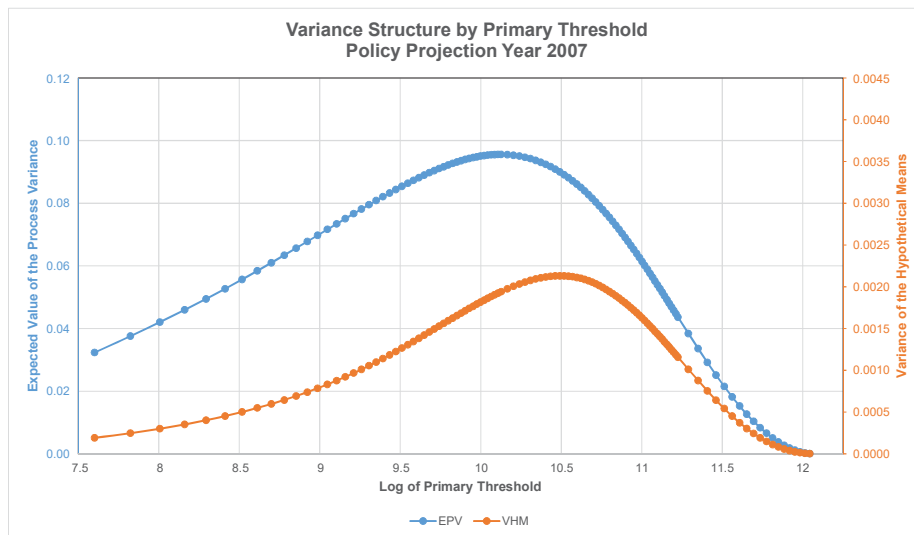
Exhibit 22 shows a histogram of the combined impact of the proposed changes. The mean impact is 0.32% while the mode is 0% and 94.5% of risks have a change of no more than five percentage points.

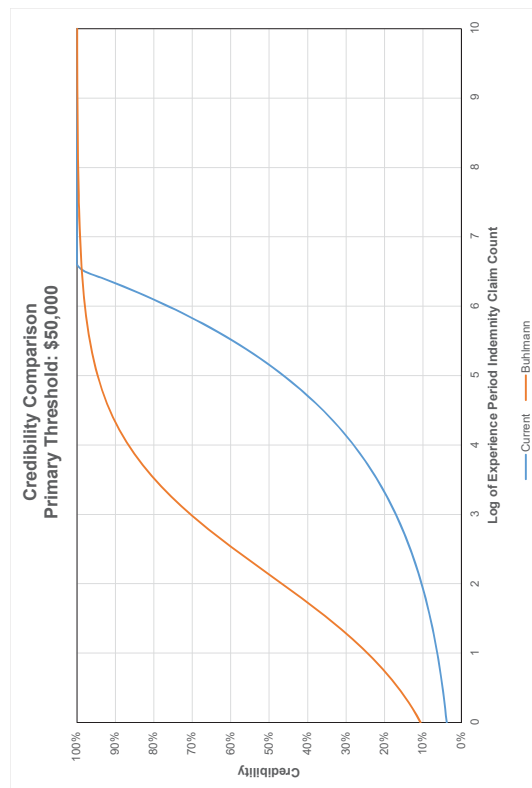
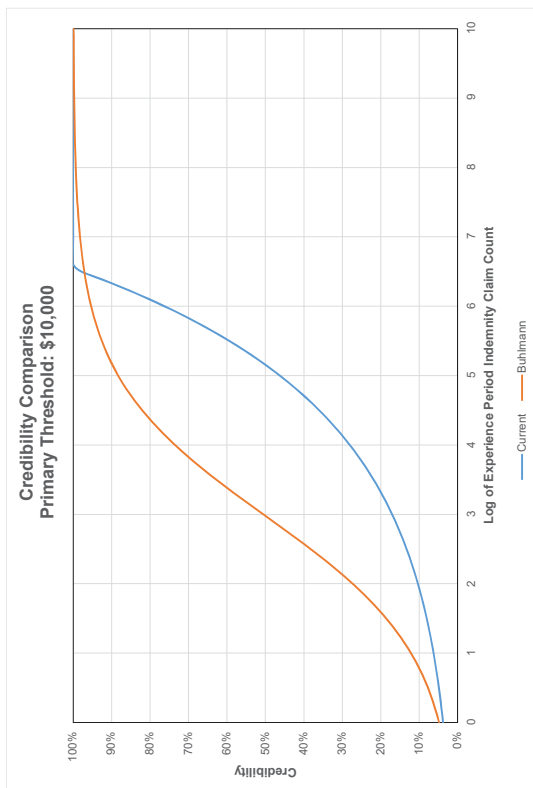
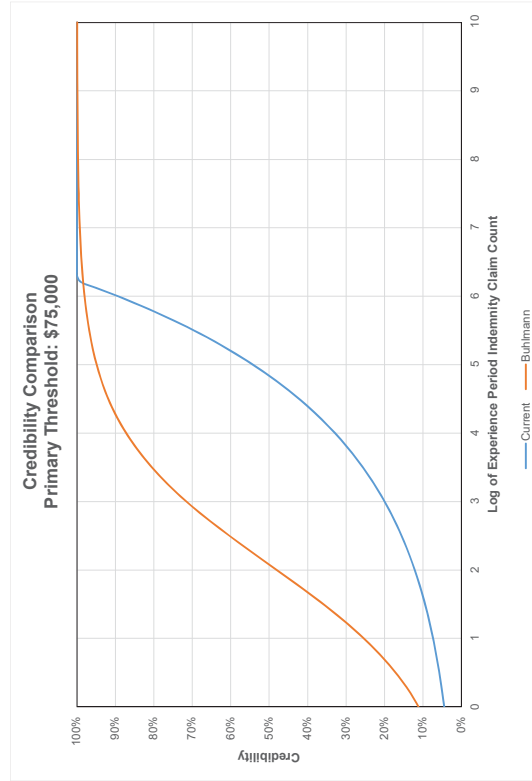
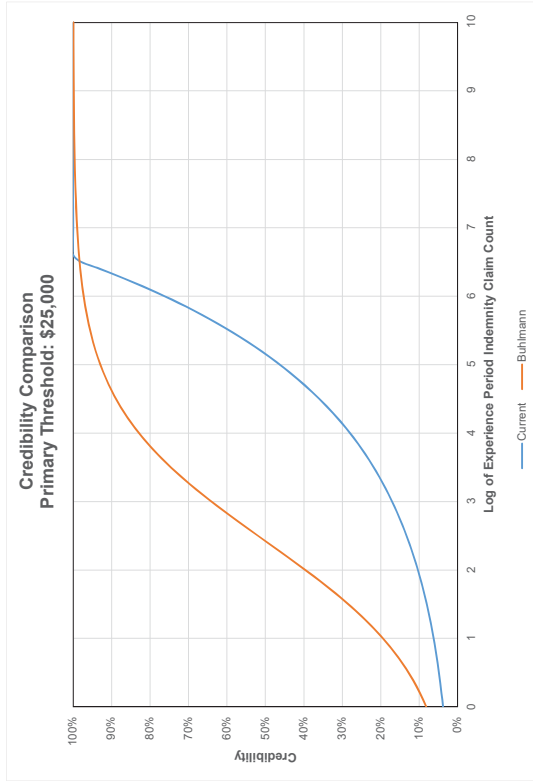
Staff recommends adopting these updated primary threshold values beginning in 2021. In addition, given the drift in the indicated primary thresholds, staff proposes to update these values annually in order to reduce the impact of changes.

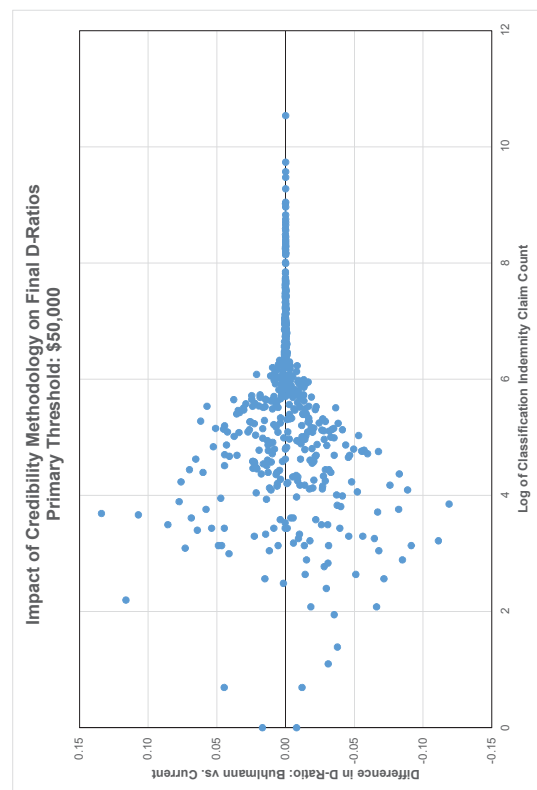
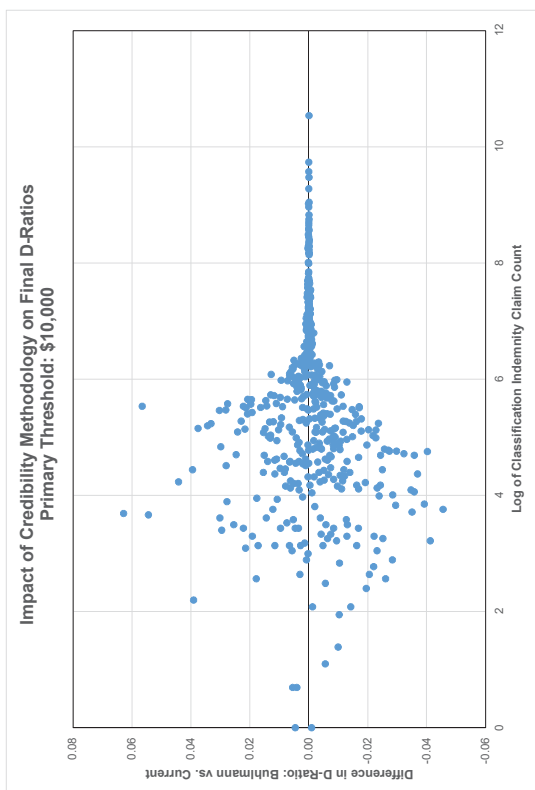
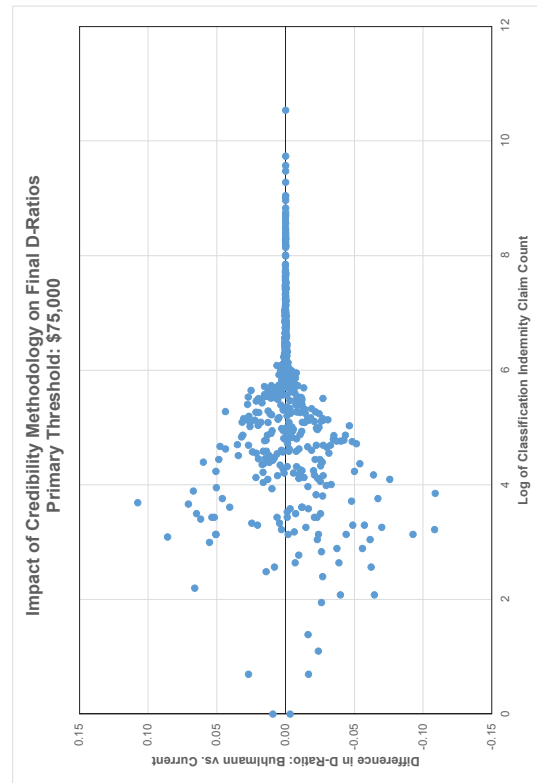
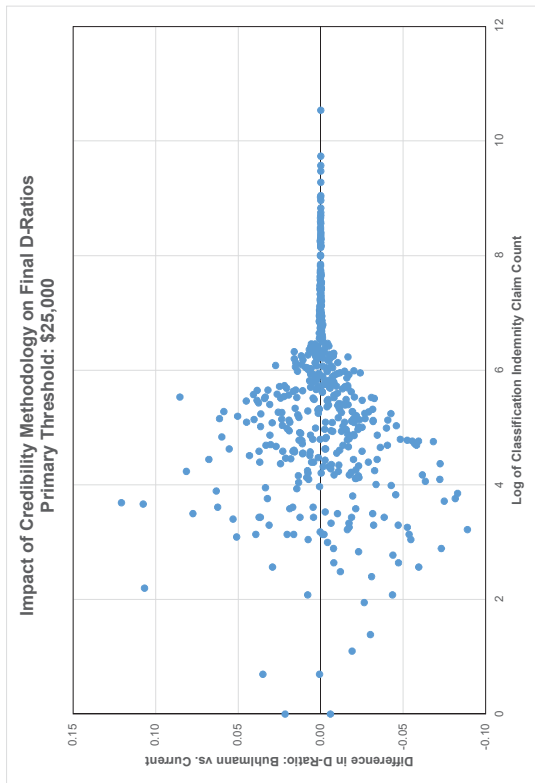


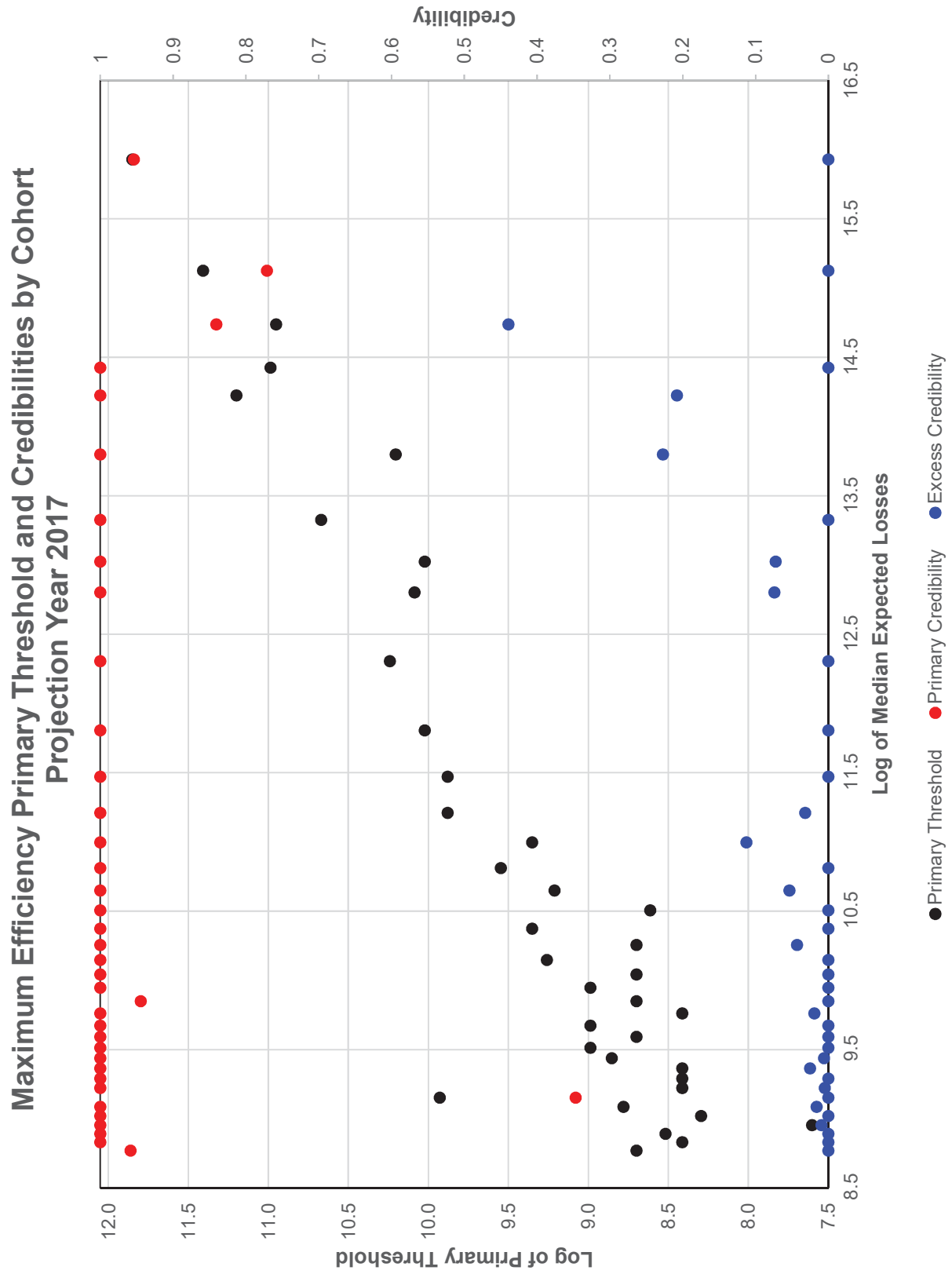


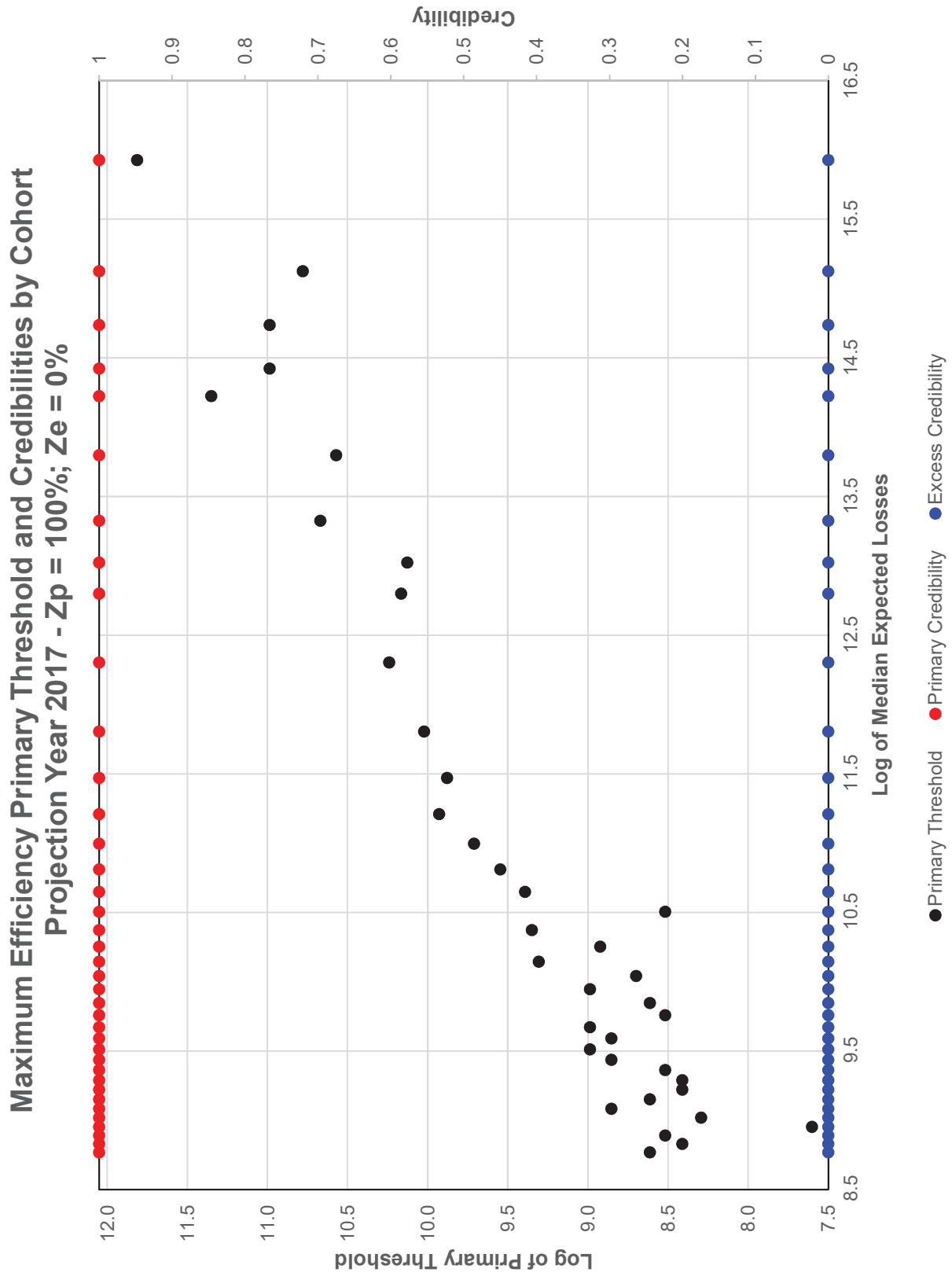












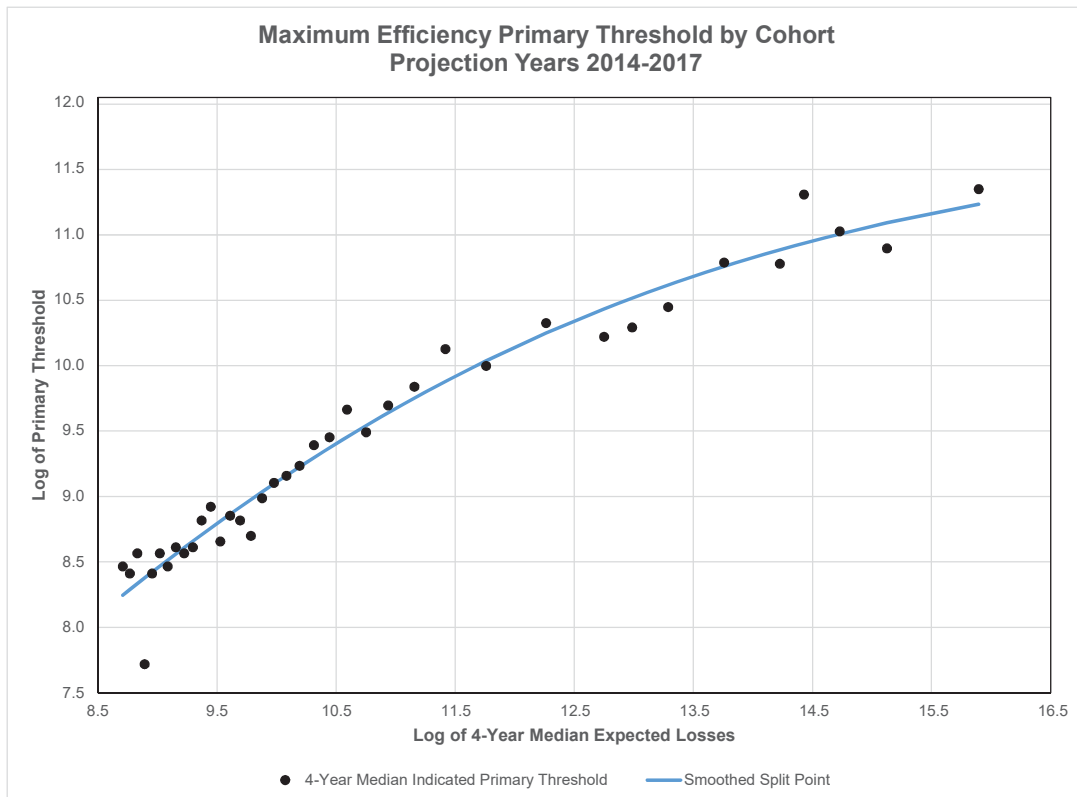
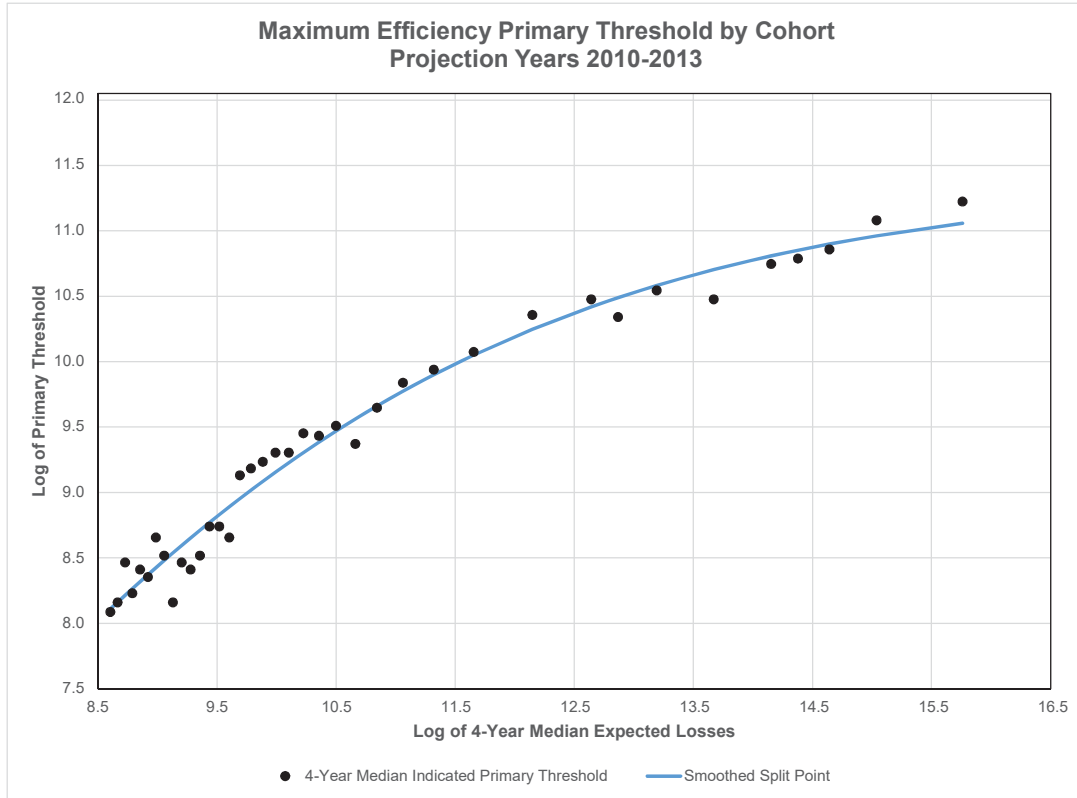
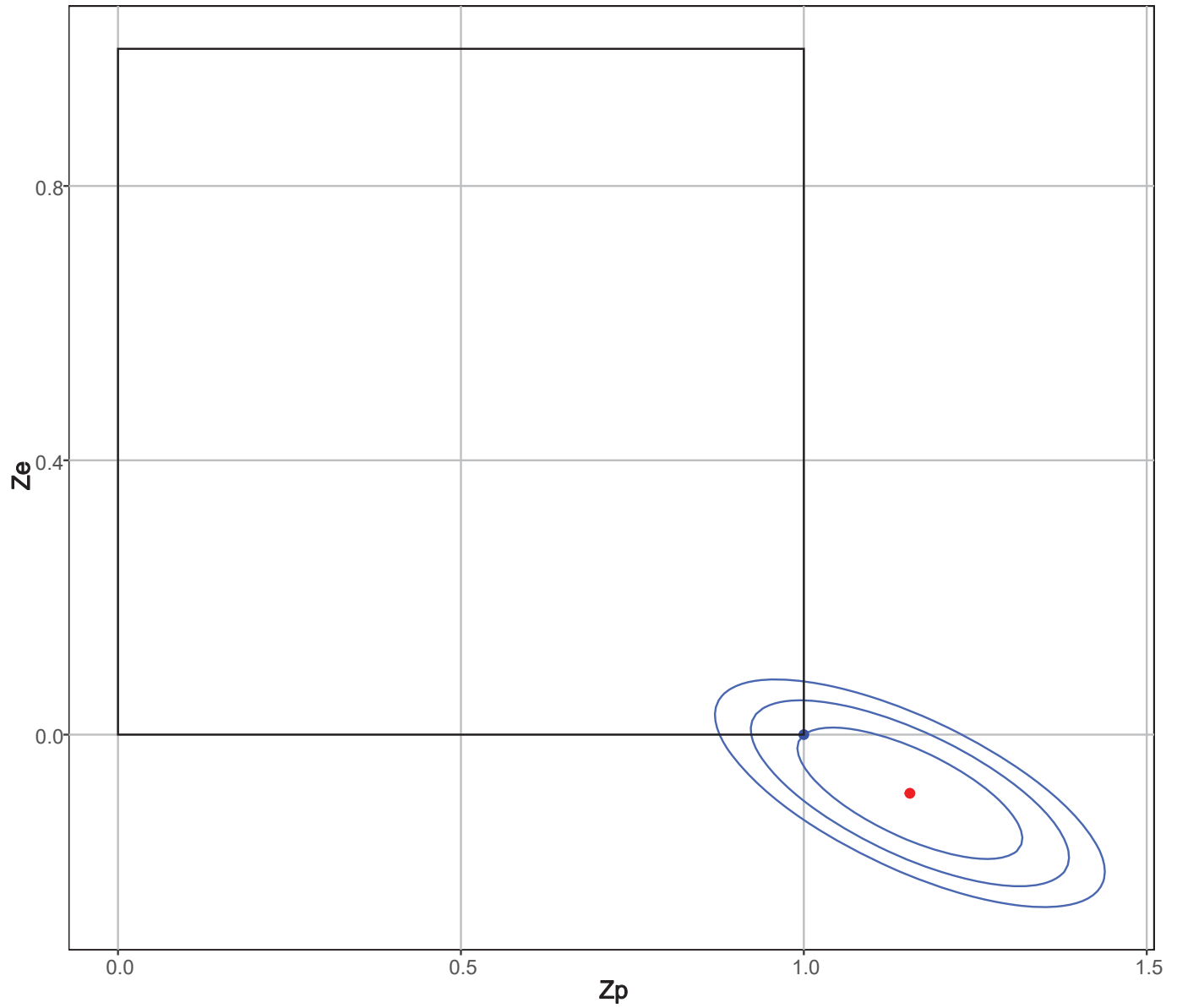
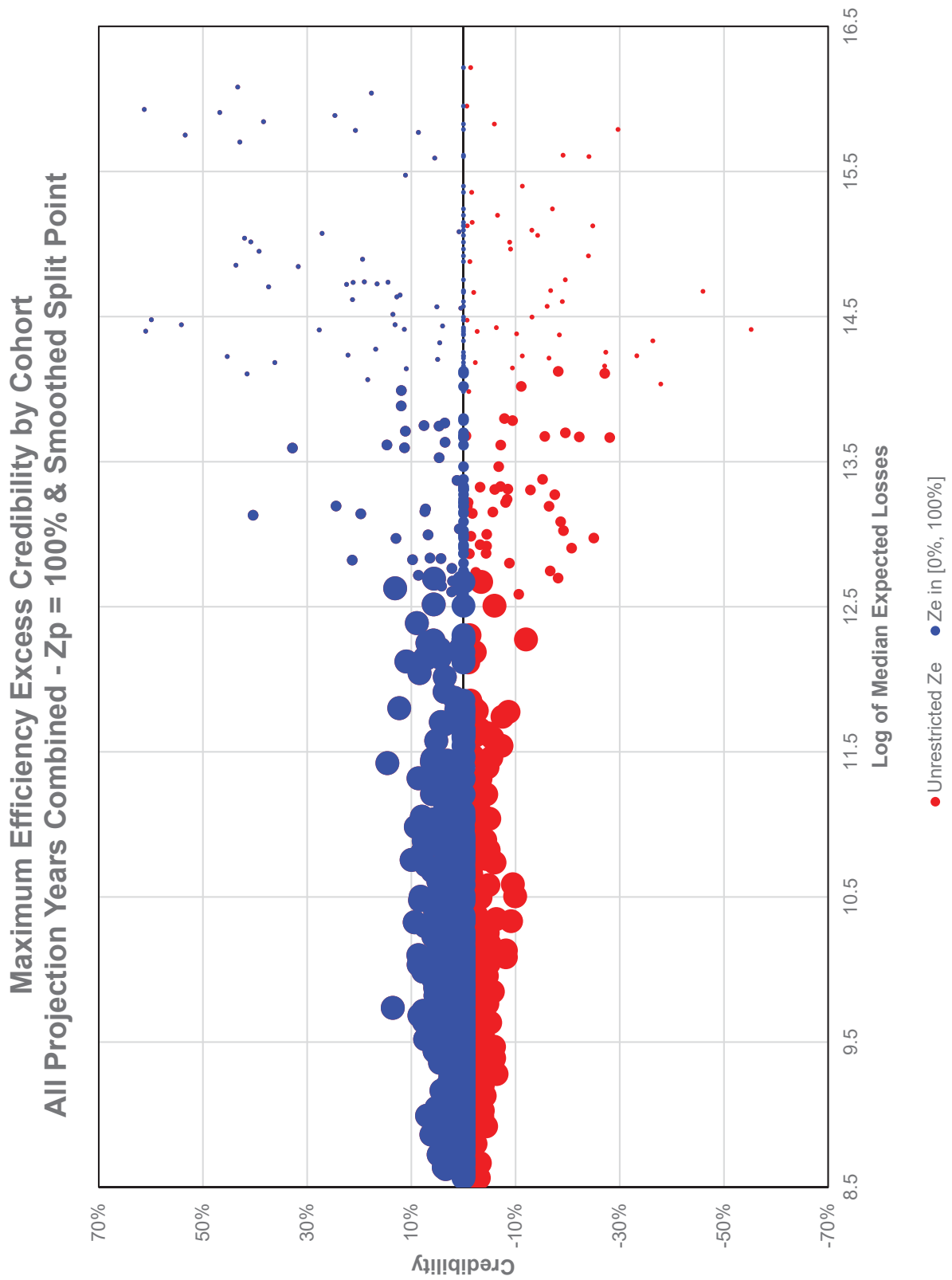


Table of Current and Updated Expected Loss Ranges by Primary Threshold

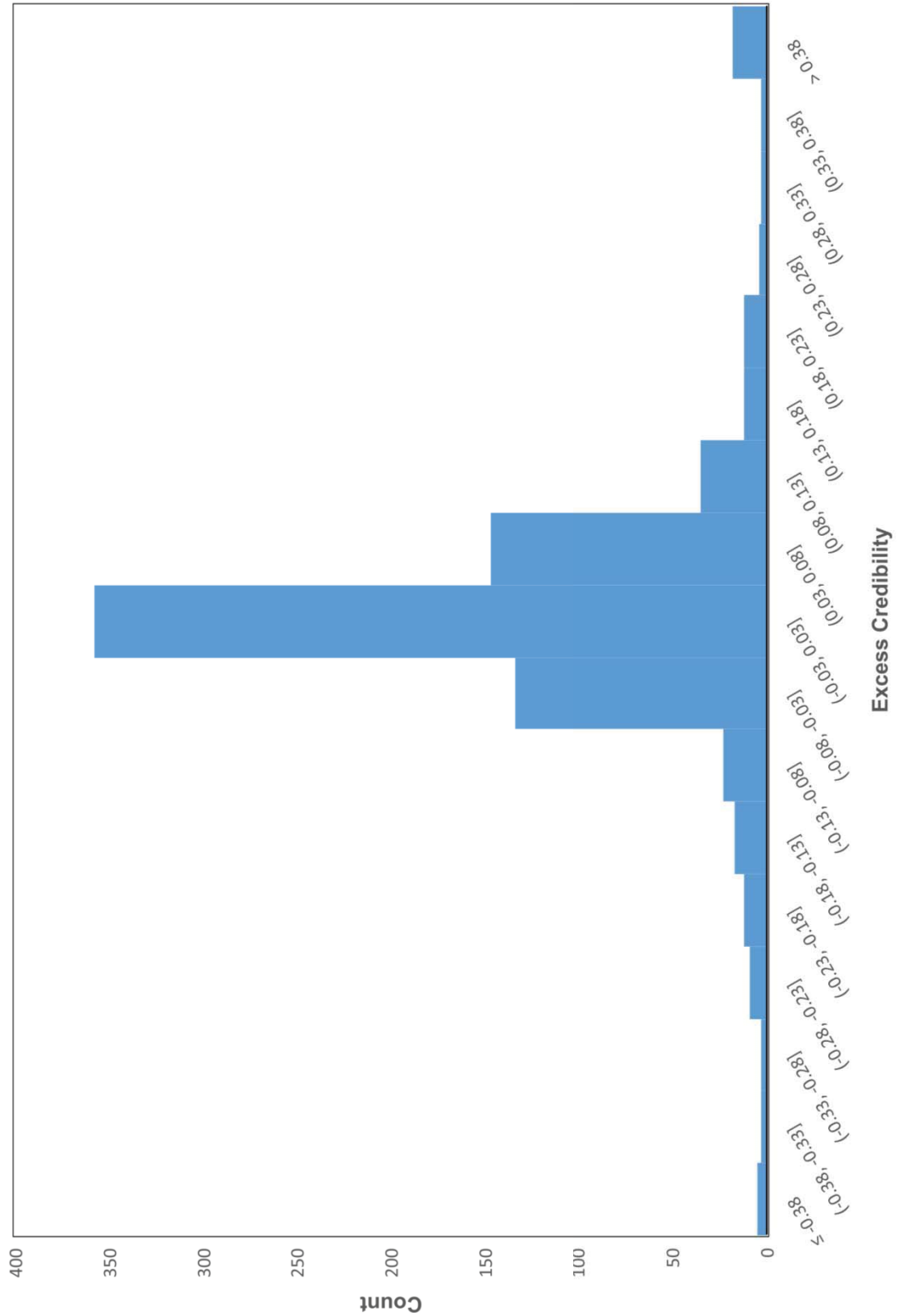
Primary Threshold	Current Expected Loss Range		Projection Year 2014-2017 Expected Loss Range		Primary Threshold	Current Expected Loss Range		Projection Year 2014-2017 Expected Loss Range	
4,500	Below	- 9,877	Below	- 8,245	30,000	213,369	- 242,111	235,883	- 257,061
5,000	9,878	- 10,866	8,246	- 9,523	31,000	242,112	- 275,323	257,062	- 279,798
5,500	10,867	- 11,887	9,524	- 10,882	32,000	275,324	- 313,696	279,799	- 304,201
6,000	11,888	- 12,945	10,883	- 12,324	33,000	313,697	- 357,964	304,202	- 330,387
6,500	12,946	- 14,041	12,325	- 13,850	34,000	357,965	- 408,876	330,388	- 358,481
7,000	14,042	- 15,179	13,851	- 15,462	35,000	408,877	- 467,147	358,482	- 388,616
7,500	15,180	- 16,362	15,463	- 17,164	36,000	467,148	- 533,407	388,617	- 420,939
8,000	16,363	- 17,591	17,165	- 18,958	37,000	533,408	- 608,149	420,940	- 455,604
8,500	17,592	- 18,872	18,959	- 20,845	38,000	608,150	- 691,685	455,605	- 492,779
9,000	18,873	- 20,206	20,846	- 22,830	39,000	691,686	- 784,128	492,780	- 532,645
9,500	20,207	- 21,597	22,831	- 24,914	40,000	784,129	- 885,390	532,646	- 575,397
10,000	21,598	- 23,048	24,915	- 27,101	41,000	885,391	- 995,208	575,398	- 621,244
10,500	23,049	- 24,563	27,102	- 29,394	42,000	995,209	- 1,113,185	621,245	- 670,413
11,000	24,564	- 26,147	29,395	- 31,796	43,000	1,113,186	- 1,238,829	670,414	- 723,149
11,500	26,148	- 27,802	31,797	- 34,311	44,000	1,238,830	- 1,371,598	723,150	- 779,717
12,000	27,803	- 29,533	34,312	- 36,941	45,000	1,371,599	- 1,510,932	779,718	- 840,402
12,500	29,534	- 31,346	36,942	- 39,691	46,000	1,510,933	- 1,656,279	840,403	- 905,513
13,000	31,347	- 33,245	39,692	- 42,565	47,000	1,656,280	- 1,807,110	905,514	- 975,386
13,500	33,246	- 35,235	42,566	- 45,565	48,000	1,807,111	- 1,962,931	975,387	- 1,050,384
14,000	35,236	- 37,323	45,566	- 48,697	49,000	1,962,932	- 2,123,285	1,050,385	- 1,130,898
14,500	37,324	- 39,513	48,698	- 51,964	50,000	2,123,286	- 2,287,757	1,130,899	- 1,217,357
15,000	39,514	- 41,814	51,965	- 55,371	51,000	2,287,758	- 2,455,968	1,217,358	- 1,310,222
15,500	41,815	- 44,232	55,372	- 58,922	52,000	2,455,969	- 2,627,577	1,310,223	- 1,409,998
16,000	44,233	- 46,775	58,923	- 62,622	53,000	2,627,578	- 2,802,277	1,409,999	- 1,517,230
16,500	46,776	- 49,451	62,623	- 66,475	54,000	2,802,278	- 2,979,788	1,517,231	- 1,632,514
17,000	49,452	- 52,269	66,476	- 70,487	55,000	2,979,789	- 3,159,860	1,632,515	- 1,756,497
17,500	52,270	- 55,239	70,488	- 74,663	56,000	3,159,861	- 3,342,268	1,756,498	- 1,889,885
18,000	55,240	- 58,371	74,664	- 79,008	57,000	3,342,269	- 3,526,806	1,889,886	- 2,033,450
18,500	58,372	- 61,677	79,009	- 83,527	58,000	3,526,807	- 3,713,290	2,033,451	- 2,188,030
19,000	61,678	- 65,169	83,528	- 88,227	59,000	3,713,291	- 3,901,550	2,188,031	- 2,354,545
19,500	65,170	- 68,860	88,228	- 93,112	60,000	3,901,551	- 4,091,435	2,354,546	- 2,533,999
20,000	68,861	- 72,765	93,113	- 98,190	61,000	4,091,436	- 4,282,803	2,534,000	- 2,727,491
20,500	72,766	- 76,900	98,191	- 103,466	62,000	4,282,804	- 4,475,529	2,727,492	- 2,936,227
21,000	76,901	- 81,281	103,467	- 108,947	63,000	4,475,530	- 4,669,495	2,936,228	- 3,161,527
21,500	81,282	- 85,928	108,948	- 114,640	64,000	4,669,496	- 4,864,594	3,161,528	- 3,404,843
22,000	85,929	- 90,860	114,641	- 120,552	65,000	4,864,595	- 5,060,728	3,404,844	- 3,667,770
22,500	90,861	- 96,100	120,553	- 126,689	66,000	5,060,729	- 5,257,806	3,667,771	- 3,952,060
23,000	96,101	- 101,673	126,690	- 133,060	67,000	5,257,807	- 5,455,746	3,952,061	- 4,259,649
23,500	101,674	- 107,603	133,061	- 139,672	68,000	5,455,747	- 5,654,469	4,259,650	- 4,592,665
24,000	107,604	- 113,920	139,673	- 146,533	69,000	5,654,470	- 5,853,904	4,592,666	- 4,953,464
24,500	113,921	- 120,655	146,534	- 153,651	70,000	5,853,905	- 6,053,986	4,953,465	- 5,344,644
25,000	120,656	- 131,616	153,652	- 164,830	71,000	6,053,987	- 6,254,653	5,344,645	- 5,769,087
26,000	131,617	- 148,038	164,831	- 180,719	72,000	6,254,654	- 6,455,847	5,769,088	- 6,229,982
27,000	148,039	- 166,850	180,720	- 197,802	73,000	6,455,848	- 6,657,517	6,229,983	- 6,730,869
28,000	166,851	- 188,466	197,803	- 216,160	74,000	6,657,518	- 6,859,611	6,730,870	- 7,275,685
29,000	188,467	- 213,368	216,161	- 235,882	75,000	6,859,612	- & Over	7,275,686	- & Over

Level Curves of Square Error Loss Function

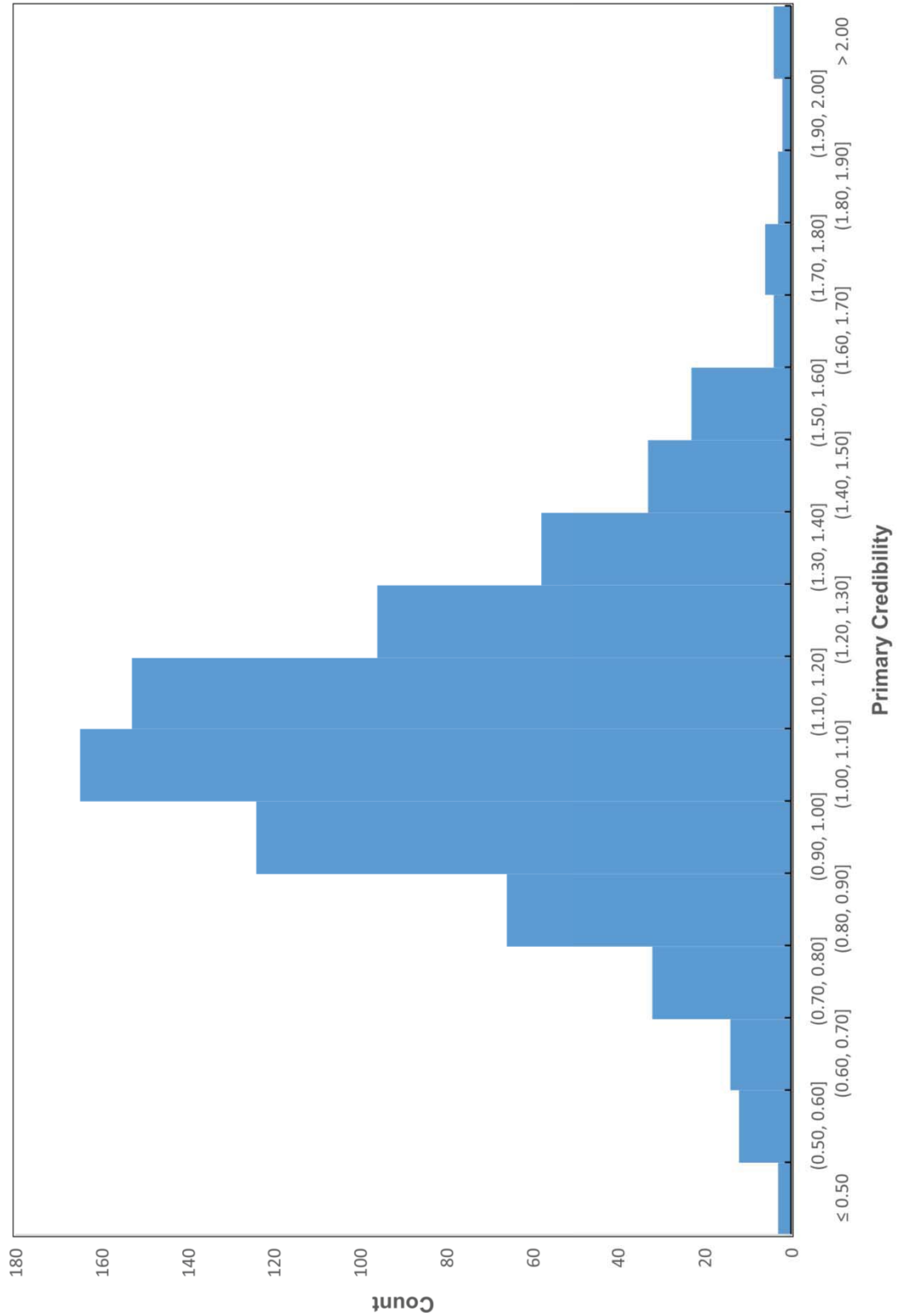




**Histogram of Unconstrained Indicated Excess Credibility
Primary Credibility 100% - All Projection Years Combined**



**Histogram of Unrestrained Indicated Primary Credibility
Excess Credibility 0% - All Projection Years Combined**

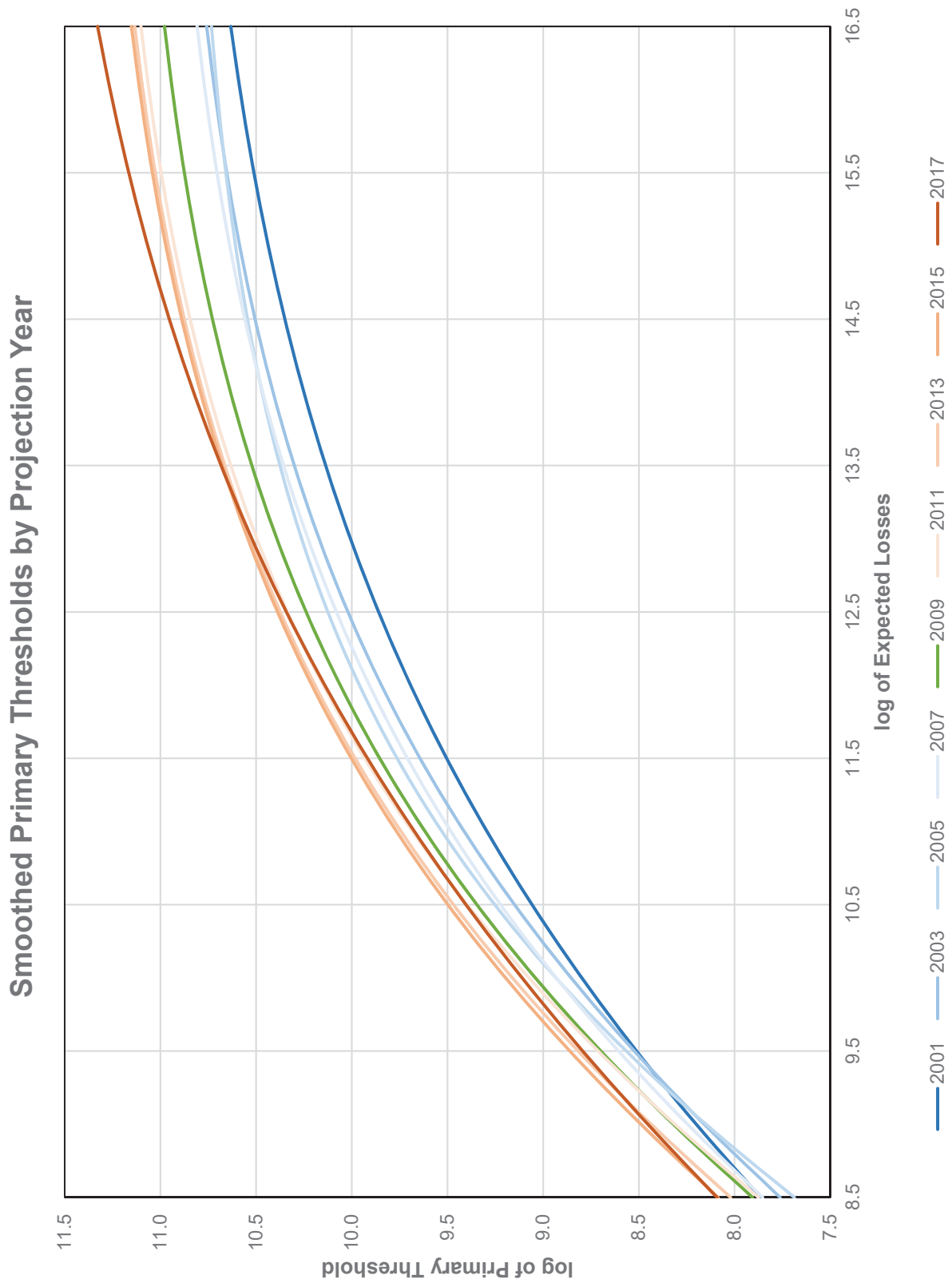


Comparison of Plan Efficiency by Parameterization - Projection Year 2017

Expected Loss Cohort	Experience Period Expected Losses(\$M)	Employer Count	Efficiencies for Projection Year 2017			
			Zp=100%/Ze=0% Current Primary Thresholds	Saturated Model	Zp=100%/Ze=0% Indicated Primary Thresholds	Zp=100%/Ze=0% Smoothed Primary Thresholds
L01 Q1 P1	2,586.1	200	57.32%	59.12%	59.00%	57.68%
L01 Q1 P2	769.1	200	30.60%	31.44%	30.80%	30.28%
L01 Q1 P3	506.1	200	35.69%	36.68%	35.98%	35.99%
L01 Q1 P4	370.6	200	36.34%	36.62%	36.62%	36.61%
L01 Q1 P5	304.2	200	32.90%	34.78%	34.76%	33.84%
L01 Q2	1,013.2	1,000	17.80%	17.95%	17.81%	17.62%
L01 Q3	624.4	1,000	19.16%	19.35%	19.35%	19.26%
L01 Q4	455.8	1,000	8.32%	8.56%	8.53%	8.18%
L01 Q5	363.1	1,000	8.17%	8.42%	8.38%	8.14%
L02	1,148.8	5,000	7.84%	7.88%	7.88%	7.84%
L03	679.5	5,000	5.30%	5.35%	5.35%	5.31%
L04	482.1	5,000	4.75%	4.80%	4.80%	4.79%
L05	370.8	5,000	4.55%	4.58%	4.57%	4.47%
L06	298.6	5,000	3.22%	3.30%	3.23%	3.24%
L07	248.3	5,000	2.54%	2.57%	2.57%	2.57%
L08	211.3	5,000	1.83%	1.92%	1.90%	1.89%
L09	182.7	5,000	-0.13%	0.67%	0.67%	0.16%
L10	160.1	5,000	1.82%	1.91%	1.91%	1.86%
L11	142.1	5,000	0.83%	0.92%	0.89%	0.87%
L12	127.5	5,000	1.41%	1.37%	1.37%	1.36%
L13	115.0	5,000	0.60%	0.74%	0.74%	0.66%
L14	104.3	5,000	1.12%	1.12%	1.12%	1.13%
L15	94.7	5,000	0.53%	0.54%	0.54%	0.56%
L16	86.6	5,000	0.50%	0.59%	0.58%	0.52%
L17	79.4	5,000	0.97%	0.92%	0.92%	0.97%
L18	73.2	5,000	1.17%	1.13%	1.14%	1.18%
L19	67.7	5,000	1.11%	1.13%	1.13%	1.12%
L20	62.7	5,000	0.84%	0.86%	0.86%	0.85%

Observation-Weighted:	L01 - L20	2.96%	3.06%	3.04%	2.99%
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Expected Loss-Weighted:	L01 - L20	23.00%	23.62%	23.51%	23.10%
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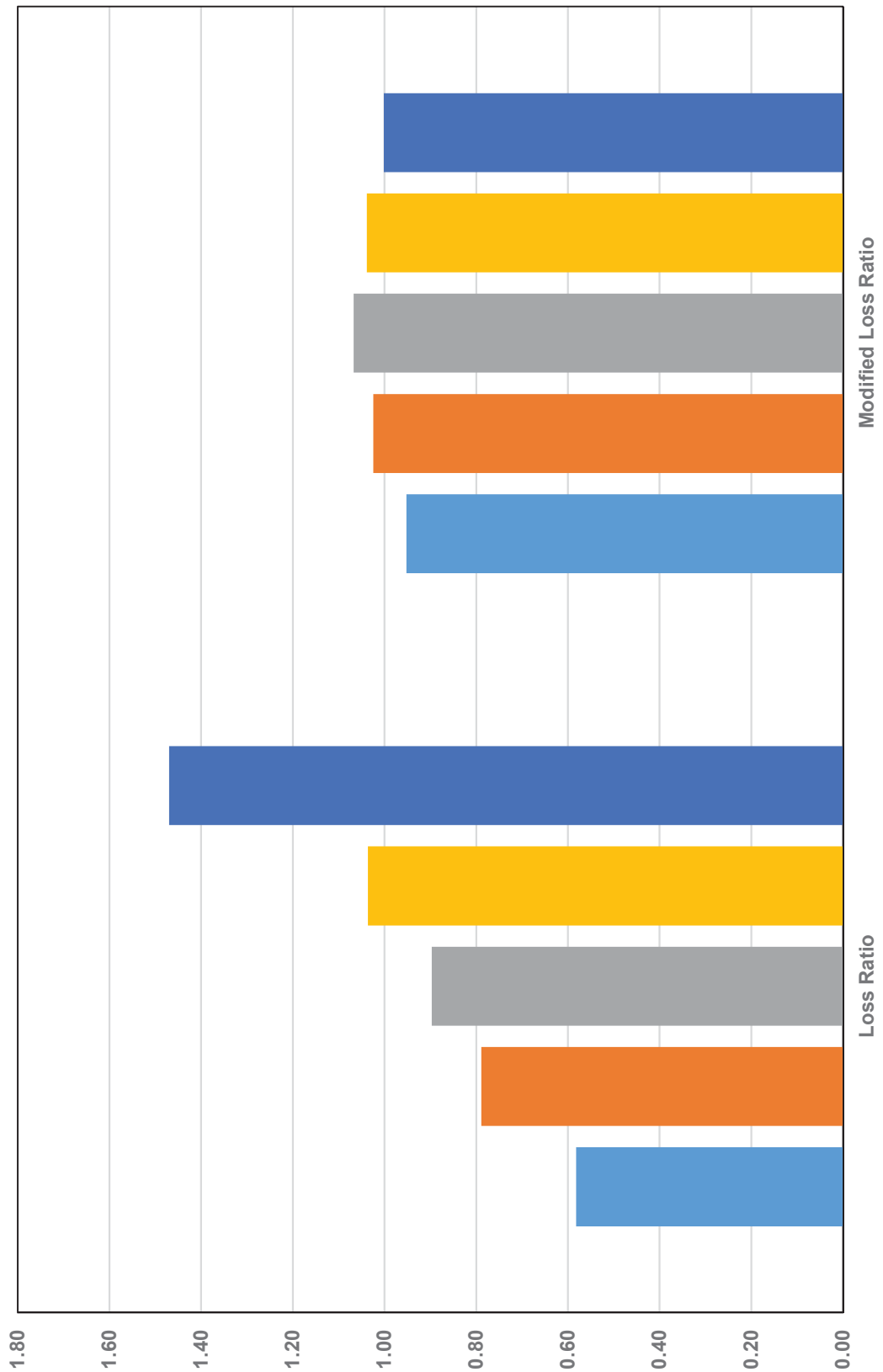


Correlation Between Annual Changes in Smoothed Primary Threshold and Annual Changes in Claim Severity

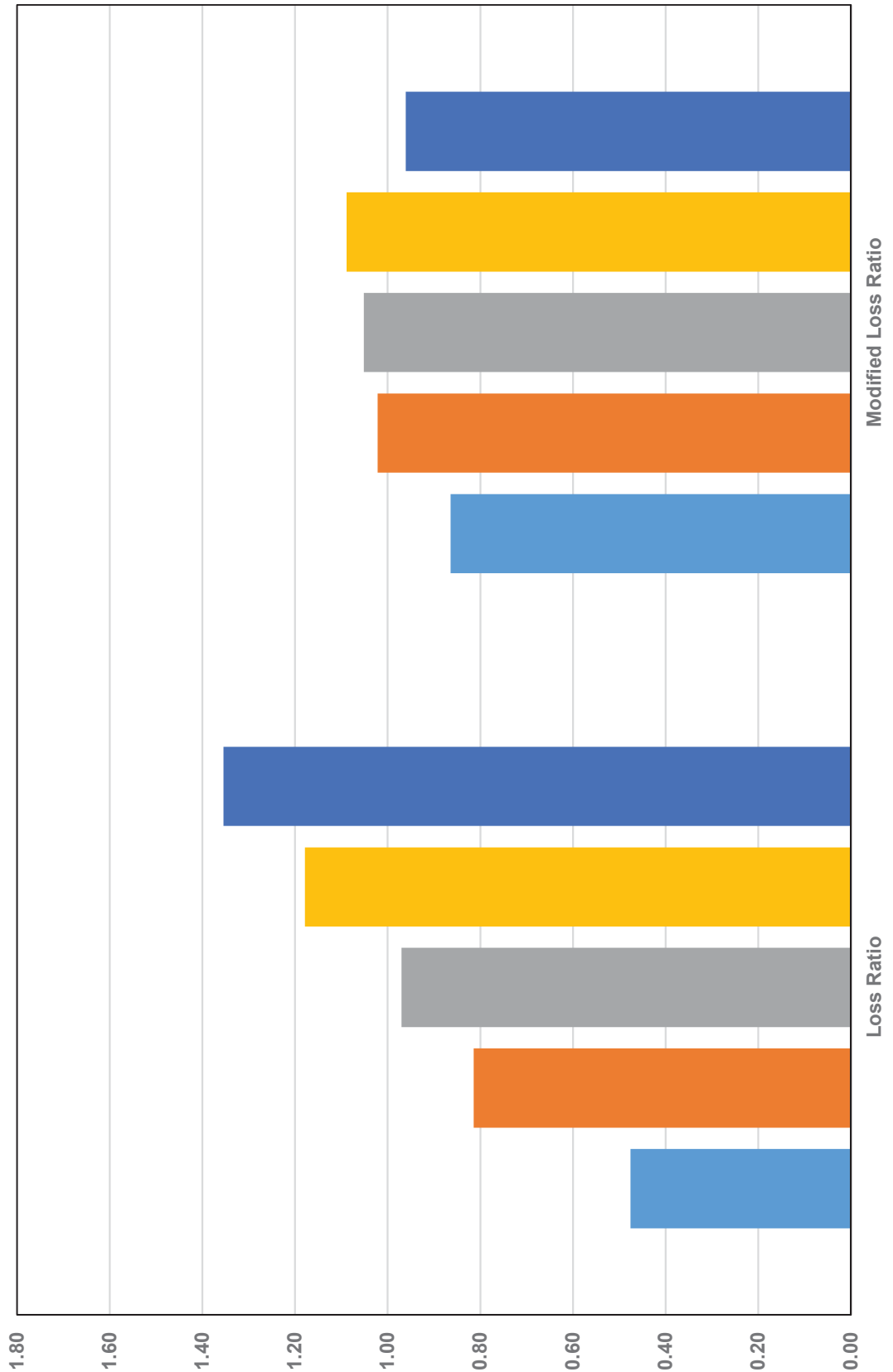
Severity	Correlation of Primary Threshold at Expected Losses of:										
	10,000	15,000	25,000	50,000	100,000	150,000	250,000	500,000	1,000,000	5,000,000	
Aggregate	-21%	12%	40%	53%	56%	56%	53%	43%	28%	-9%	
p10	-38%	-10%	18%	35%	41%	43%	43%	39%	30%	5%	
p25	-20%	6%	30%	43%	47%	48%	48%	44%	34%	7%	
p50	-1%	17%	30%	35%	37%	37%	37%	33%	26%	6%	
p75	-4%	18%	34%	40%	41%	40%	37%	30%	19%	-6%	
p90	-24%	8%	36%	50%	54%	53%	50%	40%	24%	-13%	

Note: Experience period severity limited to \$175,000 with the first \$250 excluded.

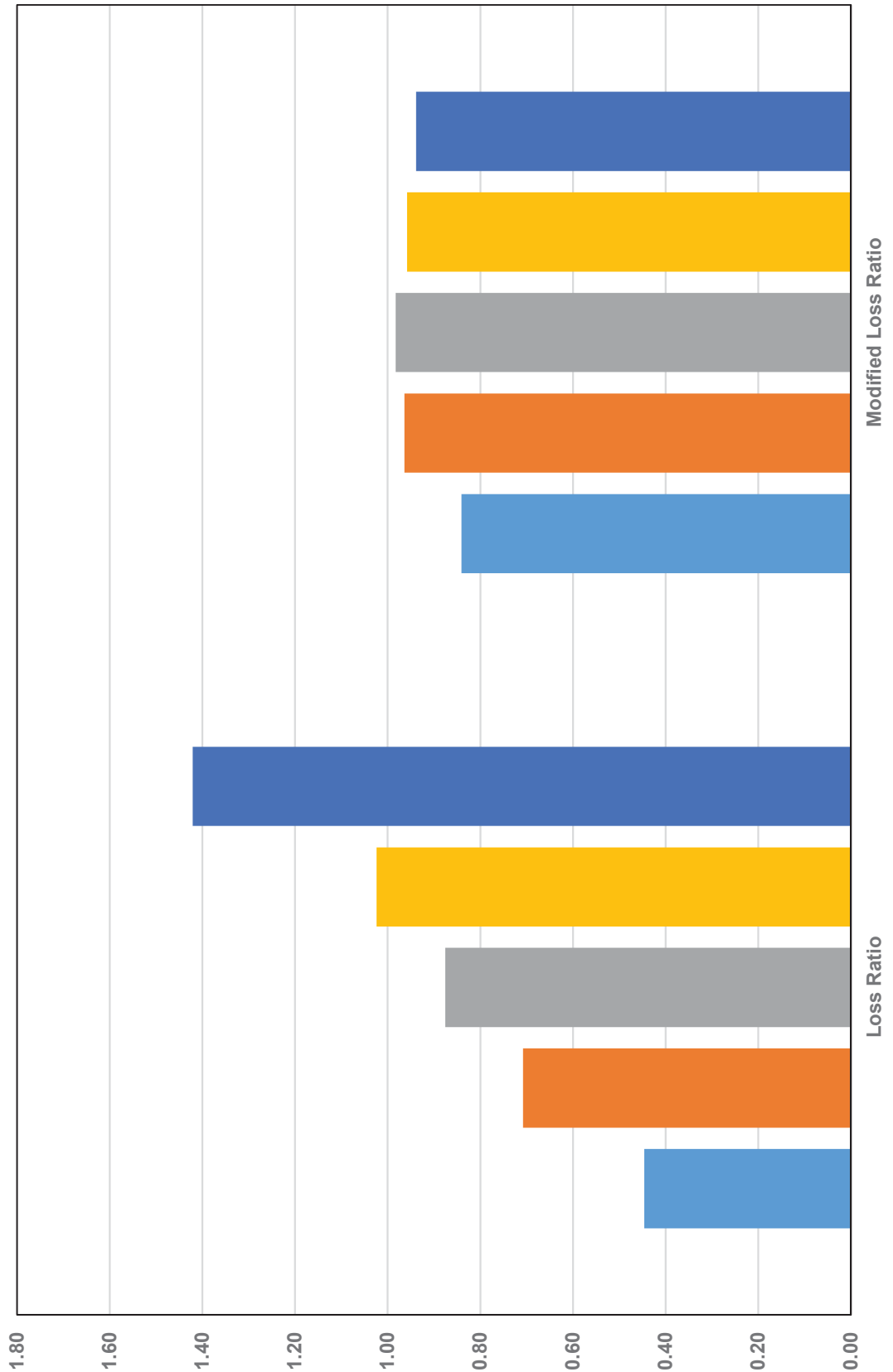
**2013 - 2017 Projection Year Loss Ratios by Modification Quintile
All Industries - All Employer Sizes: 500,000 Risks - 34% Claim-Free**



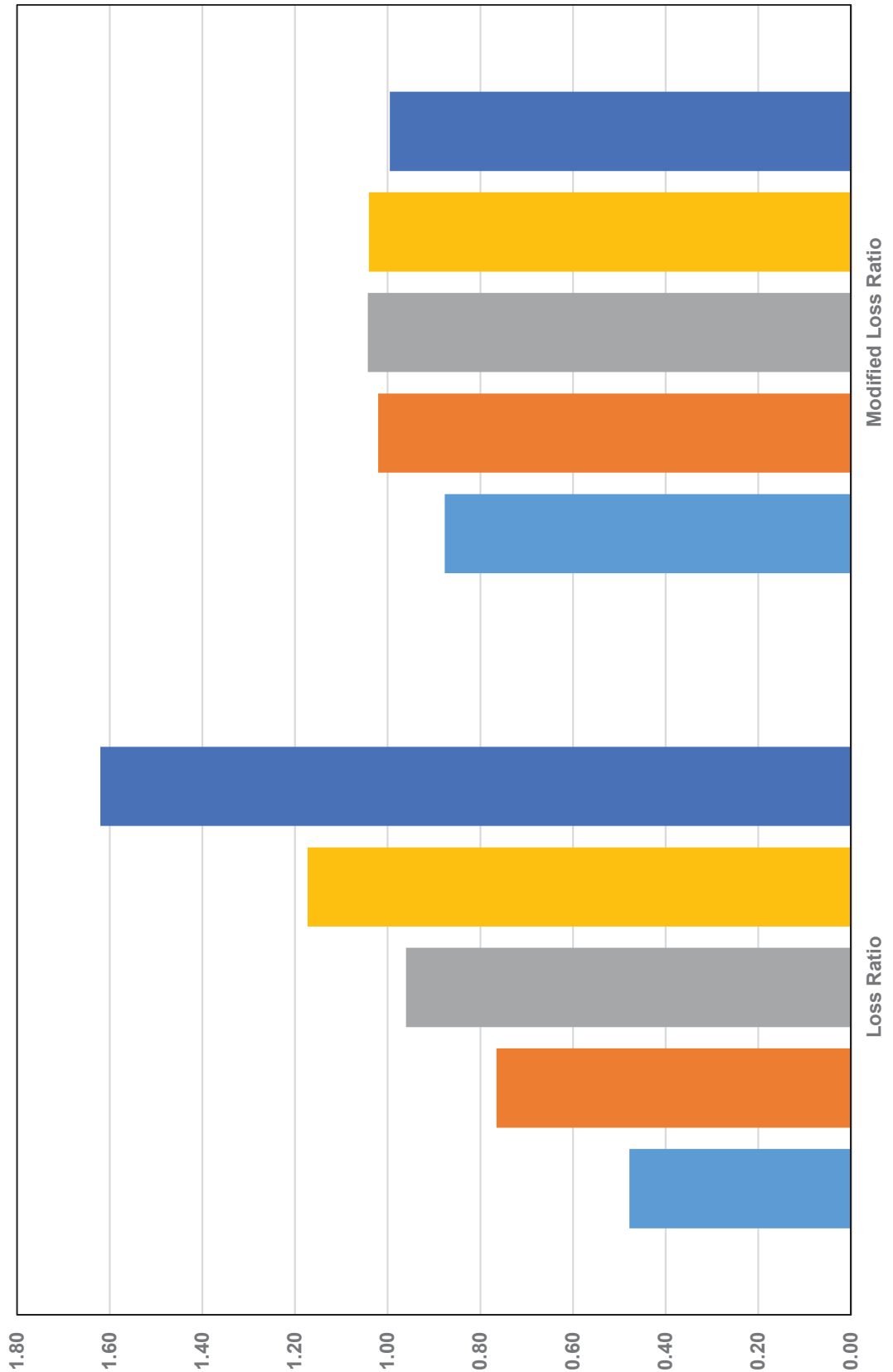
**2013 - 2017 Projection Year Loss Ratios by Modification Quintile
All Industries - 1st 20% of Expected Losses: 753 Risks - 0% Claim-Free**



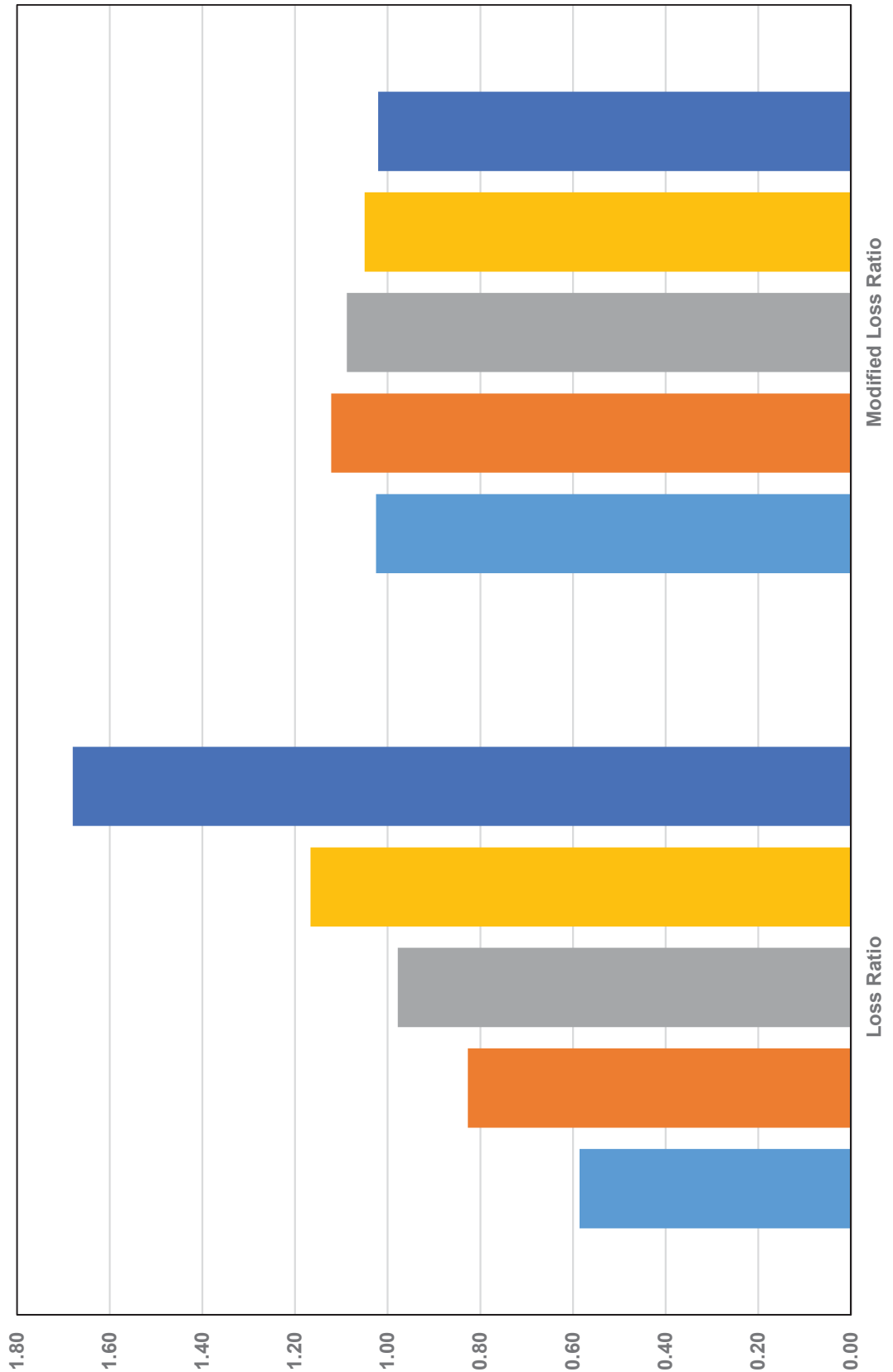
**2013 - 2017 Projection Year Loss Ratios by Modification Quintile
All Industries - 2nd 20% of Expected Losses: 4,469 Risks - 0% Claim-Free**



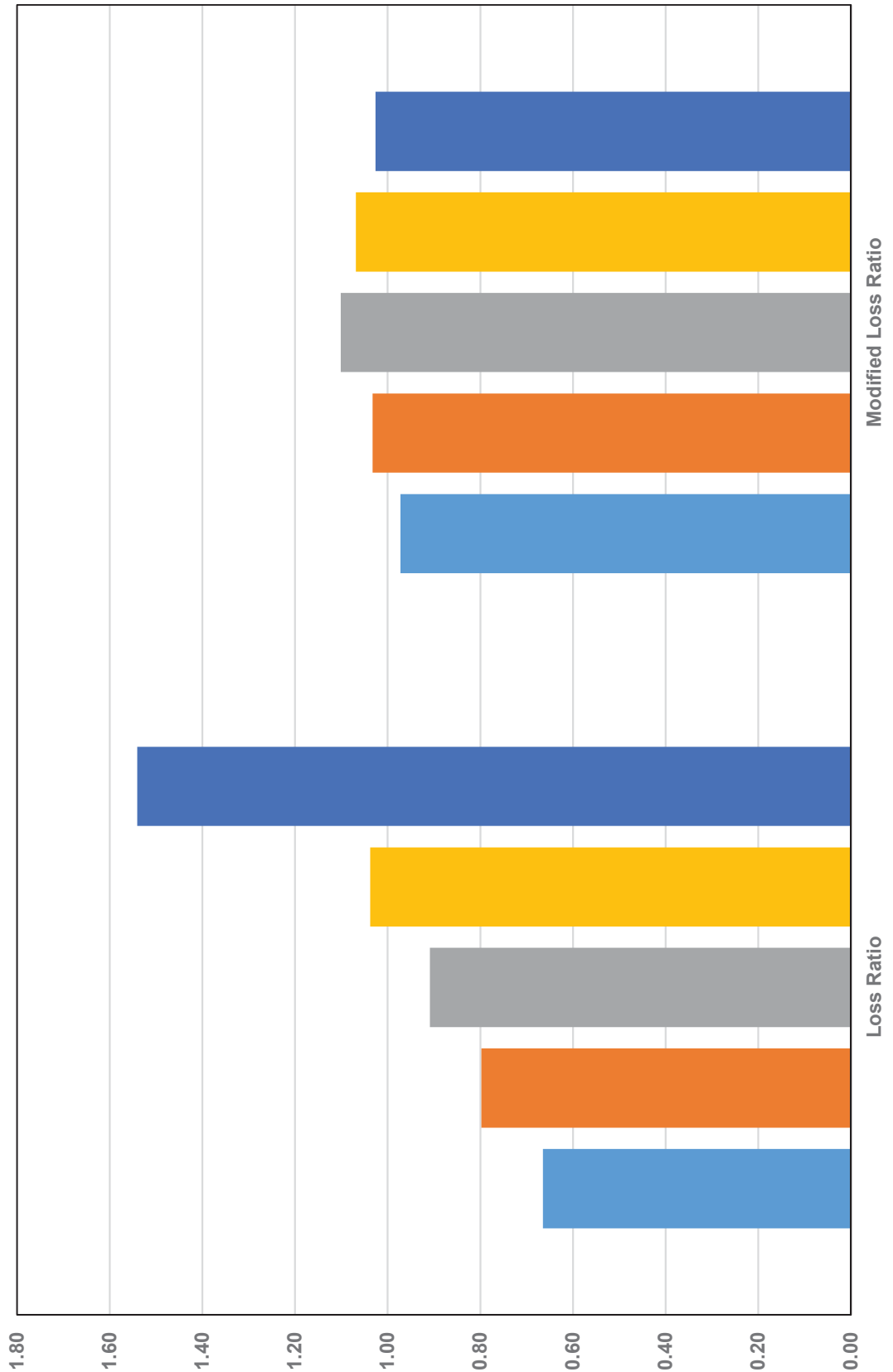
**2013 - 2017 Projection Year Loss Ratios by Modification Quintile
All Industries - 3rd 20% of Expected Losses: 19,128 Risks - 0% Claim-Free**

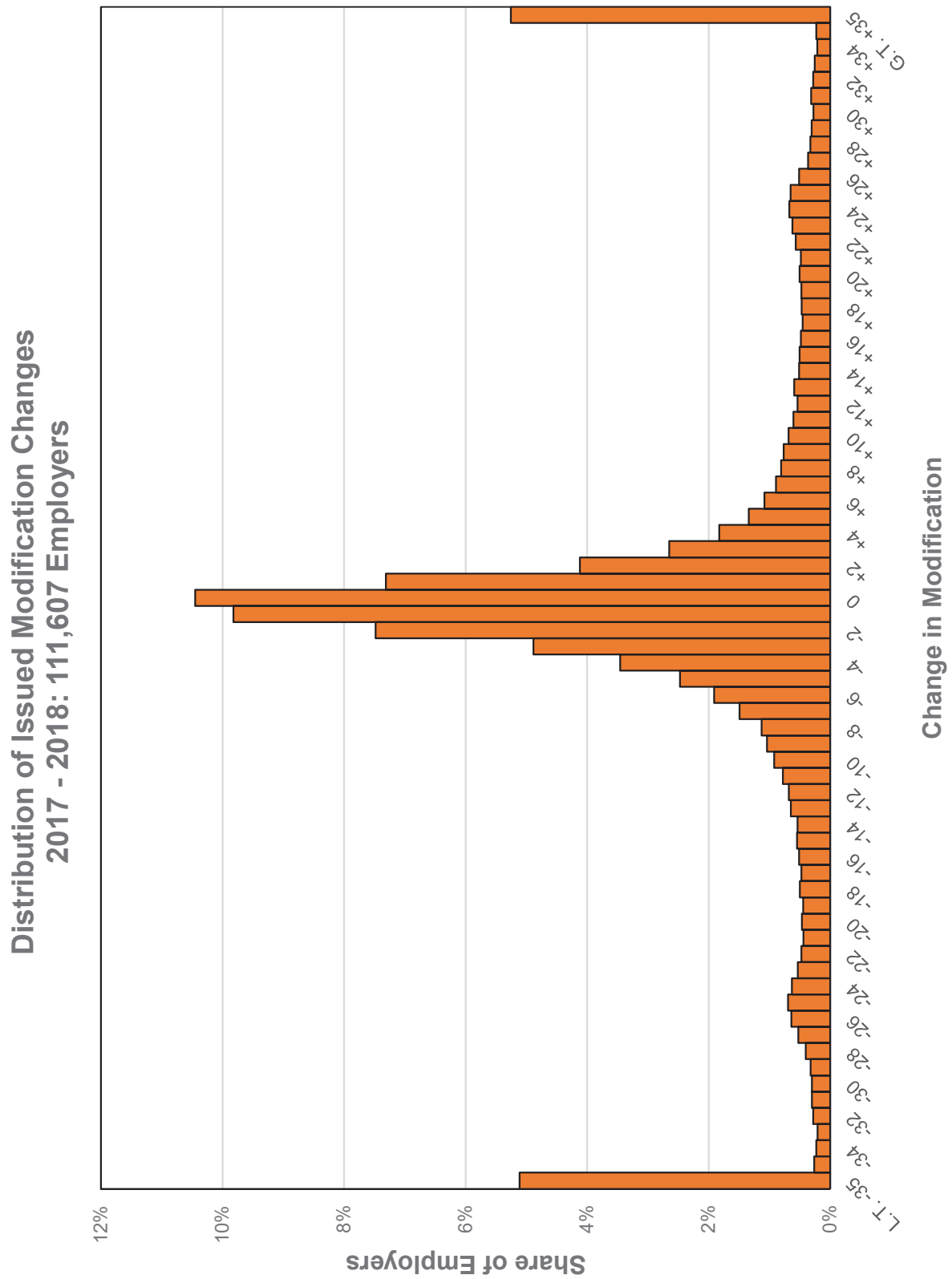


**2013 - 2017 Projection Year Loss Ratios by Modification Quintile
All Industries - 4th 20% of Expected Losses: 77,013 Risks - 5% Claim-Free**

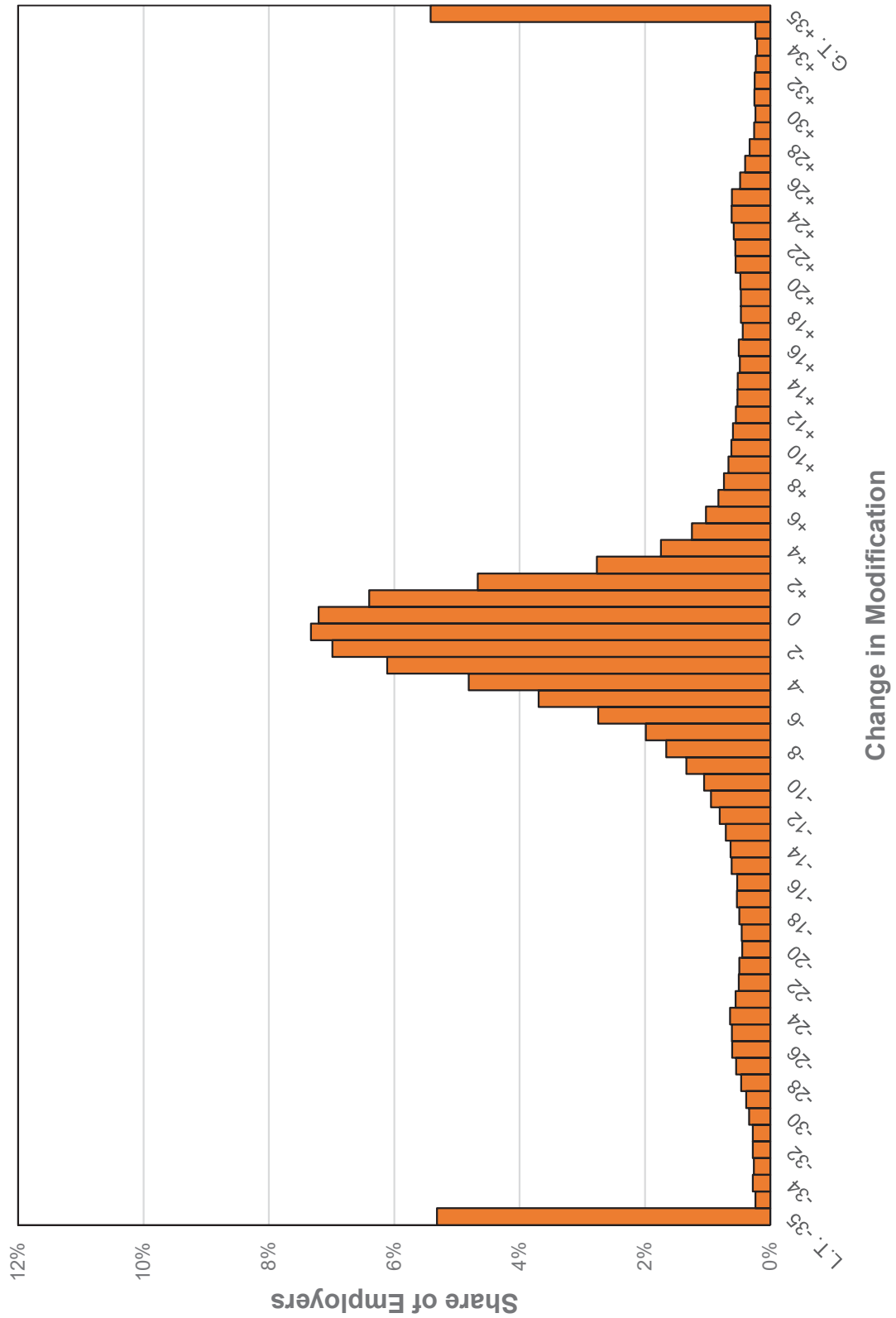


2013 - 2017 Projection Year Loss Ratios by Modification Quintile
All Industries - 5th 20% of Expected Losses: 398,637 Risks - 42% Claim-Free

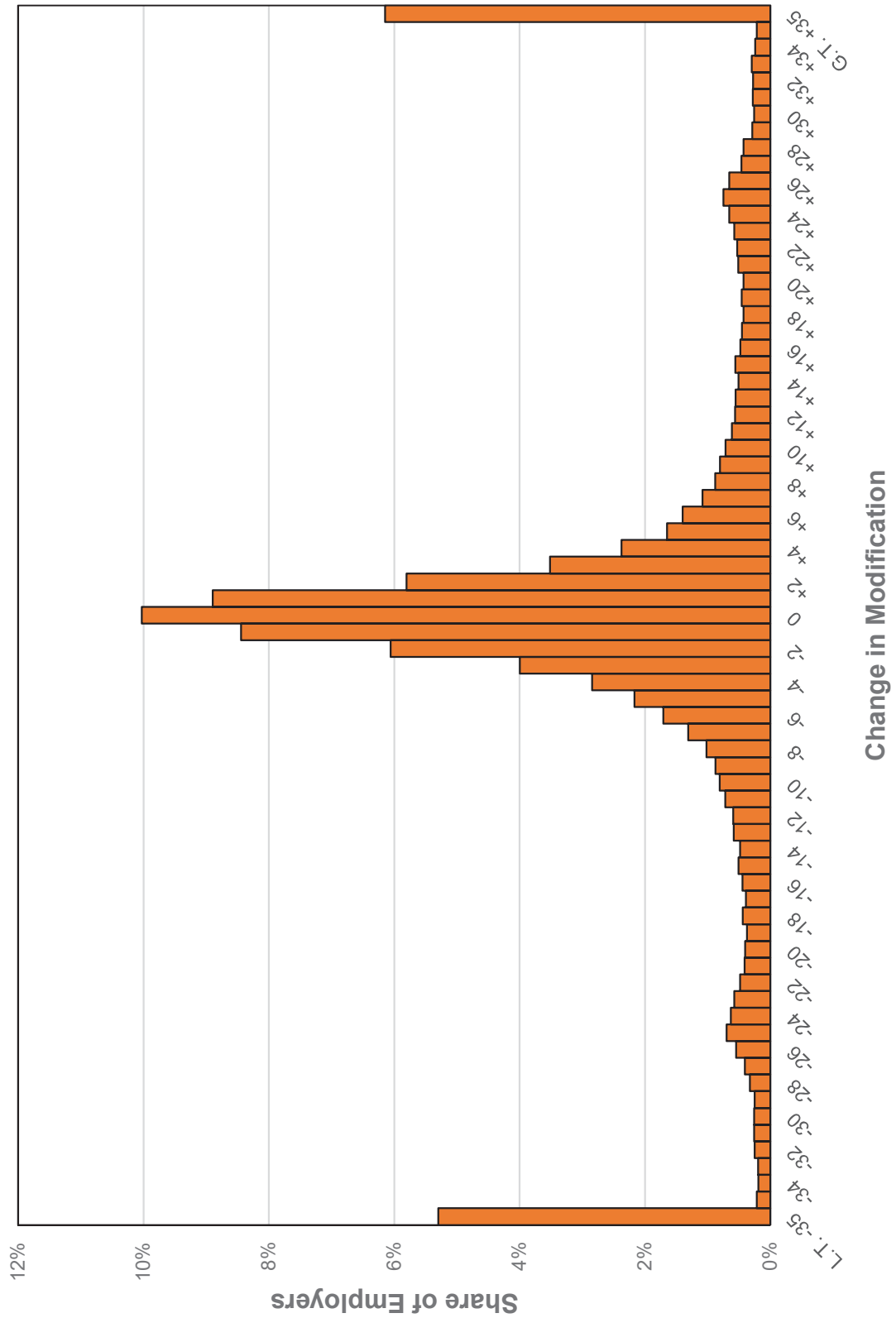




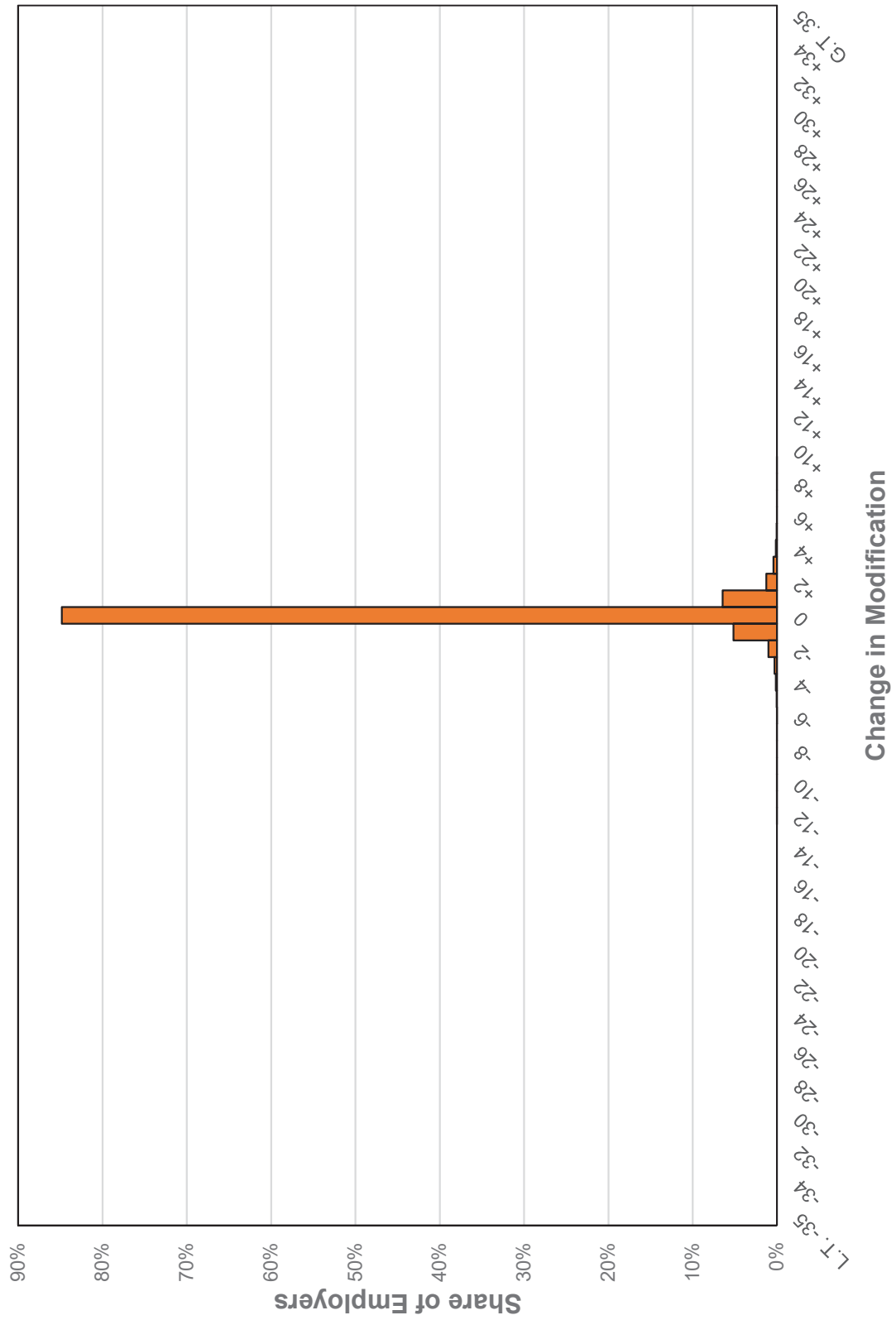
**Distribution of Issued Modification Changes
2018 - 2019: 114,677 Employers**



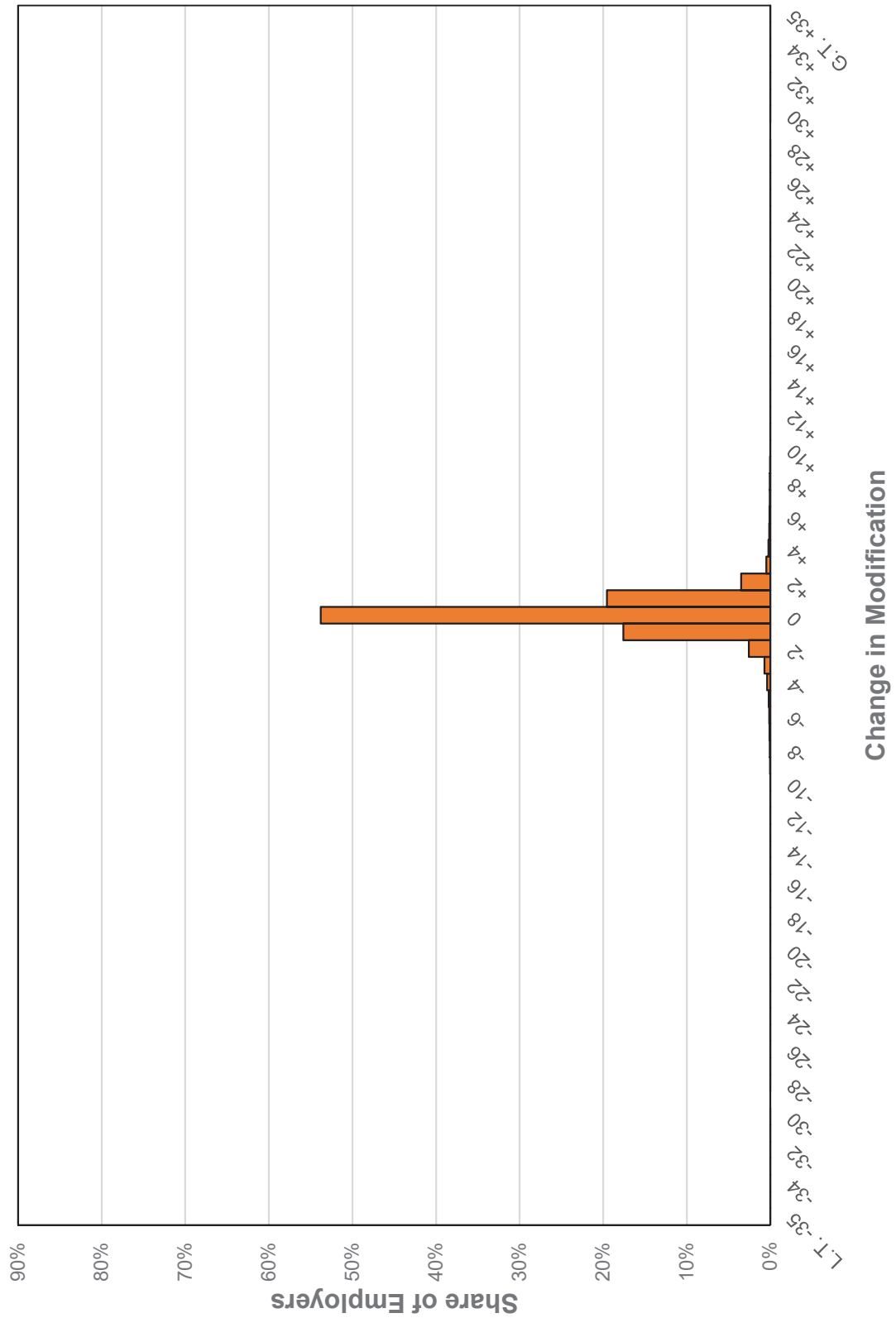
**Distribution of Issued Modification Changes
2019 - 2020: 67,000 Employers**



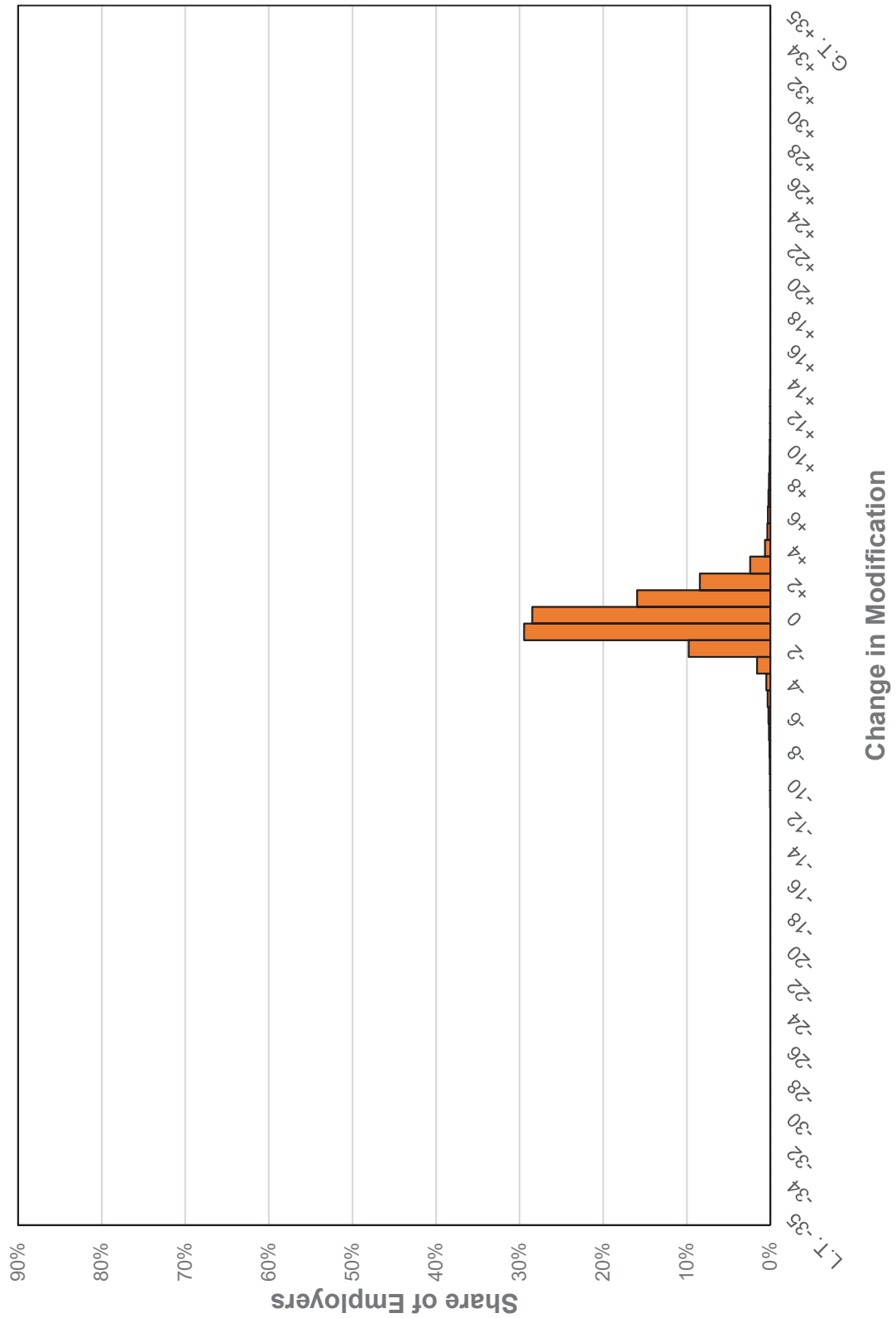
Changes in Issued 2019 & 2020 Modifications due to D-Ratio Credibility Calculation



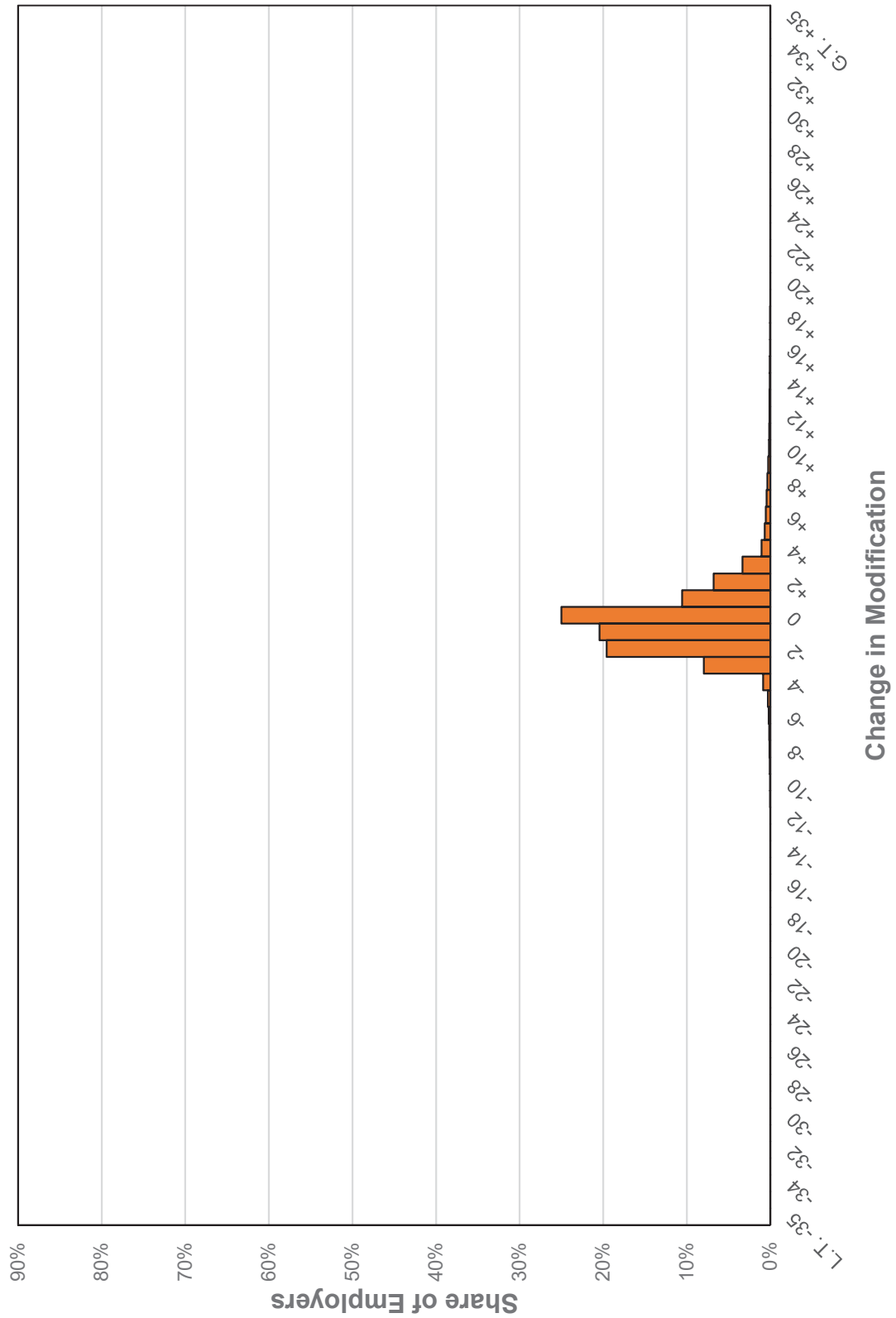
Changes in Issued 2019 & 2020 Modifications due to 1-Year Changes to Variable Split Expected Loss Ranges



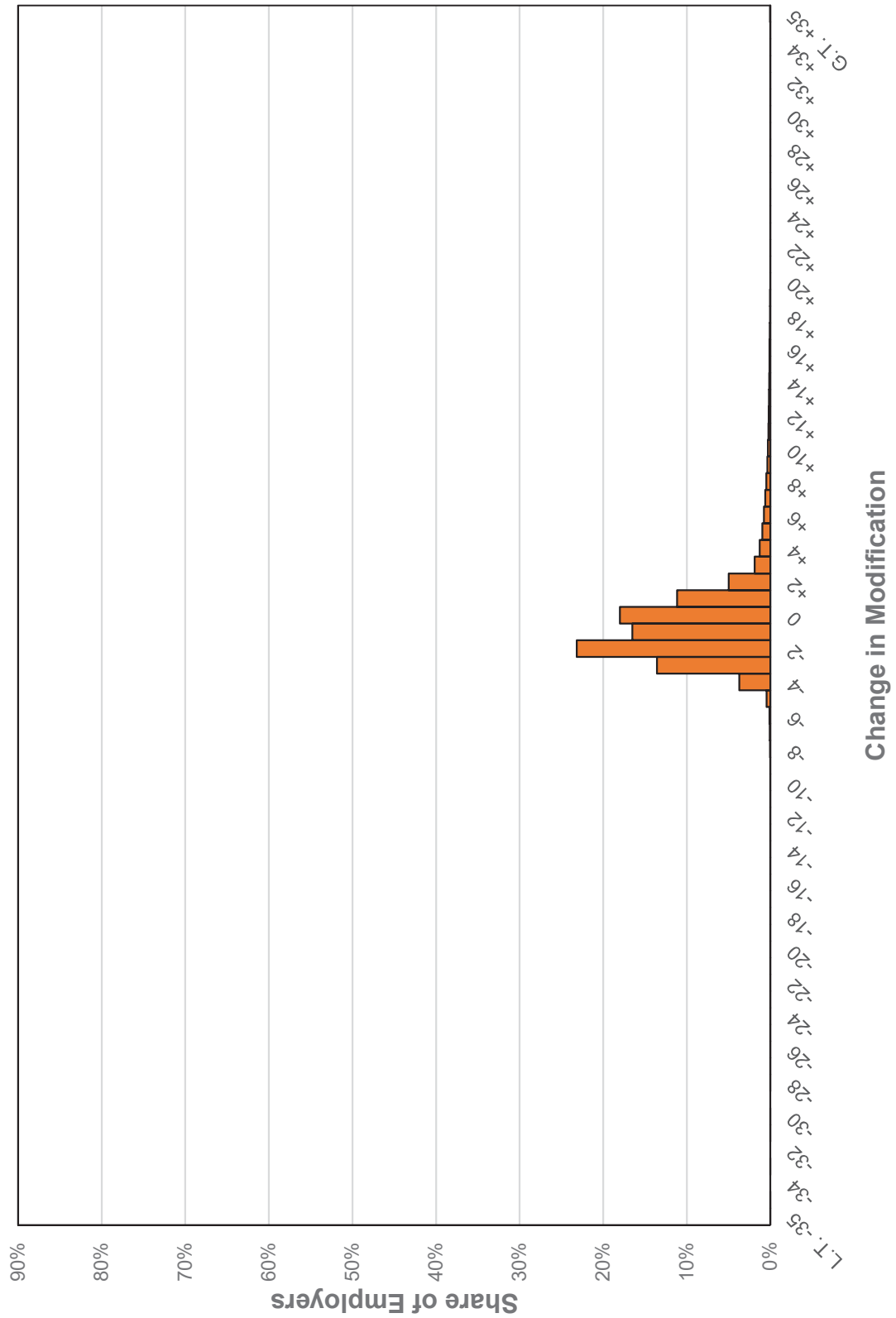
Changes in Issued 2019 & 2020 Modifications due to 2-Year Changes to Variable Split Expected Loss Ranges



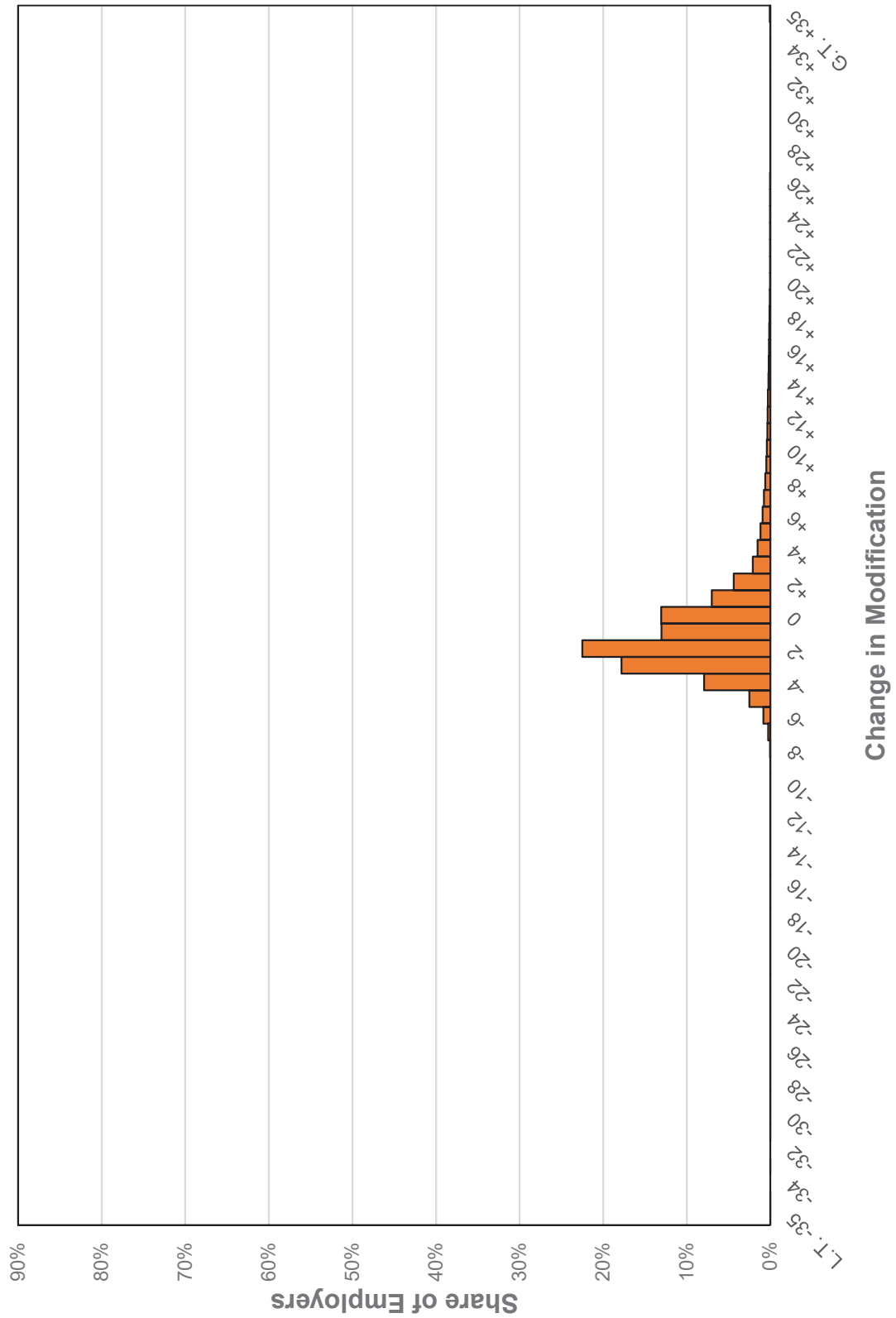
Changes in Issued 2019 & 2020 Modifications due to 3-Year Changes to Variable Split Expected Loss Ranges



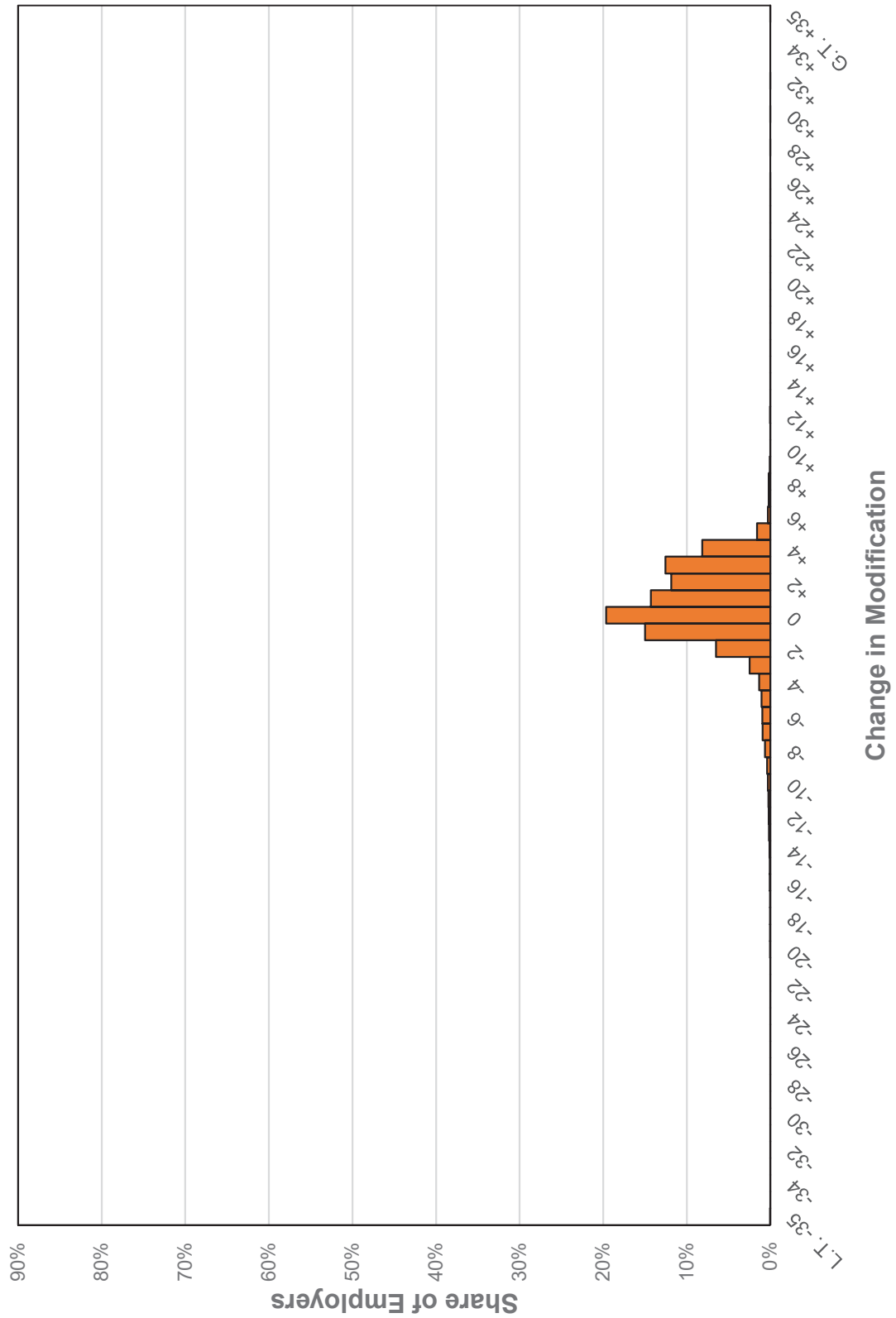
Changes in Issued 2019 & 2020 Modifications due to 4-Year Changes to Variable Split Expected Loss Ranges



Changes in Issued 2019 & 2020 Modifications due to 5-Year Changes to Variable Split Expected Loss Ranges



Changes in Issued 2019 & 2020 Modifications due to All Proposed Changes



Item AC20-04-04
COVID-19 Crisis

The COVID-19 pandemic and resultant shelter-in-place orders are expected to have a significant impact on the workers' compensation system. Potential impacts from a pure premium ratemaking perspective will be discussed at the meeting.