Actuarial Committee

Meeting Agenda

Date	Time	Location	Staff Contact
September 4, 2018	9:30 AM	WCIRB California 1221 Broadway, Suite 900 Oakland, CA	David M. Bellusci

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Released: August 27, 2018

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

I.   Approval of Minutes

   Meeting held on August 1, 2018

II.   Working Group Meeting Summaries

   Claims Working Group Meeting held July 25, 2018

   Medical Analytics Working Group Meeting held August 14, 2018

III. New Business

   A.   AC18-09-01: 6/30/2018 Experience – Review of Methodologies

   B.   AC18-09-02: Cumulative Trauma Claim Study

IV.   Matters Arising at Time of Meeting

V.   Next Meeting Date: December 5, 2018

VI.   Adjournment

Notice

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Claims Working Group

Meeting Summary

To: Participants of the Claims Working Group
Date: August 14, 2018

RE: Summary of July 25, 2018 Meeting

Discussion Topics
At the meeting, the following topics were discussed:

1. **Third Quarter 2018 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. Permanent and temporary disability claims continue to close at faster rates. Permanent disability claim closures have also accelerated in recent periods. A member suggested that, at least on an anecdotal basis, some judges have recently increased scrutiny of early settlements during settlement conferences which could, if this practice becomes widespread, reduce the acceleration of claim closures.

   b. The median and mean duration of temporary disability on permanent disability has continually decreased since 2008. Several Working Group members noted that the trend is largely related to an improved economy with rising salaries, increased number of hours worked, good job opportunities and other factors which encourage claimants to return to work.

   c. The quarterly number of eligible independent medical review (IMR) provisions of Senate Bill No. 863 (SB 863) increased significantly during the first half of 2018 compared to 2017. The Working Group noted that this increase may be attributed to improved efficiency from certain applicant attorney firms streamlining the IMR submission process.

   d. Lien filing continues to decrease significantly from 2017 through the second quarter of 2018, which is likely due to the additional lien restrictions from Senate Bill No. 1160 and Assembly Bill No. 1244 (effective January 1, 2017). The Working Group suggested that another factor leading to the decrease may be the consolidation of multiple objections on a single lien as opposed to filing individual liens.

   e. Pharmaceutical payments decreased dramatically from service year 2013 to 2017. The Working Group suggested that the decrease is largely driven by greater awareness of opioid abuse, IMR, anti-fraud efforts and medical fee schedule changes.

Meeting Summary

Date: August 14, 2018

2. **Update on WCIRB Study of Cumulative Trauma Claims**

Staff presented a preliminary summary of its study of cumulative trauma (CT) claims. The Working Group noted that the recent increases in CT claims has been focused in the Los Angeles and San Diego regions. It was also noted that CT claims are reported much later than other types of claims, are often filed on a post-termination basis, are often initially denied by the insurer, and almost always are represented. Staff received several suggestions from the Working Group to enhance the study, which will be finalized in September.

3. **Update on Medical Severity Trends**

Staff presented an updated analysis on the medical severity trends by medical component using medical transaction information through service year (SY) 2017. It was noted that the share of total medical payments for pharmaceuticals decreased by more than half from the second half of SY2012 to SY2017, while that of medical-legal (ML) services increased by 2%. The relative share of other medical components has experienced very modest changes. Staff noted that while the ML services share has increased since 2012, it was noted that recently there had been a decline in the most complex and expensive services (ML104) and an increase in the most basic ML services (ML102), which has offset some of the increase in prior years.

Staff summarized the changes in inpatient costs at both the transaction and episode levels. Staff noted a continued reduction in transactions per claim from SY2015 to SY2017, while the paid per transaction increased. This was likely in part attributable to the changes to the fee schedule applicable to Ambulatory Surgery Centers and a shift of minor inpatient procedures to outpatient settings, leaving more intensive (and more expensive) care to dominate the remaining inpatient procedures.

On a cumulative basis, staff noted that the total medical payments per claim based on medical transaction data have declined by 16% from the second half of SY2012 to SY2017, which was largely attributable to the impact of SB 863, subsequent legislation and anti-fraud efforts. For physician services, staff noted a sharp increase in paid per transaction for Evaluation & Management, Physical Therapy and Other Medicine, and a large drop in payments per transaction for major Surgery, Radiology and Anesthesia services. It was noted that these changes were expected with the four-year transition to the Resource-Based Relative Value Scale (RBRVS) based schedule during this period.

4. **Legislative, Regulatory and Judicial Update**

The Working Group reviewed pending legislation in 2018 as provided in the meeting materials. With respect to regulations, a Working Group member advised that the Division of Workers' Compensation received a significant number of comments in response to posting the Medical-Legal Fee Schedule Bill Regulations in the pre-rulemaking forum, but that it was unclear if the Fee Schedule is subject to the formal rulemaking process.

The Working Group also reviewed the pending cases included in the meeting materials. The Working Group discussed that oral arguments before the California Supreme Court in *King v. CompPartners* were held in May 2018. The Working Group discussed that if the Court holds that a utilization review organization can be subject to tort liability: (1) the cost to perform utilization review will likely increase, (2) it may become difficult to find doctors willing to perform utilization review and (3) more treatment, particularly of controversial procedures, may be approved.

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The Working Group also discussed the recent decision by the California Supreme Court in *Dynamex v. Superior Court* which established the stricter "ABC Test" when classifying workers as independent contractors for wage and hour purposes. It was noted that to the extent the decision impacts status decisions for workers' compensation purposes, both premium and loss amounts could be impacted.

Finally, a Working Group member mentioned a recent Workers' Compensation Appeals Board decision that is likely to be appealed to the California Court of Appeals involving cumulative trauma claims and whether a mere change in employment gives rise to a new cumulative trauma claim.

Medical Analytics Working Group

Meeting Summary

To: Participants of the Medical Analytics Working Group
Date: August 27, 2018

RE: Summary of August 14, 2018 Meeting

Insurer Meeting Participants Were Reminded of the Antitrust Notice
As members of the Workers' Compensation Insurance Rating Bureau of California, you are bound, when involved in meetings or other activities of the WCIRB California, to limit your actions (and discussions other than social ones) to matters relating to the business of the WCIRB California. Matters that do not relate directly to WCIRB California business should be avoided. Members should particularly avoid discussions or conduct that could be construed as intended to affect competition (or access to markets). Thus, as members, you should not discuss or pursue the business interests of individual insurers or others, including, in particular, the plans of individual members involving, or the possibility or desirability of (a) raising, lowering, or stabilizing prices (premiums or commissions); (b) doing business or refusing to do business with particular, or classes of, insurers, reinsurers, agents, brokers, or insureds, or in particular locales; or (c) potential actions that would affect the availability of products or service either generally or in specific markets or locales.

Discussion Topics
At the meeting, the following topics were discussed:

1. **Follow-up Analysis on Heavy Opioid Use in California Workers' Compensation**
   After the last Working Group meeting, staff shared a plan for a follow-up analysis on heavy opioid use with the Working Group and received helpful feedback. At this meeting, staff discussed the methodology and presented some preliminary findings of its follow-up analysis, which focuses on the early indicators of heavy opioid use and potential alternative treatments to heavy use of opioids. Staff noted that for purposes of the analysis, a claimant that used 50 Medical Morphine Equivalents (MME) or more per day for 30 days was identified as a "heavy opioid user". The Working Group agreed that the threshold was reasonable to identify those facing more adverse effects of using opioids, but suggested researching the most appropriate term to categorize this group (e.g., "users with extended high risk"). One member suggested examining how long it takes to become a heavy opioid user.

   Regarding early indicators, staff noted heavy opioid users were more likely to use opioids for more than 30 days, and more likely to fill prescriptions of similar opioids from multiple sources. The Working Group suggested it would be more meaningful to identify the number of unique prescribers and examine if heavy opioid users obtained similar opioids from different prescribers. In addition, staff noted that heavy opioid users were more likely to be prescribed long-acting opioids.

   Regarding potential alternatives to heavy use of opioids, staff summarized the patterns of reduced opioid use and co-prescribing of opioids and buprenorphine. The Working Group suggested a few additional alternatives to study, including addiction treatments, functional restoration programs, durable medical equipment, physical medicine treatments, and cognitive behavioral therapies. Staff

agreed to incorporate the Working Group's feedback and provide a draft of the analysis for the Working Group to review within the next few months.

2. Methodology for Developing Diagnostic Groups

Staff presented the methodology and a preliminary list of diagnostic groups developed with the intent to characterize the principal medical diagnosis for workers' compensation claims as they initially are treated within the system. Staff noted that the 26 diagnostic groups were developed using the International Classification of Diseases (ICD) information reported in the WCIRB's medical transaction data. The analysis started with ICD data within 30 days of the date of injury (DOI), and will extend to 60 days and 90 days from the DOI to assess the best timeframe to identify the principal diagnosis for each claim.

The Working Group suggested analyzing medical transaction data relative to the date of the first service, excluding medical transactions related to medical-legal (ML) services, examining ICD information related to pharmaceuticals, and grouping cumulative trauma claims separately. Staff also received input from the Working Group on creating groups for multiple injuries/diseases. Staff agreed to incorporate the Working Group's feedback and provide an updated list of the diagnostic groups for the Working Group to review within the next few months.

3. Update on the Medical Severity Trends by Component

Staff presented an updated analysis on the medical severity trends by medical component using medical transaction information through service year (SY) 2017. It was noted that the share of total medical payments for pharmaceuticals decreased by more than half from the second half of SY2012 to SY2017, while that of ML services increased by 2%. The relative share of other medical components experienced very modest changes. Staff noted that while the ML services share had increased since 2012, there recently had been a decline in the most complex and expensive services (ML104) and an increase in the most basic ML services (ML102), which has offset some of the increase in prior years.

Staff summarized the changes in inpatient costs at both the transaction and episode levels, and noted a continued reduction in transactions per claim from SY2015 to SY2017, while the paid per transaction increased. This was likely in part attributable to the changes to the fee schedule applicable to Ambulatory Surgery Centers (ASC) and a shift of minor inpatient procedures to outpatient settings, leaving more intensive (and more expensive) care to dominate the remaining inpatient procedures. Staff also summarized the changes in outpatient costs separately for the ASCs and Hospital outpatient departments. The patterns of costs and transactions of the two groups are very similar. A Working Group member suggested analyzing the pattern combining ASCs and the inpatient care to help assess whether there has been a service shift from inpatient settings to the ASCs.

On a cumulative basis, staff noted that the total medical payments per claim based on medical transaction data have declined by 16% from the second half of SY2012 to SY2017, which was largely attributable to the impact of SB 863, subsequent legislation and anti-fraud efforts. For physician services, staff noted a sharp increase in paid per transaction for Evaluation & Management, Physical Therapy and Other Medicine, and a large drop in payments per transaction for major Surgery, Radiology and Anesthesia services. It was noted that these changes were expected with the four-year transition to the resource-based relative value scale (RBRVS) schedule during this period. A Working Group member suggested grouping Physical Therapy, Acupuncture and Chiropractic services together under Physician Services when analyzing the costs per claim.

4. Potential Physical Medicine Study

The Working Group was advised that, as suggested by the Working Group in the prior meeting, staff anticipates conducting an in-depth analysis of physical medicine costs in early 2019. Staff shared the key research areas contemplated, including (1) the overall patterns of physical medicine treatments and costs by injury type, industry and geographic region, and (2) physical medicine treatments for soft tissue injuries, including access to care, types of treatment, management of care, and treatment outcomes. The Working Group suggested analyzing physical therapy treatments after an emergency room or physician office visits, differentiating cumulative trauma claims from other claims, and examining utilization of different modalities.

5. Potential Future WCIRB Medical Analytics Research

Staff shared with the Working Group potential additional Medical Analytics research topics for 2019, including the impact of the drug formulary, the impact of the 30-day rule regarding utilization review pursuant to Senate Bill No. 1160, an expanded analysis related to provider fraud and an analysis of "jumbo" claims.

Item AC18-09-01
6/30/2018 Experience – Review of Methodologies

At the August 1, 2018 meeting, the Committee reviewed statewide experience through March 31, 2018 and recommended a series of loss development and trending methodologies for the purposes of the WCIRB's January 1, 2019 Pure Premium Rate Filing. At the August 8, 2017 meeting, the Governing Committee authorized the WCIRB to submit the filing using a loss projection based on the methodologies recommended by the Actuarial Committee. On August 20, 2018, the WCIRB submitted its filing to the California Department of Insurance. In the filing, the WCIRB advised that it "will be reviewing accident year experience valued as of June 30, 2018 once it is received and, if authorized by the WCIRB Governing Committee, will amend the pure premium rates proposed in this filing."

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

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

Additional supplemental information is included in Exhibits 9 through 12.

California Workers' Compensation

Accident Year Experience as of June 30, 2018

Year	Earned Premium	Paid Indemnity	Indemnity Reserves	Paid Medical**	Medical Reserves	IBNR*	Total Incurred**	Loss Ratio*
1986	3,506,609,097	1,382,590,741	4,803,485	1,138,613,895	37,672,914	11,765,230	2,575,446,265	0.734
1987	4,374,085,383	1,505,134,845	7,214,143	1,328,953,137	44,601,450	59,212,085	2,945,115,660	0.673
1988	5,173,049,472	1,702,332,658	6,528,018	1,535,575,155	38,964,520	45,439,768	3,328,840,119	0.643
1989	5,674,529,942	1,937,848,179	8,442,856	1,790,482,824	54,814,218	41,353,012	3,832,941,089	0.675
1990	5,698,665,461	2,255,180,782	9,017,579	2,034,439,017	53,943,889	65,211,947	4,417,793,214	0.775
1991	5,863,319,243	2,471,241,212	15,927,134	2,186,116,875	62,504,088	65,400,322	4,801,189,631	0.819
1992	5,681,466,382	1,971,822,786	13,644,268	1,749,192,735	66,360,185	64,855,531	3,865,875,505	0.680
1993	5,928,480,359	1,689,776,534	14,256,905	1,499,741,399	80,693,114	45,930,663	3,330,398,615	0.562
1994	5,022,749,028	1,622,557,780	20,650,400	1,456,552,726	93,893,118	47,285,865	3,240,939,889	0.645
1995	3,778,975,599	1,756,191,512	29,138,323	1,602,454,624	112,037,894	62,306,990	3,562,129,343	0.943
1996	3,736,857,547	1,941,797,281	36,779,830	1,694,318,380	118,835,124	76,639,321	3,868,369,936	1.035
1997	3,916,944,392	2,300,827,092	44,412,407	1,986,808,641	147,044,207	116,369,494	4,595,461,841	1.173
1998	4,322,051,270	2,753,341,720	61,246,107	2,603,168,351	239,996,563	207,467,821	5,865,220,562	1.357
1999	4,537,629,086	3,032,338,664	57,630,102	2,990,039,125	215,058,191	278,935,829	6,574,001,911	1.449
2000	5,905,419,052	3,399,426,046	79,910,789	3,512,623,303	254,420,258	411,286,690	7,657,667,086	1.297
2001	10,094,684,192	4,797,875,407	121,562,973	5,276,009,082	416,435,471	659,193,361	11,271,076,294	1.117
2002	13,405,893,679	4,724,902,779	113,932,435	5,392,091,437	398,825,440	894,152,580	11,523,904,671	0.860
2003	19,429,675,115	4,488,062,095	171,241,795	4,957,440,373	400,903,103	1,291,771,481	11,309,418,847	0.582
2004	23,043,963,090	3,159,911,958	143,773,554	3,965,550,206	355,674,908	1,409,475,842	9,034,386,468	0.392
2005	21,350,709,483	2,484,601,513	126,454,264	3,559,585,184	352,260,942	1,148,166,053	7,671,067,956	0.359
2006	17,205,061,787	2,567,905,339	142,088,378	3,658,992,358	369,477,290	938,642,264	7,677,105,629	0.446
2007	13,252,379,499	2,690,224,931	160,571,395	3,906,781,663	425,626,603	797,908,476	7,981,113,068	0.602
2008	10,744,360,124	2,729,113,853	185,073,335	3,899,527,365	433,437,868	603,253,810	7,850,406,231	0.731
2009	8,877,640,496	2,586,136,870	182,821,008	3,683,476,055	430,798,686	619,652,057	7,502,884,676	0.845
2010	9,398,228,398	2,593,675,742	189,800,151	3,755,780,554	409,486,256	722,861,771	7,671,604,474	0.816
2011	10,129,285,077	2,529,012,604	221,368,782	3,371,506,122	471,899,388	947,072,957	7,540,859,853	0.744
2012	11,692,134,220	2,524,225,757	266,027,295	3,205,398,445	519,661,827	1,170,324,826	7,685,638,150	0.657
2013	14,149,827,161	2,499,431,258	309,000,183	2,992,045,293	572,961,764	2,093,274,266	8,466,712,764	0.598
2014	15,997,914,039	2,469,831,426	448,240,916	2,764,428,150	687,567,237	2,996,426,142	9,366,493,871	0.585
2015	17,063,477,971	2,239,754,021	623,996,013	2,446,083,114	953,478,342	3,960,303,125	10,223,614,615	0.599
2016	17,953,201,345	1,673,564,305	837,176,528	1,932,208,366	1,212,815,002	4,742,221,711	10,397,985,912	0.579
2017	17,673,010,658	859,769,592	939,695,848	1,239,278,088	1,437,231,342	5,806,569,054	10,282,543,924	0.582
2018	8,737,734,529	93,009,813	309,280,879	181,685,892	644,351,138	3,476,499,278	4,704,827,000	0.538

  * Shown for informational purposes only.

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

Source: WCIRB quarterly experience calls

Incurred Indemnity Loss Development Factors

Age-to-Age (in months)

Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198
1992																0.999
1993															1.001	0.999
1994														1.001	0.999	1.001
1995													1.003	1.002	1.000	1.002
1996												1.001	1.000	1.000	1.002	1.001
1997											1.002	1.002	1.002	1.002	1.000	1.001
1998										1.004	1.001	1.005	1.004	1.000	1.002	1.001
1999									1.007	1.002	1.004	1.003	1.004	1.001	1.001	1.001
2000								1.006	1.005	1.005	1.005	1.002	1.004	1.002	1.001	1.001
2001							1.013	1.006	1.008	1.008	1.005	1.004	1.002	1.001	1.002	1.001
2002						1.017	1.010	1.010	1.008	1.007	1.002	1.004	1.002	1.002	1.002	
2003					1.028	1.016	1.020	1.017	1.010	1.008	1.005	1.003	1.003	1.003		
2004				1.044	1.032	1.029	1.021	1.015	1.014	1.005	1.005	1.002	1.001			
2005			1.083	1.059	1.047	1.035	1.020	1.013	1.009	1.004	1.005	1.004				
2006		1.158	1.089	1.067	1.044	1.029	1.020	1.008	1.007	1.008	1.004					
2007	1.446	1.171	1.090	1.060	1.040	1.028	1.017	1.012	1.008	1.005						
2008	1.472	1.200	1.100	1.057	1.034	1.022	1.017	1.009	1.010							
2009	1.504	1.190	1.106	1.059	1.035	1.021	1.016	1.011								
2010	1.502	1.199	1.096	1.055	1.030	1.022	1.014									
2011	1.487	1.180	1.092	1.046	1.029	1.022										
2012	1.471	1.174	1.083	1.049	1.030											
2013	1.453	1.161	1.076	1.042												
2014	1.464	1.174	1.082													
2015	1.465	1.152														
2016	1.439															
Selected (a)	1.439	1.152	1.082	1.042	1.030	1.022	1.014	1.011	1.010	1.006	1.004	1.003	1.003	1.002	1.001	1.001
Cumulative	2.099	1.459	1.266	1.170	1.123	1.090	1.067	1.052	1.041	1.031	1.024	1.020	1.017	1.014	1.013	1.011

(a) Selections are latest year for the 18-to-30 month through 102-to-114 month factors and six-year average for the subsequent age-to-age factors.

Incurred Indemnity Loss Development Factors (Continued)

Age-to-Age (in months)

Accident Year	222/210	234/222	246/234	258/246	270/258	282/270	294/282	306/294	318/306	330/318	342/330	354/342	366/354	378/366	390/378	402/390	ULT/402Inc (b)
1982										1.001	1.000	1.002	1.000	1.001	1.000	1.001	
1983									0.999	1.001	1.001	1.001	1.001	1.000	1.000	1.000	
1984								1.000	1.000	1.001	1.001	1.001	1.000	1.000	1.000	1.000	
1985							1.000	1.001	1.000	1.001	1.001	1.001	1.000	1.000	1.000		
1986						1.000	1.001	1.000	1.002	1.002	1.000	0.999	1.001	1.001			
1987					1.000	1.001	1.000	1.002	1.001	1.000	1.001	1.001	1.000				
1988			1.001	1.000	1.000	1.002	1.002	1.000	1.000	1.000	1.000	1.000					
1989			1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.001	1.000	1.000					
1990		1.001	1.000	1.000	1.001	1.000	1.001	1.000	1.000	1.000	1.000						
1991	1.001	1.000	1.001	1.000	1.001	1.001	1.001	1.000	1.000	1.000							
1992	1.000	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000								
1993	1.000	1.001	1.001	1.002	1.001	1.000	1.000	1.000									
1994	1.002	1.002	1.000	1.000	1.000	1.000	1.000	1.000									
1995	1.002	0.999	1.001	1.000	1.000	1.000											
1996	1.002	1.000	1.000	1.001	1.000												
1997	1.000	1.000	1.002	0.999													
1998	1.001	1.002															
1999	1.000	1.001															
2000	1.002																
Selected (a)	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	
Cumulative	1.010	1.009	1.008	1.008	1.007	1.007	1.006	1.006	1.006	1.006	1.005	1.005	1.005	1.005	1.004	1.004	1.004

(b) The ULT/402Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 114-to-126 through 342-to-354 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Incurred Medical Loss Development Factors

Age-to-Age (in months) (b)

Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198
1992																1.007
1993															1.011	1.009
1994														1.009	1.018	1.010
1995													1.022	1.012	1.005	1.012
1996												1.020	1.015	1.017	1.008	1.006
1997											1.018	1.019	1.010	1.008	1.006	1.003
1998										1.019	1.020	1.010	1.010	1.012	1.008	1.008
1999									1.025	1.018	1.016	1.011	1.011	1.010	1.002	1.000
2000								1.022	1.022	1.019	1.018	1.014	1.010	1.003	0.996	0.996
2001							1.041	1.028	1.032	1.019	1.015	1.019	1.002	0.998	0.997	0.997
2002						1.037	1.034	1.026	1.026	1.018	1.010	1.006	0.997	0.999	1.001	
2003					1.050	1.043	1.038	1.033	1.024	1.016	1.006	0.999	1.001	0.999		
2004				1.071	1.060	1.052	1.036	1.029	1.024	1.006	1.003	0.998	0.999			
2005			1.076	1.083	1.065	1.053	1.038	1.026	1.014	1.007	1.000	1.003				
2006		1.141	1.092	1.073	1.055	1.050	1.030	1.014	1.004	1.003	1.003					
2007	1.293	1.150	1.101	1.074	1.063	1.036	1.025	1.011	1.006	1.003						
2008	1.294	1.164	1.106	1.077	1.051	1.031	1.017	1.006	1.006							
2009	1.322	1.170	1.117	1.072	1.042	1.023	1.009	1.007								
2010	1.347	1.184	1.096	1.058	1.035	1.017	1.011									
2011	1.340	1.157	1.090	1.049	1.023	1.016										
2012	1.282	1.127	1.071	1.044	1.022											
2013	1.257	1.107	1.061	1.027												
2014	1.240	1.111	1.050													
2015	1.247	1.097														
2016	1.214															
Selected (a)	1.214	1.097	1.050	1.027	1.022	1.016	1.011	1.007	1.013	1.009	1.006	1.007	1.003	1.004	1.002	1.002
Cumulative	1.654	1.362	1.242	1.183	1.152	1.127	1.109	1.097	1.089	1.075	1.066	1.059	1.053	1.049	1.045	1.044

(a) Selections are latest year for the 18-to-30 month through 102-to-114 month factors and six-year average for the subsequent age-to-age factors.

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

Incurred Medical Loss Development Factors (Continued)

Age-to-Age (in months)

Accident Year	222/210	234/222	246/234	258/246	270/258	282/270	294/282	306/294	318/306	330/318	342/330	354/342	366/354	378/366	390/378	402/390	ULT/402Inc (c)
1982											1.002	1.009					1.029
1983										1.009	1.004	1.004	1.002	1.004	1.000	1.000	
1984								1.001	1.005	1.003	1.001	1.002	1.003	0.997	1.000	1.001	
1985							1.004	1.002	1.001	1.004	1.003	1.004	0.999	1.000	0.999	0.999	
1986						1.003	1.006	1.007	1.003	1.005	1.004	1.001	1.000	0.998	1.009		
1987					1.004	1.010	1.001	1.004	1.005	1.004	1.001	1.001	1.000	1.001			
1988				1.004	1.005	1.003	1.005	1.003	1.003	1.004	1.001	0.999	0.998				
1989			1.006	1.006	1.006	1.006	1.005	1.000	1.003	1.003	0.999	0.999					
1990		1.005	1.007	1.005	1.003	1.003	0.999	1.000	1.002	0.998	0.998						
1991	1.007	1.005	1.004	1.002	1.004	1.001	1.002	1.001	1.001	1.000							
1992	1.007	0.997	1.007	1.004	1.004	1.002	0.999	0.999	0.999	0.999							
1993	1.004	1.013	1.011	1.002	1.000	0.998	0.996	0.999	1.002								
1994	1.012	1.005	1.006	1.001	1.003	0.993	1.000										
1995	1.002	1.007	1.002	0.999	0.999	0.998											
1996	1.008	1.001	0.998	1.002	0.996												
1997	0.998	0.994	0.998	0.998													
1998	1.000	0.997	0.999														
1999	0.996	1.001															
2000	0.998																
Selected (a)	1.000	1.001	1.002	1.001	1.001	0.999	1.000	1.000	1.001	1.001	1.001	1.001	1.000	1.000	1.002	1.000	
Cumulative	1.042	1.042	1.041	1.038	1.037	1.036	1.037	1.037	1.035	1.033	1.033	1.032	1.031	1.031	1.031	1.029	

(c) The ULT/402Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 114-to-126 through 342-to-354 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Paid Indemnity Loss Development Factors

Age-to-Age (in months)

Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198
1992																1.002
1993															1.003	1.002
1994														1.004	1.003	1.004
1995													1.007	1.005	1.003	1.005
1996												1.008	1.007	1.004	1.005	1.004
1997											1.010	1.007	1.007	1.006	1.005	1.004
1998										1.014	1.009	1.009	1.008	1.007	1.005	1.006
1999									1.017	1.012	1.010	1.008	1.008	1.006	1.005	1.004
2000								1.021	1.014	1.011	1.010	1.008	1.008	1.006	1.004	1.004
2001							1.028	1.020	1.016	1.013	1.012	1.009	1.008	1.006	1.006	1.005
2002						1.039	1.025	1.018	1.017	1.014	1.009	1.009	1.006	1.006	1.005	
2003					1.056	1.035	1.028	1.025	1.022	1.018	1.014	1.009	1.009	1.007		
2004				1.090	1.060	1.044	1.040	1.032	1.023	1.017	1.013	1.011	1.008			
2005			1.167	1.095	1.068	1.054	1.047	1.033	1.023	1.018	1.014	1.011				
2006		1.337	1.171	1.110	1.077	1.059	1.042	1.027	1.024	1.019	1.014					
2007	1.909	1.351	1.182	1.114	1.076	1.056	1.038	1.031	1.024	1.016						
2008	1.933	1.386	1.200	1.118	1.072	1.049	1.035	1.024	1.020							
2009	2.012	1.402	1.207	1.118	1.075	1.050	1.037	1.027								
2010	2.020	1.414	1.201	1.114	1.073	1.047	1.033									
2011	2.035	1.394	1.190	1.113	1.069	1.047										
2012	2.019	1.387	1.186	1.108	1.067											
2013	2.013	1.389	1.182	1.095												
2014	2.066	1.396	1.176													
2015	2.056	1.372														
2016	1.999															
Selected (a)	1.999	1.372	1.176	1.095	1.067	1.047	1.033	1.027	1.023	1.018	1.014	1.010	1.008	1.006	1.005	1.004
Cumulative	4.724	2.363	1.722	1.465	1.338	1.254	1.197	1.159	1.129	1.104	1.084	1.070	1.059	1.051	1.044	1.039

(a) Selections are latest year for the 18-to-30 month through 102-to-114 month factors and three-year average for the subsequent age-to-age factors.

Paid Indemnity Loss Development Factors (Continued)

Accident Year	222/210	234/222	246/234	258/246	270/258	282/270	294/282	306/294	318/306	330/318	342/330	354/342	366/354	378/366	390/378	402/390	402Inc/402Pd (b)	ULT/402Inc (c)
																	Age-to-Age (in months)	
1982										1.002	1.002	1.001					1.004	
1983										1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.005	
1984									1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.001	1.005	
1985								1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.000	1.005	
1986								1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001		1.003	
1987						1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001				1.003	
1988					1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001						
1989				1.001	1.001	1.002	1.002	1.001	1.001	1.001	1.001	1.001						
1990		1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.000	1.001							
1991	1.002	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001								
1992	1.002	1.001	1.002	1.001	1.001	1.001	1.001	1.001	1.001									
1993	1.003	1.003	1.002	1.003	1.002	1.001	1.001	1.001										
1994	1.004	1.003	1.002	1.003	1.002	1.002	1.002											
1995	1.004	1.004	1.002	1.002	1.003	1.002												
1996	1.004	1.004	1.004	1.003	1.002													
1997	1.004	1.003	1.002	1.002														
1998	1.005	1.004	1.003															
1999	1.004	1.003																
2000	1.004																	
Selected (a)	1.004	1.003	1.003	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	1.004	1.004
Cumulative	1.035	1.030	1.027	1.024	1.021	1.019	1.017	1.016	1.015	1.014	1.013	1.012	1.011	1.010	1.009	1.008		

(a) Three-year averages of the 402Inc/402Pd factors are selected.

(b) Three-year averages of the 402Inc/402Pd factors are selected.

(c) The ULT/402Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 114-to-126 through 342-to-354 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Paid Medical Loss Development Factors

Unadjusted (a)

Age-to-Age (in months)

Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198
1992																1.009
1993															1.012	1.011
1994														1.013	1.013	1.013
1995													1.019	1.018	1.015	1.014
1996												1.022	1.020	1.015	1.014	1.014
1997											1.024	1.021	1.017	1.016	1.012	1.014
1998										1.031	1.024	1.020	1.018	1.017	1.016	1.016
1999									1.033	1.028	1.027	1.018	1.016	1.017	1.017	1.014
2000								1.034	1.028	1.024	1.022	1.019	1.021	1.017	1.012	1.010
2001							1.042	1.036	1.032	1.025	1.022	1.025	1.018	1.015	1.012	1.010
2002						1.049	1.040	1.031	1.026	1.024	1.020	1.020	1.014	1.015	1.009	
2003					1.065	1.053	1.043	1.031	1.029	1.031	1.023	1.017	1.015	1.012		
2004				1.108	1.079	1.064	1.044	1.038	1.037	1.029	1.020	1.016	1.013			
2005			1.171	1.112	1.084	1.058	1.053	1.046	1.036	1.026	1.020	1.016				
2006		1.291	1.172	1.116	1.078	1.061	1.047	1.038	1.030	1.022	1.017					
2007	1.618	1.300	1.177	1.112	1.085	1.069	1.045	1.036	1.025	1.021						
2008	1.616	1.308	1.183	1.124	1.088	1.060	1.038	1.029	1.023							
2009	1.648	1.328	1.199	1.135	1.083	1.055	1.035	1.028								
2010	1.678	1.353	1.202	1.119	1.080	1.054										
2011	1.699	1.340	1.190	1.121	1.071	1.050										
2012	1.712	1.339	1.183	1.114	1.067											
2013	1.707	1.324	1.180	1.097												
2014	1.701	1.322	1.164													
2015	1.691	1.300														
2016	1.634															

Adjusted (b)

Age-to-Age (in months)

Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198
1999																1.014
2000															1.012	1.010
2001														1.015	1.012	1.010
2002													1.014	1.012	1.009	
2003												1.017	1.015	1.012		
2004											1.020	1.016	1.013			
2005										1.026	1.020	1.016				
2006									1.030	1.022	1.017					
2007								1.036	1.025	1.021						
2008							1.045	1.029	1.023							
2009						1.055	1.038	1.028								
2010					1.080	1.054	1.035									
2011				1.121	1.071	1.052										
2012			1.183	1.114	1.070											
2013		1.324	1.180	1.100												
2014	1.701	1.322	1.168													
2015	1.691	1.303														
2016	1.635															
Selected (c)	1.635	1.303	1.168	1.100	1.070	1.052	1.035	1.028	1.026	1.023	1.019	1.016	1.014	1.013	1.011	1.011
Cumulative Unadjusted for Impact of SB 1160	4.315	2.639	2.026	1.734	1.577	1.473	1.401	1.353	1.316	1.283	1.254	1.231	1.211	1.194	1.179	1.166
Cumulative Adjusted for Impact of SB 1160(d)	4.164	2.560	1.981	1.708	1.564	1.469	---	---	---	---	---	---	---	---	---	---

(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%, -3.4%, -2.4%, -0.9%, and -0.1% to accident years 2011 to 2016, respectively, for the SB 1160 lien reforms.

(c) Selections are latest year for the 18-to-30 month through 102-to-114 month factors and three-year average for the subsequent age-to-age factors.

(d) The cumulative factors for 18, 30, 42, 54, 66, and 78 months are adjusted by -3.5%, -3.0%, -2.2%, -1.5%, -0.8%, and -0.3%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Paid Medical Loss Development Factors (Continued)

Unadjusted (a)

Accident Year	222/210	234/222	246/234	258/246	270/258	282/270	294/282	306/294	318/306	330/318	342/330	354/342	366/354	378/366	390/378	402/390	402Inc/402Pd (e)	ULT/402Inc (f)
1982									1.007	1.008	1.006	1.003		1.004	1.004	1.002	1.033	
1983								1.004	1.005	1.004	1.004	1.004	1.003	1.003	1.002	1.002	1.037	
1984							1.003	1.003	1.004	1.003	1.003	1.003	1.002	1.002	1.003	1.002	1.033	
1985						1.004	1.004	1.004	1.004	1.004	1.003	1.004	1.005	1.005			1.032	
1986				1.005	1.005	1.005	1.005	1.005	1.005	1.006	1.006	1.003	1.002				1.020	
1987			1.005	1.005	1.005	1.005	1.005	1.004	1.006	1.004	1.003	1.004					1.020	
1988		1.005	1.005	1.006	1.008	1.006	1.005	1.006	1.003	1.003	1.003							
1989	1.005	1.006	1.006	1.006	1.005	1.006	1.005	1.006	1.003	1.003	1.004							
1990	1.006	1.002	1.005	1.005	1.006	1.005	1.004	1.003	1.002	1.003								
1991	1.007	1.010	1.006	1.007	1.006	1.006	1.005	1.003	1.003									
1992	1.008	1.010	1.010	1.012	1.010	1.008	1.005	1.004										
1993	1.012	1.010	1.011	1.011	1.007	1.008	1.005	1.006										
1994	1.010	1.015	1.012	1.010	1.013	1.007	1.005											
1995	1.014	1.013	1.010	1.007	1.008													
1996	1.013	1.008	1.006	1.006														
1997	1.014	1.009	1.007															
1998	1.012	1.009																
1999	1.011																	
2000	1.008																	

Adjusted (b)

Accident Year	222/210	234/222	246/234	258/246	270/258	282/270	294/282	306/294	318/306	330/318	342/330	354/342	366/354	378/366	390/378	402/390	402Inc/402Pd (e)	ULT/402Inc (f)
1982																1.002	1.033	1.029
1983															1.002	1.002	1.037	
1984														1.002	1.003	1.002	1.033	
1985													1.004	1.005	1.005		1.032	
1986												1.004	1.003	1.002			1.020	
1987											1.003	1.003	1.004				1.020	
1988									1.003	1.003	1.003	1.004						
1989								1.003	1.002	1.002	1.003							
1990							1.003	1.003	1.003	1.003								
1991						1.005	1.004	1.005										
1992					1.007	1.005	1.006											
1993				1.010	1.013	1.005												
1994			1.010	1.007	1.008													
1995		1.008	1.006	1.006														
1996		1.009	1.007															
1997	1.012	1.009																
1998	1.011																	
1999	1.008																	
2000																		
Selected (c)	1.010	1.009	1.008	1.008	1.009	1.008	1.005	1.004	1.003	1.003	1.003	1.003	1.004	1.003	1.003	1.002	1.029	
Cumulative	1.153	1.141	1.131	1.123	1.114	1.104	1.096	1.090	1.085	1.081	1.079	1.075	1.072	1.068	1.065	1.061		

(e) Six-year averages of the 402Inc/402Pd factors are selected.
(f) The ULT/402Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 114-to-126 through 342-to-354 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

Selected Indemnity Development Factors - Paid to Age 246, Incurred from Age 246 to Ultimate

Age-to-Age (in months)

Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198	222/210	234/222	246/234	246Inc/246Pd (b)
1991																	1.002	1.001	1.002	1.013
1992																1.002	1.002	1.001	1.002	1.013
1993															1.003	1.002	1.003	1.003	1.002	1.014
1994														1.004	1.003	1.004	1.004	1.003	1.003	1.019
1995													1.007	1.005	1.003	1.005	1.004	1.004	1.002	1.024
1996												1.008	1.007	1.004	1.005	1.004	1.004	1.003	1.004	1.022
1997											1.010	1.007	1.007	1.006	1.005	1.004	1.005	1.004	1.002	1.022
1998										1.014	1.009	1.009	1.008	1.007	1.005	1.006	1.004	1.003	1.003	1.022
1999									1.017	1.012	1.010	1.008	1.008	1.006	1.005	1.004	1.004	1.003		
2000								1.021	1.014	1.011	1.010	1.008	1.008	1.006	1.004	1.004	1.004			
2001							1.028	1.020	1.016	1.013	1.012	1.009	1.008	1.006	1.006	1.005				
2002						1.039	1.025	1.018	1.017	1.014	1.009	1.009	1.006	1.006	1.005					
2003					1.056	1.035	1.028	1.025	1.022	1.018	1.014	1.009	1.009	1.007						
2004				1.090	1.060	1.044	1.040	1.032	1.023	1.017	1.013	1.011	1.008							
2005			1.167	1.095	1.068	1.054	1.047	1.033	1.023	1.018	1.014	1.011								
2006		1.337	1.171	1.110	1.077	1.059	1.042	1.027	1.024	1.019	1.014									
2007	1.909	1.351	1.182	1.114	1.072	1.056	1.038	1.031	1.024	1.016										
2008	1.933	1.386	1.200	1.118	1.072	1.049	1.035	1.024	1.020											
2009	2.012	1.402	1.207	1.118	1.075	1.050	1.037	1.027												
2010	2.020	1.414	1.201	1.114	1.073	1.047	1.033													
2011	2.035	1.394	1.190	1.113	1.069	1.047														
2012	2.019	1.387	1.186	1.108	1.067															
2013	2.013	1.389	1.182	1.095																
2014	2.066	1.396	1.176																	
2015	2.056	1.372																		
2016	1.999																			
Selected (a)	1.979(c)	1.351(c)	1.159(c)	1.086(c)	1.057(c)	1.047	1.033	1.027	1.023	1.018	1.014	1.010	1.008	1.006	1.005	1.004	1.004	1.003	1.003	
Cumulative	4.484	2.266	1.677	1.447	1.333	1.261	1.205	1.166	1.135	1.110	1.091	1.076	1.065	1.057	1.051	1.045	1.041	1.036	1.033	1.022

(a) Selections are latest year for the 18-to-30 month through 102-to-114 month factors and three-year average for the subsequent paid age-to-age factors. Paid development factors are selected to age 246, 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 246Inc/246Pd 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 246, Incurred from Age 246 to Ultimate (Continued)

Age-to-Age (in months)

Accident Year	258/246	270/258	282/270	294/282	306/294	318/306	330/318	342/330	354/342	366/354	378/366	390/378	402/390	ULT/402Inc (d)
1980									1.000					
1981							1.001	1.000	1.000					
1982						1.001	1.000	1.002						
1983					0.999	1.001	1.001	1.001	1.001	1.000	1.001	1.000	1.001	
1984				1.000	1.001	1.001	1.001	1.000	1.001	1.001	1.000	1.000	1.000	
1985			1.000	1.001	1.000	1.000	1.001	1.001	1.001	1.000	1.000	1.000	1.000	
1986		1.000	1.001	1.000	1.002	1.002	1.000	0.999	1.000	1.000	1.000			
1987	1.000	1.001	1.000	1.002	1.001	1.000	1.001	1.001	1.001	1.001				
1988	1.000	1.000	1.002	1.002	1.000	1.000	1.000	1.000	1.000	1.000				
1989	1.000	1.001	1.000	1.000	1.000	1.001	1.000	1.000	1.000					
1990	1.000	1.001	1.000	1.001	1.000	1.000	1.001	1.000						
1991	1.000	1.001	1.000	1.001	1.000	1.000	1.000							
1992	1.001	1.001	1.000	1.000	1.000	1.000								
1993	1.002	1.000	1.000	1.000	1.000									
1994	1.000	1.001	1.000	1.000										
1995	1.000	1.000	1.000											
1996	1.001	1.000												
1997	0.999													
Selected (a)	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	
Cumulative	1.008	1.007	1.007	1.007	1.006	1.006	1.006	1.006	1.005	1.005	1.005	1.004	1.004	1.004

(d) The ULT/402Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 114-to-126 through 342-to-354 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

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

A. Total Reported Indemnity Claim Counts

Accident	Evaluated as of (in months)					
Year	18	30	42	54	66	78
2009						112,939
2010					116,475	116,755
2011				116,920	117,410	117,695
2012			122,739	123,797	124,342	124,643
2013		128,986	131,237	132,294	132,780	
2014	127,022	135,467	137,745	138,722		
2015	133,040	141,649	143,548			
2016	135,351	144,756				
2017	137,209					

B. Development of Total Reported Indemnity Claim Counts

Accident	Age-to-Age Development (in months):					
Year	18-30	30-42	42-54	54-66	66-78	78-Ultimate
2010					1.002	
2011				1.004	1.002	
2012			1.009	1.004	1.002	
2013		1.017	1.008	1.004		
2014	1.066	1.017	1.007			
2015	1.065	1.013				
2016	1.069					
Latest Year	1.069	1.013	1.007	1.004	1.002	
Cumulative	1.103	1.031	1.017	1.010	1.007	1.004

Acc. Year	2017	2016	2015	2014	2013	2012
Ult. Claim Counts	151,299	149,250	146,047	140,143	133,649	125,156

C. Closed Indemnity Claim Counts

Accident	Evaluated as of (in months)					
Year	18	30	42	54	66	78
2009						97,889
2010					97,085	102,973
2011				91,176	99,376	104,924
2012			85,568	98,167	106,766	112,516
2013		73,460	93,438	107,352	116,169	
2014	50,600	78,709	100,169	114,738		
2015	54,492	85,594	108,011			
2016	58,643	91,303				
2017	62,661					

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)					
	18	30	42	54	66	78
2009						86.2%
2010					82.8%	87.8%
2011				77.2%	84.1%	88.8%
2012			68.4%	78.4%	85.3%	89.9%
2013		55.0%	69.9%	80.3%	86.9%	
2014	36.1%	56.2%	71.5%	81.9%		
2015	37.3%	58.6%	74.0%			
2016	39.3%	61.2%				
2017	41.4%					

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

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						102,036
2010					101,941	105,436
2011				96,756	102,722	106,244
2012			92,561	102,468	108,787	112,516
2013		81,759	98,842	109,421	116,169	
2014	58,040	85,732	103,645	114,738		
2015	60,486	89,343	108,011			
2016	61,812	91,303				
2017	62,661					

F. Average Paid Indemnity per Closed Claim

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						17,261
2010					15,740	17,656
2011				13,585	16,010	17,725
2012			10,985	13,953	16,117	17,674
2013		7,416	11,383	14,316	16,286	
2014	3,552	7,884	12,121	15,181		
2015	3,971	8,614	12,839			
2016	4,242	8,786				
2017	4,298					

(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)					
	18	30	42	54	66	78
2009						18,766
2010					17,304	18,482
2011				15,192	17,024	18,147
2012			12,544	14,997	16,648	17,674
2013		8,861	12,443	14,756	16,286	
2014	4,387	9,076	12,790	15,181		
2015	4,610	9,209	12,839			
2016	4,552	8,786				
2017	4,298					
2018						

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

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						1,914,823
2010					1,763,972	1,948,677
2011				1,469,917	1,748,710	1,927,991
2012			1,161,121	1,536,672	1,811,087	1,988,579
2013		724,449	1,229,914	1,614,639	1,891,939	
2014	254,614	778,088	1,325,567	1,741,824		
2015	278,846	822,759	1,386,804			
2016	281,400	802,181				
2017	269,301					

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

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						627,287
2010					688,494	559,385
2011				748,086	614,231	496,147
2012			826,371	719,657	593,574	479,931
2013		826,736	836,669	708,567	564,817	
2014	542,978	873,518	870,865	709,569		
2015	577,296	894,669	852,618			
2016	588,581	871,759				
2017	590,544					

(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) 18	30	42	54	66	78
2009						41,680
2010					35,509	40,590
2011				29,059	34,061	38,849
2012			22,232	28,079	33,772	39,575
2013		14,889	22,135	28,409	34,003	
2014	7,105	15,390	23,176	29,585		
2015	7,350	15,961	23,992			
2016	7,673	16,309				
2017	7,922					

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) 18	30	42	54	66	78
2009						-172,888
2010					-172,397	-99,932
2011				-162,149	-113,969	-51,281
2012			-155,446	-120,768	-68,253	
2013		-123,565	-119,616	-58,777		
2014	-52,862	-108,070	-80,559			
2015	-44,053	-59,836				
2016	-24,316					

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

Accident Year	Evaluated as of (in months) 18	30	42	54	66	78
2009						454,399
2010					516,097	459,453
2011				585,936	500,262	444,866
2012			670,925	598,889	525,321	479,931
2013		703,171	717,053	649,789	564,817	
2014	490,116	765,448	790,305	709,569		
2015	533,242	834,833	852,618			
2016	564,265	871,759				
2017	590,544					

(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)					
	18	30	42	54	66	78
2009						2,369,222
2010					2,280,070	2,408,131
2011				2,055,854	2,248,972	2,372,857
2012			1,832,046	2,135,561	2,336,408	2,468,511
2013		1,427,620	1,946,967	2,264,428	2,456,756	
2014	744,730	1,543,536	2,115,872	2,451,393		
2015	812,088	1,657,592	2,239,422			
2016	845,665	1,673,940				
2017	859,845					

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

Accident Year	Evaluated as of (in months)				
	18-30	30-42	42-54	54-66	66-78
2009					
2010					1.056
2011				1.094	1.055
2012			1.166	1.094	1.057
2013		1.364	1.163	1.085	
2014	2.073	1.371	1.159		
2015	2.041	1.351			
2016	1.979				
Latest Year	1.979	1.351	1.159	1.085	1.057
3-Year Average	2.031	1.362	1.162	1.091	1.056

O. Paid Indemnity Loss Development Factors (i)

Accident Year	Evaluated as of (in months)				
	18-30	30-42	42-54	54-66	66-78
2010					1.073
2011				1.110	1.068
2012			1.183	1.108	1.067
2013		1.386	1.182	1.094	
2014	2.067	1.395	1.176		
2015	2.056	1.372			
2016	1.999				

(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)				
	18-30	30-42	42-54	54-66	66-78
2010					-1.53%
2011				-1.45%	-1.24%
2012			-1.46%	-1.23%	-0.94%
2013		-1.57%	-1.57%	-0.84%	
2014	0.26%	-1.77%	-1.46%		
2015	-0.73%	-1.54%			
2016	-0.98%				

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

Accident Year	Evaluated as of (in months)				
	18-30	30-42	42-54	54-66	66-78
2010					1.057
2011				1.097	1.056
2012			1.169	1.094	1.057
2013		1.367	1.163	1.086	
2014	2.071	1.371	1.159		
2015	2.041	1.351			
2016	1.979				
Latest Year	1.979	1.351	1.159	1.086	1.057
3-Year Average	2.031	1.363	1.164	1.092	1.056

(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 246, Incurred from Age 246 to Ultimate

Age-to-Age (in months)

Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198	222/210	234/222	246/234	246Inc/246Pd (b)
1991																			1.005	1.053
1992																	1.007	1.006	1.006	1.061
1993															1.012	1.009	1.008	1.002	1.010	1.102
1994														1.013	1.013	1.011	1.012	1.010	1.011	1.103
1995													1.019	1.018	1.015	1.013	1.010	1.010	1.012	1.108
1996												1.022	1.020	1.015	1.014	1.014	1.014	1.013	1.010	1.088
1997												1.021	1.017	1.016	1.012	1.014	1.014	1.008	1.006	1.083
1998										1.031	1.024	1.020	1.016	1.017	1.017	1.016	1.012	1.009	1.007	1.090
1999									1.033	1.028	1.024	1.018	1.021	1.017	1.017	1.014	1.011	1.009		
2000								1.034	1.028	1.024	1.027	1.019	1.018	1.015	1.012	1.010	1.008			
2001							1.042	1.036	1.032	1.025	1.022	1.025	1.018	1.015	1.012	1.010				
2002						1.049	1.040	1.031	1.026	1.024	1.022	1.020	1.014	1.012	1.009					
2003					1.065	1.053	1.043	1.031	1.024	1.031	1.020	1.017	1.015	1.012						
2004				1.108	1.079	1.064	1.044	1.038	1.037	1.029	1.023	1.016	1.013							
2005			1.171	1.112	1.084	1.058	1.053	1.046	1.036	1.026	1.020	1.016								
2006		1.291	1.172	1.116	1.078	1.061	1.053	1.038	1.030	1.022	1.017									
2007	1.618	1.300	1.177	1.112	1.085	1.069	1.047	1.036	1.025	1.021										
2008	1.616	1.308	1.183	1.124	1.088	1.060	1.045	1.029	1.023											
2009	1.648	1.328	1.199	1.135	1.083	1.055	1.038	1.028												
2010	1.678	1.353	1.202	1.119	1.080	1.054	1.035													
2011	1.699	1.340	1.190	1.121	1.071	1.050														
2012	1.712	1.339	1.183	1.114	1.067															
2013	1.707	1.324	1.180	1.097																
2014	1.701	1.322	1.164																	
2015	1.691	1.300																		
2016	1.634																			

Adjusted (b)

Age-to-Age (in months)

Adjusted (b) Accident Year	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198	222/210	234/222	246/234	246Inc/246Pd (b)
1996																			1.010	1.088
1997																		1.008	1.006	1.083
1998																	1.012	1.009	1.007	1.090
1999																1.014	1.011	1.009		
2000															1.012	1.010	1.008			
2001														1.015	1.012	1.010				
2002													1.014	1.012	1.009					
2003												1.017	1.015	1.012						
2004											1.020	1.016	1.013							
2005										1.026	1.020	1.016								
2006									1.030	1.022	1.017									
2007								1.036	1.025	1.021										
2008							1.045	1.029	1.023											
2009						1.055	1.038	1.028												
2010					1.080	1.054	1.035													
2011				1.121	1.071	1.052														
2012			1.183	1.114	1.070															
2013		1.324	1.180	1.100																
2014	1.701	1.322	1.168																	
2015	1.691	1.303																		
2016	1.635																			

	30/18	42/30	54/42	66/54	78/66	90/78	102/90	114/102	126/114	138/126	150/138	162/150	174/162	186/174	198/186	210/198	222/210	234/222	246/234	246Inc/246Pd (b)
Selected (c)	1.630(e)	1.291(e)	1.155(e)	1.091(e)	1.063(e)	1.052	1.035	1.028	1.026	1.023	1.019	1.016	1.014	1.013	1.011	1.011	1.010	1.009	1.008	1.087
Cumulative Unadjusted for Impact of SB 1160	4.176	2.562	1.985	1.718	1.574	1.481	1.408	1.360	1.323	1.290	1.261	1.237	1.217	1.200	1.185	1.172	1.159	1.147	1.137	
Cumulative Adjusted for Impact of SB 1160(f)	4.030	2.485	1.941	1.692	1.561	1.477	---	---	---	---	---	---	---	---	---	---	---	---	---	

(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%, -3.8%, -2.4%, -0.9%, and -0.1% to accident years 2011 to 2016, respectively, for the SB 1160 lien reforms.

(c) Selections are latest year for the 18-to-30 month through 102-to-114 month factors and three-year average for the subsequent paid age-to-age factors. Paid development factors are selected to age 246, 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 246Inc/246Pd 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 18, 30, 42, 54, 66, and 78 months are adjusted by -3.5%, -3.0%, -2.2%, -1.5%, -0.8%, and -0.3%, respectively, for the impact of the SB 1160 reductions in future lien filings.

Selected Medical Development Factors - Paid to Age 246, Incurred from Age 246 to Ultimate (Continued)

Age-to-Age (in months)

Accident Year	258/246	270/258	282/270	294/282	306/294	318/306	330/318	342/330	354/342	366/354	378/366	390/378	402/390	ULT/402Inc (g)
1983										1.002	1.004	1.000	1.000	
1984									1.002	1.003	0.997	1.000	1.001	
1985								1.003	1.004	0.999	1.000	0.999	0.999	
1986							1.004	1.004	1.001	1.000	0.998	1.009		
1987						1.003	1.004	1.001	1.001	1.000	1.001			
1988					1.003	1.003	1.003	1.001	0.999	0.998				
1989				1.005	1.000	1.002	0.998	0.999	0.999					
1990			1.003	0.999	1.000	1.001	1.000	0.998						
1991		1.004	1.001	1.002	1.001	0.999	0.999							
1992	1.004	1.004	1.002	0.999	0.999	1.002								
1993	1.002	1.000	0.998	0.996	0.999									
1994	1.001	1.003	0.993	1.000										
1995	0.999	0.999	0.998											
1996	1.002	0.996												
1997	0.998													
Selected (c)	1.001	1.001	0.999	1.000	1.000	1.002	1.001	1.001	1.001	1.000	1.000	1.002	1.000	
Cumulative	1.038	1.037	1.036	1.037	1.037	1.037	1.035	1.033	1.032	1.031	1.031	1.031	1.029	1.029

(g) The ULT/402Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 114-to-126 through 342-to-354 factors, excluding the most recent two evaluations, and extrapolated to 80 development years.

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

A. Total Reported Indemnity Claim Counts

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						112,939
2010					116,475	116,755
2011				116,920	117,410	117,695
2012			122,739	123,797	124,342	124,643
2013		128,986	131,237	132,294	132,780	
2014	127,022	135,467	137,745	138,722		
2015	133,040	141,649	143,548			
2016	135,351	144,756				
2017	137,209					

B. Development of Total Reported Indemnity Claim Counts

Accident Year	Age-to-Age Development (in months):					
	18-30	30-42	42-54	54-66	66-78	78-Ultimate
2010					1.002	
2011				1.004	1.002	
2012			1.009	1.004	1.002	
2013		1.017	1.008	1.004		
2014	1.066	1.017	1.007			
2015	1.065	1.013				
2016	1.069					
Latest Year	1.069	1.013	1.007	1.004	1.002	
Cumulative	1.103	1.031	1.017	1.010	1.007	1.004

Acc. Year	2017	2016	2015	2014	2013	2012
Ult. Claim Counts	151,299	149,250	146,047	140,143	133,649	125,156

C. Closed Indemnity Claim Counts

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						97,889
2010					97,085	102,973
2011				91,176	99,376	104,924
2012			85,568	98,167	106,766	112,516
2013		73,460	93,438	107,352	116,169	
2014	50,600	78,709	100,169	114,738		
2015	54,492	85,594	108,011			
2016	58,643	91,303				
2017	62,661					

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)					
	18	30	42	54	66	78
2009						86.2%
2010					82.8%	87.8%
2011				77.2%	84.1%	88.8%
2012			68.4%	78.4%	85.3%	89.9%
2013		55.0%	69.9%	80.3%	86.9%	
2014	36.1%	56.2%	71.5%	81.9%		
2015	37.3%	58.6%	74.0%			
2016	39.3%	61.2%				
2017	41.4%					

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

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						102,036
2010					101,941	105,436
2011				96,756	102,722	106,244
2012			92,561	102,468	108,787	112,516
2013		81,759	98,842	109,421	116,169	
2014	58,040	85,732	103,645	114,738		
2015	60,486	89,343	108,011			
2016	61,812	91,303				
2017	62,661					

F. Average Paid Medical per Closed Indemnity Claim

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						21,475
2010					19,466	22,254
2011				15,607	18,943	21,427
2012			12,009	15,487	18,272	20,211
2013		7,794	11,943	15,198	17,574	
2014	3,874	7,951	11,968	15,015		
2015	4,201	8,448	12,161			
2016	4,476	8,392				
2017	4,486					

(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)					
	18	30	42	54	66	78
2009						23,629
2010					21,738	23,556
2011				17,806	20,405	22,050
2012			13,830	16,823	18,932	20,211
2013		9,306	13,115	15,725	17,574	
2014	4,686	9,089	12,634	15,015		
2015	4,807	8,979	12,161			
2016	4,758	8,392				
2017	4,486					

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

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						2,410,994
2010					2,216,036	2,483,600
2011				1,722,868	2,096,075	2,342,683
2012			1,280,108	1,723,785	2,059,514	2,274,090
2013		760,839	1,296,332	1,720,663	2,041,582	
2014	271,983	779,243	1,309,395	1,722,801		
2015	290,729	802,217	1,313,510			
2016	294,104	766,258				
2017	281,099					

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

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						950,195
2010					1,004,306	846,661
2011				999,784	860,044	705,252
2012			1,001,747	908,949	770,687	639,217
2013		940,110	941,274	822,913	665,626	
2014	642,448	927,977	915,842	770,402		
2015	660,877	914,047	879,114			
2016	682,400	905,728				
2017	699,836					

(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)					
	18	30	42	54	66	78
2009						63,135
2010					51,797	61,435
2011				38,836	47,693	55,223
2012			26,950	35,465	43,849	52,710
2013		16,931	24,902	32,993	40,071	
2014	8,407	16,350	24,373	32,122		
2015	8,414	16,306	24,738			
2016	8,896	16,944				
2017	9,388					

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)					
	18	30	42	54	66	78
2009						-261,886
2010					-251,475	-151,253
2011				-216,705	-159,579	-72,894
2012			-188,436	-152,534	-88,618	
2013		-140,510	-134,571	-68,263		
2014	-62,545	-114,808	-84,720			
2015	-50,432	-61,132				
2016	-28,192					

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

Accident Year	Evaluated as of (in months)					
	18	30	42	54	66	78
2009						688,309
2010					752,831	695,408
2011				783,078	700,465	632,358
2012			813,312	756,415	682,068	639,217
2013		799,600	806,703	754,650	665,626	
2014	579,902	813,169	831,122	770,402		
2015	610,445	852,915	879,114			
2016	654,208	905,728				
2017	699,836					

(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) _____					
	18	30	42	54	66	78
2009						225,873
2010					221,425	224,375
2011				208,963	212,426	216,452
2012			211,361	216,150	221,244	224,818
2013		208,406	216,234	224,472	227,825	
2014	211,652	231,475	241,286	246,928		
2015	222,676	244,200	253,005			
2016	237,700	260,573				
2017	258,410					

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

Accident Year	_____ Evaluated as of (in months) _____					
	18	30	42	54	66	78
2009						3,325,177
2010					3,232,181	3,447,731
2011				2,945,349	3,257,695	3,451,536
2012			2,304,781	2,696,351	2,962,826	3,138,125
2013		1,768,845	2,319,268	2,699,785	2,935,034	
2014	1,063,537	1,823,887	2,381,804	2,740,130		
2015	1,123,851	1,899,332	2,445,629			
2016	1,186,012	1,932,559				
2017	1,239,345					

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

Accident Year	_____ Evaluated as of (in months) _____				
	18-30	30-42	42-54	54-66	66-78
2010					1.067
2011				1.106	1.060
2012			1.170	1.099	1.059
2013		1.311	1.164	1.087	
2014	1.715	1.306	1.150		
2015	1.690	1.288			
2016	1.629				
Latest Year	1.629	1.288	1.150	1.087	1.059

(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)				
	18-30	30-42	42-54	54-66	66-78
2010					1.079
2011				1.119	1.071
2012			1.181	1.112	1.066
2013		1.321	1.178	1.096	
2014	1.700	1.320	1.163		
2015	1.691	1.300			
2016	1.634				

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

Accident Year	Evaluated as of (in months)				
	18-30	30-42	42-54	54-66	66-78
2010					-1.14%
2011				-1.19%	-1.04%
2012			-0.91%	-1.22%	-0.68%
2013		-0.74%	-1.21%	-0.77%	
2014	0.88%	-1.04%	-1.09%		
2015	-0.07%	-0.95%			
2016	-0.29%				

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

Accident Year	Evaluated as of (in months)				
	18-30	30-42	42-54	54-66	66-78
2010					1.068
2011				1.108	1.060
2012			1.172	1.100	1.063
2013		1.314	1.166	1.091	
2014	1.716	1.308	1.155		
2015	1.690	1.291			
2016	1.630				
Latest Year	1.630	1.291	1.155	1.091	1.063
3-Year Average	1.679	1.304	1.164	1.100	1.063

(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 June 30, 2018

		Development Factors		
	(1)	(2)	(3)	(4)
	Paid or			Projected
	Incurred Loss			Ultimate
Accident Year	Ratio(a)	Annual(b)	Cumulative	Loss Ratio
				(4) = (1) x (3)
1986	0.396	1.000	1.004	0.397
1987	0.346	1.000	1.004	0.347
1988	0.330	1.000	1.005	0.332
1989	0.343	1.000	1.005	0.345
1990	0.397	1.000	1.005	0.399
1991	0.424	1.000	1.006	0.427
1992	0.349	1.001	1.006	0.352
1993	0.287	1.000	1.006	0.289
1994	0.327	1.000	1.006	0.329
1995	0.472	1.000	1.007	0.476
1996	0.529	1.000	1.007	0.533
1997	0.599	1.000	1.007	0.603
1998	0.651	1.001	1.008	0.656
1999	0.668	1.003	1.033	0.690
2000	0.576	1.003	1.036	0.597
2001	0.475	1.004	1.041	0.495
2002	0.352	1.004	1.045	0.368
2003	0.231	1.005	1.051	0.243
2004	0.137	1.006	1.057	0.145
2005	0.116	1.008	1.065	0.124
2006	0.149	1.010	1.076	0.161
2007	0.203	1.014	1.091	0.221
2008	0.254	1.018	1.110	0.282
2009	0.291	1.023	1.135	0.331
2010	0.276	1.027	1.166	0.322
2011	0.250	1.033	1.205	0.301
2012	0.216	1.047	1.261	0.272
2013	0.177	1.057	1.333	0.235
2014	0.154	1.086	1.447	0.223
2015	0.131	1.159	1.677	0.220
2016	0.093	1.351	2.266	0.211
2017	0.049	1.979	4.484	0.218

(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 June 30, 2018

	(1)	(2)	(3)	(4)	(5)
			Reform Adjusted		
			Development Factors		
			Cumulative		
Accident	Paid or Incurred		Unadjusted for	Adjusted for	Projected Ultimate
Year	Loss Ratio(a)	Annual(b)	Reforms(b)	Reforms(b)	Loss Ratio
					(1) x (4)
1986	0.335	1.000	1.029	1.029	0.345
1987	0.314	1.002	1.031	1.031	0.324
1988	0.304	1.000	1.031	1.031	0.314
1989	0.325	1.000	1.031	1.031	0.335
1990	0.366	1.001	1.032	1.032	0.378
1991	0.384	1.001	1.033	1.033	0.396
1992	0.320	1.001	1.035	1.035	0.331
1993	0.267	1.002	1.037	1.037	0.276
1994	0.309	1.000	1.037	1.037	0.320
1995	0.454	1.000	1.037	1.037	0.471
1996	0.485	0.999	1.036	1.036	0.503
1997	0.545	1.001	1.037	1.037	0.565
1998	0.658	1.001	1.038	1.038	0.683
1999	0.659	1.008	1.137	1.137	0.749
2000	0.595	1.009	1.147	1.147	0.682
2001	0.523	1.010	1.159	1.159	0.606
2002	0.402	1.011	1.172	1.172	0.471
2003	0.255	1.011	1.185	1.185	0.302
2004	0.172	1.013	1.200	1.200	0.207
2005	0.167	1.014	1.217	1.217	0.203
2006	0.213	1.016	1.237	1.237	0.263
2007	0.295	1.019	1.261	1.261	0.372
2008	0.363	1.023	1.290	1.290	0.468
2009	0.415	1.026	1.323	1.323	0.549
2010	0.400	1.028	1.360	1.360	0.544
2011	0.333	1.035	1.408	1.408	0.469
2012	0.274	1.052	1.481	1.477	0.405
2013	0.211	1.063	1.574	1.561	0.330
2014	0.173	1.091	1.718	1.692	0.292
2015	0.143	1.155	1.985	1.941	0.278
2016	0.108	1.291	2.562	2.485	0.267
2017	0.070	1.630	4.176	4.030	0.283

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

(b) See Exhibits 2.6.1 and 2.6.2.

Indemnity Benefit Level Factors

Accident Year	(1) Annual Benefit Change Prior to Frequency Adjustments (a)	(2) Frequency Adjustments (a)	(3) Annual Impact on Indemnity Benefits Due to Wage Inflation (b)	(4a) Annual Cost Impact on Indemnity (c)	(5a) Composite Indemnity Adjustment Factor (d)	
1986	0.0	0.0	1.6	1.6	1.530	
1987	0.0	0.0	1.9	1.9	1.501	
1988	0.0	0.0	1.5	1.5	1.479	
1989	0.0	0.0	1.5	1.5	1.457	
1990	2.3	19.9	1.7	24.7	1.168	
1991	4.9	14.8	0.8	21.4	0.962	
1992	1.8	-8.3	1.6	-5.2	1.015	
1993	0.2	-18.1	0.4	-17.6	1.231	
1994	-5.1	0.2	0.6	-4.3	1.287	
1995	6.3	0.6	1.0	8.0	1.192	
1996	5.3	0.4	1.2	7.0	1.114	
1997	9.7	0.2	1.6	11.7	0.997	
1998	6.5	0.0	1.8	8.4	0.920	
1999	5.7	0.0	2.1	7.9	0.852	
2000	3.9	0.0	3.1	7.1	0.796	
2001	-0.3	0.0	-0.2	-0.5	0.800	
2002	-0.7	0.0	0.4	-0.3	0.819	(e)
2003	7.3	0.0	1.2	8.6	0.818	(e)
2004	-6.0	-13.7	1.7	-17.5	1.126	(e)
2005	-31.6	-15.3	1.1	-41.5	1.529	
2006	5.6	-5.7	1.6	1.2	1.511	
2007	1.6	0.0	1.6	3.2	1.464	
2008	4.8	0.6	0.7	6.2	1.379	
2009	0.4	1.4	0.2	2.0	1.352	
2010	0.4	0.0	1.0	1.4	1.333	
2011	0.0	0.0	1.6	1.6	1.312	
2012	0.3	0.0	2.1	2.4	1.281	
2013	2.6	0.2	0.4	3.2	1.241	
2014	7.0	1.5	1.7	10.4	1.124	
2015	0.3	0.0	2.3	2.6	1.095	
2016	0.3	0.0	1.0	1.3	1.082	
2017	0.5	0.0	1.4	1.9	1.062	
2018	0.4	0.0	2.2	2.6		
2019	0.4	0.0	2.0	2.4		
1/1/2020	0.2 (Annual 0.5)	0.0	0.8 (Annual 1.7)	1.0		

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

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

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

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

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

Annual Medical Cost Level Change - Non-Legislative

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

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

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

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

Annual Medical Cost Level Change - Legislative

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

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

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

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

Total Medical Cost Level Factors

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

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

Annual Wage Level Changes

Year	Annual Wage Level Change(a)	Factor to a 1/1/2020 Wage Level
1986	4.7	3.157
1987	5.6	2.990
1988	4.4	2.864
1989	4.3	2.745
1990	5.0	2.615
1991	2.3	2.556
1992	4.7	2.441
1993	1.2	2.412
1994	1.8	2.370
1995	2.9	2.303
1996	3.4	2.227
1997	4.7	2.127
1998	5.2	2.022
1999	6.2	1.904
2000	9.0	1.747
2001	-0.6	1.757
2002	1.1	1.738
2003	3.6	1.678
2004	5.0	1.598
2005	3.2	1.548
2006	4.6	1.480
2007	4.5	1.416
2008	2.1	1.387
2009	0.5	1.380
2010	3.0	1.340
2011	3.1	1.300
2012	4.1	1.249
2013	0.7	1.240
2014	3.3	1.200
2015	4.4	1.150
2016	1.9	1.128
2017	2.6	1.100

Projected:

2018	4.2	
2019	3.9	
1/1/2020	1.6	(Annual = 3.2)

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

Premium Adjustment Factors

Calendar Year	(1) Factor to a 1/1/2020 Wage Level (a)	(2a) Ratio of Industry Average Charged Rates to Advisory Pure Premium Rates (b)	(2b) Factor to Industry Average Filed Pure Premium Rate Level as of July 1, 2018 (c)	(2c) Factor to Adjust Insurer Premium to an Industry Average Filed Pure Premium Rate Level as of July 1, 2018 (d)	(3) Adjustment to Remove Surcharge Premium (e)	(4) Average Experience Modification (f)	(5) Off-Balance Correction in Advisory July 1, 2018 Pure Premium Rates	(6) Factor to Adjust for Impact of Premium Resulting from Audits (g)	(7) Composite Premium Adjustment Factor (h)
1986	3.157	---	---	0.792	0.991	0.983	1.015	---	2.482
1987	2.990	---	---	0.696	0.992	0.983	1.015	---	2.069
1988	2.864	---	---	0.622	0.993	0.963	1.015	---	1.811
1989	2.745	---	---	0.613	0.993	0.945	1.015	---	1.742
1990	2.615	---	---	0.598	0.991	0.942	1.015	---	1.619
1991	2.556	---	---	0.553	0.987	0.939	1.015	---	1.464
1992	2.441	---	---	0.531	0.982	0.940	1.015	---	1.334
1993	2.412	---	---	0.524	0.981	0.949	1.015	---	1.287
1994	2.370	---	---	0.600	0.986	0.948	1.015	---	1.458
1995	2.303	---	---	0.812	0.995	0.958	1.015	---	1.914
1996	2.227	1.023	0.863	0.844	1.000	0.935	1.015	---	1.980
1997	2.127	0.989	0.861	0.871	1.000	0.949	1.015	---	1.923
1998	2.022	0.965	0.897	0.930	1.000	0.959	1.015	---	1.931
1999	1.904	0.972	0.907	0.933	1.000	0.954	1.015	---	1.835
2000	1.747	1.005	0.822	0.818	1.000	0.970	1.015	---	1.451
2001	1.757	1.029	0.724	0.704	1.000	0.969	1.015	---	1.257
2002	1.738	1.157	0.648	0.560	1.000	0.991	1.015	---	0.968
2003	1.678	1.267	0.530	0.418	1.000	1.005	1.015	---	0.688
2004	1.598	1.397	0.539	0.386	1.000	0.981	1.015	---	0.619
2005	1.548	1.470	0.649	0.441	1.000	0.982	1.015	---	0.686
2006	1.480	1.447	0.836	0.578	1.000	0.956	1.015	---	0.881
2007	1.416	1.493	1.139	0.763	1.000	0.931	1.015	0.985	1.126
2008	1.387	1.426	1.356	0.951	1.000	0.946	1.015	0.991	1.362
2009	1.380	1.366	1.337	0.979	1.000	0.937	1.015	1.034	1.469
2010	1.340	1.384	1.310	0.947	1.000	0.941	1.015	1.005	1.335
2011	1.300	1.401	1.309	0.934	1.000	0.982	1.015	---	1.219
2012	1.249	1.223	1.079	0.882	1.000	1.000	1.015	---	1.085
2013	1.240	1.138	0.869	0.764	1.000	0.983	1.015	---	0.949
2014	1.200	1.126	0.800	0.710	1.000	0.961	1.015	---	0.874
2015	1.150	1.109	0.778	0.702	1.000	0.951	1.015	---	0.836
2016	1.128	1.148	0.838	0.730	1.000	0.950	1.015	---	0.854
2017	1.100	1.157	0.925	0.799	1.000	0.959	1.015	---	0.903

(a) See Exhibit 5.1.

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

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

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

(e) Based on unit statistical data.

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

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

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

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

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

Y = Hazardousness-Adjusted Noncumulative Indemnity Claim Frequency

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

Notes:

Indemnity Benefit Level variable is leading. The benefit level change for AY 2004 is related to the AY 2003 change in non-cumulative frequency.

The Indemnity Benefit Level change for Ogilvie & Almaraz / Guzman in 2009-2010 is not leading.

The Indemnity Benefit Level variable excludes indemnity benefit utilization, and changes in the death and permanent total benefits.

The Indemnity Benefit Level variable has been revised due to on-leveling reassessments. See Actuarial Committee item AC09-03-03.

For 1993 on, cumulative claims include both cumulative trauma and occupational disease claims. See March 19, 2014 Actuarial Committee Agenda Item III.

Economic variables are historical through 2017; June 2018 UCLA Anderson Forecasts for 2018 on.

Regression is over AY 1979 through AY 2016. AY 2017 through AY 2020 are projections.

The constant term, -0.020, consists of measured offsets that recognize annual changes in real benefit levels relative to nominal benefit levels and long-term economic growth. Without these offsets, the indemnity benefit level and economic variables would project frequency to increase without bound.

*AY 2016 change is based on a comparison of 2016 accidents on 2015 policies to 2015 accidents on 2014 policies.

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

Accident Year	(1) Estimated Ultimate Severity	(2) Annual % Change	(3) Indemnity Adjustment Factor (a)	(4) Ultimate On-level Severity (1) x (3)	(5) Annual % Change
1990	9,977	---	1.868	18,639	---
1991	10,908	9.3%	1.767	19,272	3.4%
1992	11,009	0.9%	1.708	18,806	-2.4%
1993	11,993	8.9%	1.698	20,364	8.3%
1994	12,954	8.0%	1.779	23,040	13.1%
1995	14,532	12.2%	1.657	24,073	4.5%
1996	16,283	12.1%	1.555	25,313	5.2%
1997	19,321	18.7%	1.395	26,949	6.5%
1998	21,203	9.7%	1.287	27,278	1.2%
1999	23,238	9.6%	1.192	27,702	1.6%
2000	24,670	6.2%	1.113	27,454	-0.9%
2001	27,172	10.1%	1.118	30,391	10.7%
2002	26,244	-3.4%	1.146	30,075	-1.0%
2003	25,860	-1.5%	1.144	29,581	-1.6%
2004	21,081	-18.5%	1.359	28,650	-3.1%
2005	19,038	-9.7%	1.563	29,748	3.8%
2006	20,769	9.1%	1.456	30,248	1.7%
2007	22,561	8.6%	1.411	31,831	5.2%
2008	24,698	9.5%	1.337	33,018	3.7%
2009	25,922	5.0%	1.329	34,448	4.3%
2010	25,550	-1.4%	1.311	33,484	-2.8%
2011	25,234	-1.2%	1.290	32,549	-2.8%
2012	24,908	-1.3%	1.260	31,373	-3.6%
2013	24,519	-1.6%	1.223	29,981	-4.4%
2014	25,299	3.2%	1.124	28,431	-5.2%
2015	25,710	1.6%	1.095	28,162	-0.9%
2016	25,407	-1.2%	1.082	27,480	-2.4%
2017	25,479	0.3%	1.062	27,051	-1.6%

(6) Estimated Annual Exponential Trend Based on 1990 to 2017:	1.6%
(7) Estimated Annual Exponential Trend Based on 2005 to 2017:	-1.3%
(8) Estimated Annual Exponential Trend Based on 2013 to 2017:	-2.4%
Selected Indemnity Severity Trend:	-0.5%

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

Source: WCIRB experience calls.

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

Accident Year	(1) Estimated Ultimate Severity (a)	(2) Annual % Change	(3) Medical Adjustment Factor (b)	(4) Ultimate On-level Severity (1) x (3)	(5) Annual % Change
1990	8,810	---	0.921	8,113	---
1991	9,464	7.4%	0.903	8,549	5.4%
1992	9,581	1.2%	0.873	8,361	-2.2%
1993	10,610	10.7%	0.856	9,079	8.6%
1994	11,719	10.5%	0.899	10,538	16.1%
1995	13,423	14.5%	0.891	11,963	13.5%
1996	14,367	7.0%	0.882	12,677	6.0%
1997	17,092	19.0%	0.876	14,977	18.1%
1998	20,960	22.6%	0.772	16,182	8.0%
1999	24,013	14.6%	0.669	16,063	-0.7%
2000	26,923	12.1%	0.615	16,549	3.0%
2001	32,016	18.9%	0.560	17,941	8.4%
2002	32,325	1.0%	0.582	18,813	4.9%
2003	30,857	-4.5%	0.611	18,841	0.1%
2004	28,525	-7.6%	0.808	23,038	22.3%
2005	29,382	3.0%	0.808	23,730	3.0%
2006	32,092	9.2%	0.804	25,816	8.8%
2007	35,803	11.6%	0.789	28,264	9.5%
2008	38,859	8.5%	0.786	30,554	8.1%
2009	40,934	5.3%	0.783	32,057	4.9%
2010	41,137	0.5%	0.781	32,119	0.2%
2011	37,395 (c)	---	0.803	30,011 (c)	---
2012	35,149	-6.0%	0.843	29,632	-1.3%
2013	32,564	-7.4%	0.927	30,171	1.8%
2014	31,199	-4.2%	0.985	30,725	1.8%
2015	30,574	-2.0%	1.007	30,788	0.2%
2016	30,164	-1.3%	1.006	30,346	-1.4%
2017	30,854	2.3%	1.006	31,039	2.3%

Selected Medical Severity Trend: 2.5%

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

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

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

Source: WCIRB experience calls.

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	MCCP Included				MCCP Removed Based on WCIRB Aggregate Calendar Year Data Calls (b)			
Accident Year	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change
2005	29,382	---	23,730	---	27,824	---	22,472	---
2006	32,092	9.2%	25,816	8.8%	30,071	8.1%	24,190	7.6%
2007	35,803	11.6%	28,264	9.5%	33,405	11.1%	26,371	9.0%
2008	38,859	8.5%	30,554	8.1%	35,444	6.1%	27,868	5.7%
2009	40,933	5.3%	32,056	4.9%	37,499	5.8%	29,366	5.4%
2010	41,137	0.5%	32,119	0.2%	37,647	0.4%	29,395	0.1%
2011	40,999	-0.3%	32,903	2.4%	37,395	-0.7%	30,011	2.1%
2012	38,504	-6.1%	32,461	-1.3%	35,149	-6.0%	29,632	-1.3%
2013	35,743	-7.2%	33,116	2.0%	32,564	-7.4%	30,171	1.8%
2014	34,223	-4.3%	33,703	1.8%	31,199	-4.2%	30,725	1.8%
2015	33,443	-2.3%	33,677	-0.1%	30,574	-2.0%	30,788	0.2%
2016	32,976	-1.4%	33,174	-1.5%	30,164	-1.3%	30,346	-1.4%
2017	33,781	2.4%	33,985	2.4%	30,854	2.3%	31,039	2.3%

Estimated Annual Exponential Trend

	(5)	(9)
Trend Based on 1990 to 2017:	6.1%	N/A
Trend Based on 2005 to 2017:	2.5%	2.2%
Trend Based on 2013 to 2017:	0.4%	0.4%

Selected Medical Severity Trend: 2.5%

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

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

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

Source: WCIRB experience calls.

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

	(1)	(2)	(3)	(4)
				On-Level Indemnity to
Accident	Developed Indemnity	Composite Indemnity	Composite Premium	Industry Average Filed
Year	Loss Ratio(a)	Adjustment Factor(b)	Adjustment Factor(c)	Pure Premium Ratio
				(1)×(2)÷(3)
1986	0.397	1.530	2.482	0.245
1987	0.347	1.501	2.069	0.252
1988	0.332	1.479	1.811	0.271
1989	0.345	1.457	1.742	0.288
1990	0.399	1.168	1.619	0.288
1991	0.427	0.962	1.464	0.280
1992	0.352	1.015	1.334	0.267
1993	0.289	1.231	1.287	0.277
1994	0.329	1.287	1.458	0.291
1995	0.476	1.192	1.914	0.296
1996	0.533	1.114	1.980	0.300
1997	0.603	0.997	1.923	0.313
1998	0.656	0.920	1.931	0.313
1999	0.690	0.852	1.835	0.321
2000	0.597	0.796	1.451	0.327
2001	0.495	0.800	1.257	0.315
2002	0.368	0.819	0.968	0.312
2003	0.243	0.818	0.688	0.288
2004	0.145	1.126	0.619	0.264
2005	0.124	1.529	0.686	0.276
2006	0.161	1.511	0.881	0.275
2007	0.221	1.464	1.126	0.288
2008	0.282	1.379	1.362	0.286
2009	0.331	1.352	1.469	0.304
2010	0.322	1.333	1.335	0.321
2011	0.301	1.312	1.219	0.324
2012	0.272	1.281	1.085	0.321
2013	0.235	1.241	0.949	0.308
2014	0.223	1.124	0.874	0.287
2015	0.220	1.095	0.836	0.289
2016	0.211	1.082	0.854	0.267
2017	0.218	1.062	0.903	0.256

				Projections (d)
2018				0.258
2019				0.253
1/1/2020				0.249

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

On-Level Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of June 30, 2018
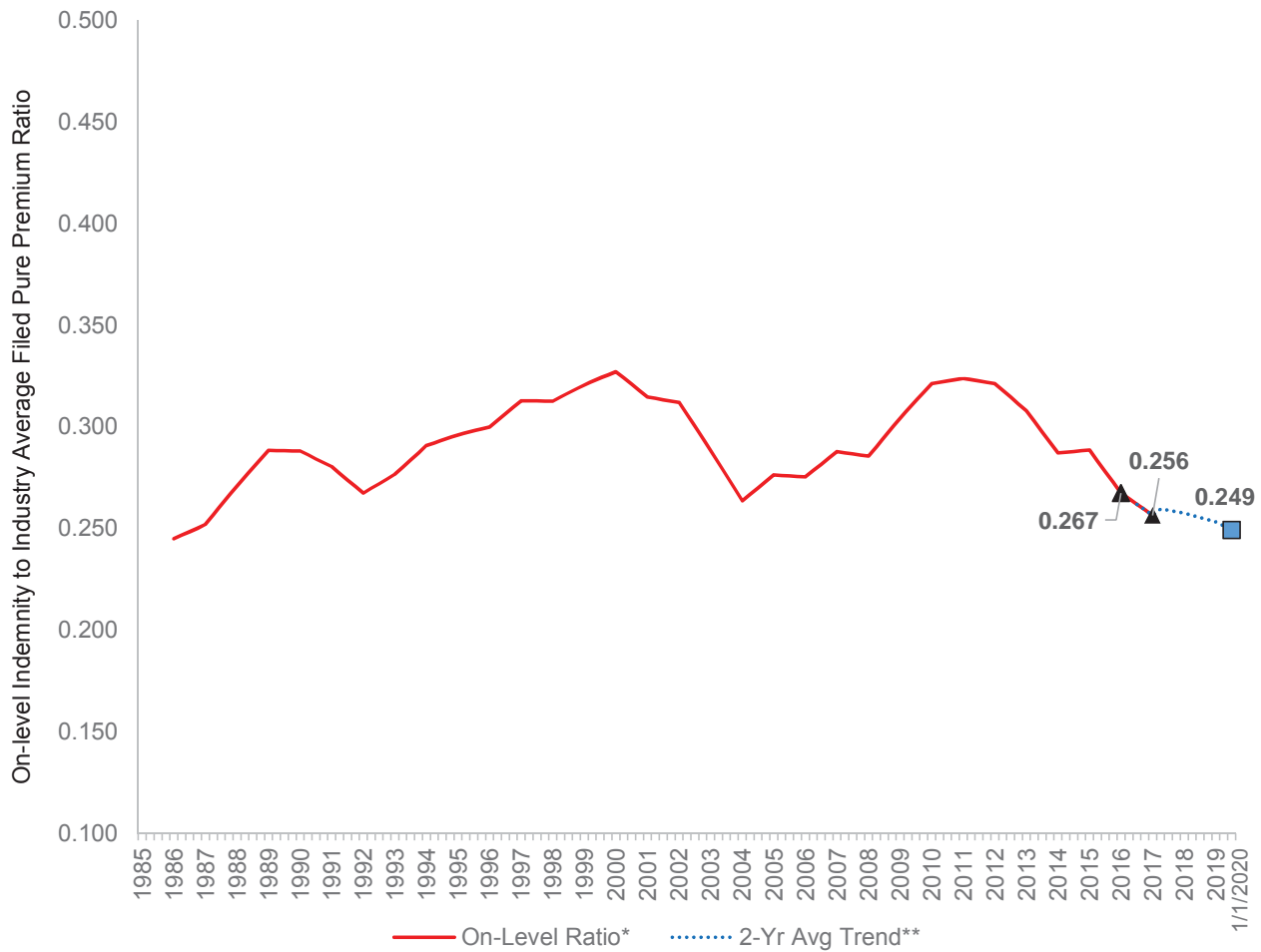
* On-level indemnity to industry average filed pure premium ratios (see Exhibit 7.1)

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

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

Accident Year	(1) Developed Medical Loss Ratio(a)	(2) Composite Medical On-Level Factor(b)	(3) Composite Premium Adjustment Factor(c)	(4) On-Level Medical to Industry Average Filed Pure Premium Ratio(e) (1)×(2)÷(3)
1986	0.345	0.809	2.482	0.112
1987	0.324	0.779	2.069	0.122
1988	0.314	0.750	1.811	0.130
1989	0.335	0.729	1.742	0.140
1990	0.378	0.590	1.619	0.138
1991	0.396	0.505	1.464	0.137
1992	0.331	0.532	1.334	0.132
1993	0.276	0.637	1.287	0.137
1994	0.320	0.668	1.458	0.147
1995	0.471	0.658	1.914	0.162
1996	0.503	0.649	1.980	0.165
1997	0.565	0.643	1.923	0.189
1998	0.683	0.567	1.931	0.201
1999	0.749	0.491	1.835	0.201
2000	0.682	0.451	1.451	0.212
2001	0.606	0.412	1.257	0.198
2002	0.471	0.427	0.968	0.208
2003	0.302	0.448	0.688	0.197
2004	0.207	0.678	0.619	0.226
2005	0.203	0.787	0.686	0.233
2006	0.263	0.827	0.881	0.247
2007	0.372	0.812	1.126	0.268
2008	0.468	0.806	1.362	0.277
2009	0.549	0.795	1.469	0.297
2010	0.544	0.793	1.335	0.323
2011	0.469	0.815	1.219	0.313
2012	0.405	0.856	1.085	0.319
2013	0.330	0.939	0.949	0.326
2014	0.292	0.985	0.874	0.329
2015	0.278	1.007	0.836	0.335
2016	0.267	1.006	0.854	0.315
2017	0.283	1.006	0.903	0.315

		Projections (d)
2018		0.324
2019		0.328
1/1/2020		0.328

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

(b) See Exhibit 4.4.
(c) See Exhibit 5.2.
(d) These on-level ratios were projected based on an estimated annual medical severity trend from Exhibit 6.4, the actual frequency trend for accident year 2017 from Exhibit 12, and projected frequency trends for accident years 2018 through 2020 from Exhibit 6.1; these trends were then separately applied to the 2016 and 2017 on-level ratios.

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

On-Level Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of June 30, 2018
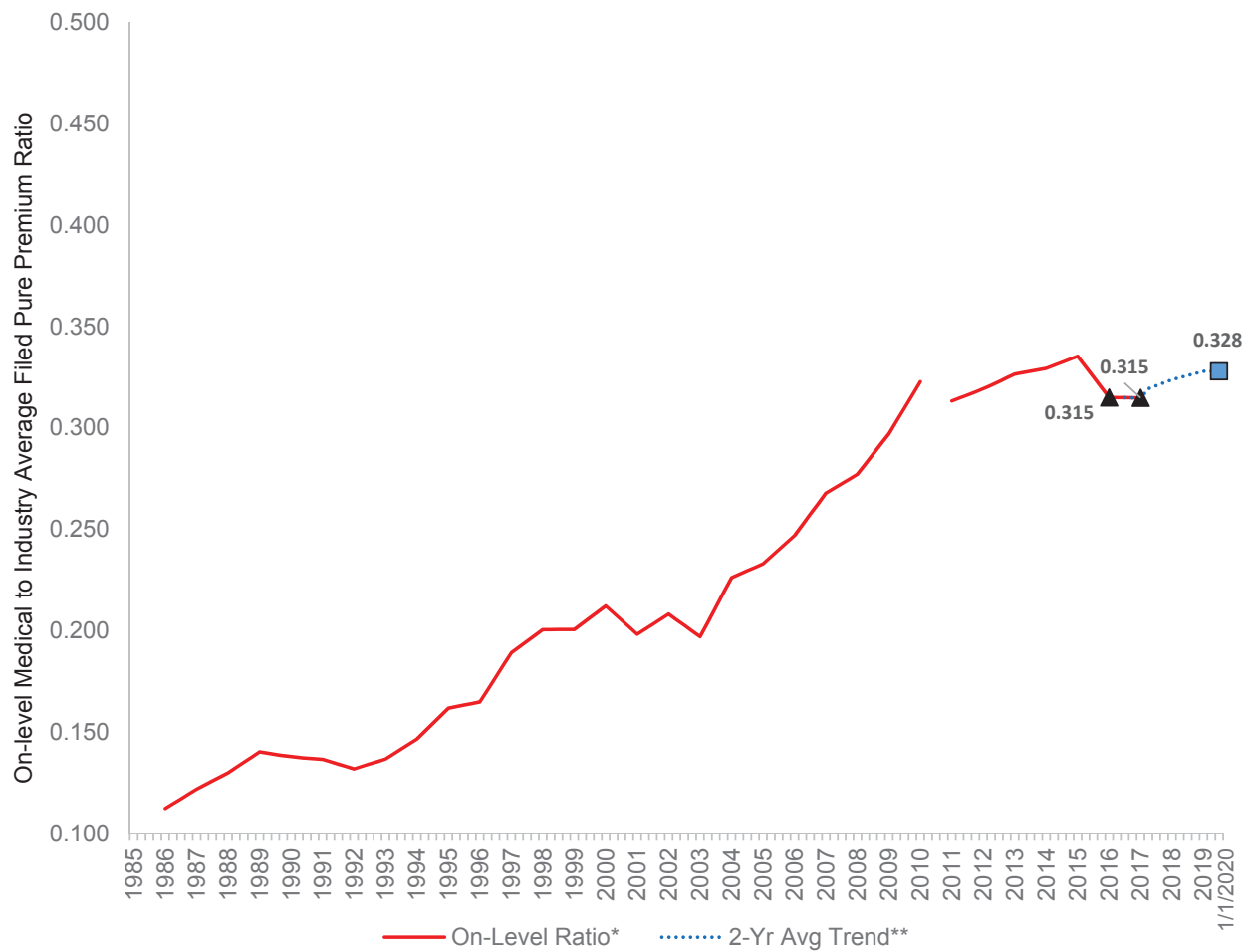
* On-level medical to industry average filed pure premium ratios (see Exhibit 7.3)

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

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

	Indemnity	Medical	Total
1. Projected Loss to Industry Average Filed Pure Premium Ratio (See Exhibits 7.1 and 7.3)	0.249	0.328	0.577

Quarterly Incurred Indemnity Loss Development Factors

Through June 30, 2018

Age in Months	Accident Year																			
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
6/3									2.417	2.724	2.785	3.031	3.116	3.052	3.238	3.344	3.303	3.209	3.201	3.356
9/6									1.656	1.776	1.820	1.848	1.904	2.001	1.966	1.940	1.960	1.948	1.945	1.874
12/9									1.448	1.511	1.510	1.530	1.564	1.632	1.587	1.585	1.570	1.578	1.578	1.580
15/12	1.229	1.260	1.268	1.250	1.257	1.238	1.180	1.149	1.189	1.234	1.248	1.293	1.306	1.306	1.303	1.301	1.301	1.313	1.309	1.298
18/15	**1.172**	**1.202**	**1.188**	**1.184**	**1.206**	**1.167**	**1.101**	**1.103**	**1.140**	**1.158**	**1.182**	**1.194**	**1.197**	**1.195**	**1.206**	**1.178**	**1.190**	**1.187**	**1.189**	**1.178**
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	
24/21	1.126	1.112	1.121	1.111	1.117	1.094	1.045	1.082	1.098	1.106	1.106	1.114	1.119	1.117	1.111	1.104	1.114	1.111	1.104	
27/24	1.074	1.096	1.093	1.100	1.094	1.073	1.045	1.070	1.082	1.081	1.088	1.089	1.091	1.085	1.087	1.081	1.082	1.087	1.079	
30/27	**1.078**	**1.069**	**1.074**	**1.082**	**1.064**	**1.051**	**1.040**	**1.054**	**1.057**	**1.072**	**1.075**	**1.075**	**1.080**	**1.071**	**1.068**	**1.067**	**1.074**	**1.066**	**1.065**	
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		
36/33	1.043	1.046	1.039	1.046	1.035	1.020	1.029	1.033	1.039	1.043	1.051	1.049	1.049	1.043	1.041	1.043	1.042	1.035		
39/36	1.038	1.041	1.035	1.038	1.028	1.017	1.027	1.029	1.031	1.033	1.040	1.039	1.039	1.041	1.035	1.031	1.036	1.031		
42/39	**1.027**	**1.028**	**1.034**	**1.030**	**1.023**	**1.018**	**1.020**	**1.020**	**1.031**	**1.033**	**1.036**	**1.038**	**1.035**	**1.032**	**1.028**	**1.031**	**1.030**	**1.028**		
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			
48/45	1.025	1.020	1.022	1.013	1.008	1.013	1.013	1.021	1.019	1.021	1.024	1.024	1.026	1.023	1.024	1.020	1.020			
51/48	1.022	1.017	1.018	1.015	1.010	1.016	1.010	1.018	1.021	1.018	1.022	1.023	1.021	1.018	1.017	1.015	1.019			
54/51	**1.019**	**1.018**	**1.013**	**1.009**	**1.007**	**1.017**	**1.009**	**1.017**	**1.021**	**1.020**	**1.021**	**1.020**	**1.020**	**1.016**	**1.019**	**1.015**	**1.016**			
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				
60/57	1.013	1.014	1.007	1.005	1.008	1.009	1.011	1.013	1.019	1.016	1.013	1.015	1.012	1.014	1.012	1.012				
63/60	1.012	1.012	1.007	1.007	1.008	1.008	1.010	1.014	1.013	1.015	1.011	1.014	1.014	1.009	1.012	1.009				
66/63	**1.014**	**1.009**	**1.005**	**1.006**	**1.011**	**1.008**	**1.010**	**1.013**	**1.016**	**1.014**	**1.015**	**1.013**	**1.013**	**1.009**	**1.010**	**1.010**				
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					
72/69	1.009	1.006	1.005	1.005	1.005	1.009	1.009	1.013	1.011	1.009	1.009	1.009	1.010	1.008	1.007					
75/72	1.006	1.004	1.004	1.005	1.003	1.005	1.007	1.010	1.011	1.010	1.010	1.008	1.007	1.004	1.006					
78/75	**1.007**	**1.004**	**1.003**	**1.007**	**1.005**	**1.006**	**1.006**	**1.012**	**1.009**	**1.010**	**1.006**	**1.006**	**1.006**	**1.006**	**1.006**					
81/78	1.005	1.002	1.003	1.004	1.004	1.005	1.006	1.010	1.009	1.007	1.007	1.006	1.006	1.007						
84/81	1.003	1.003	1.005	1.003	1.006	1.006	1.007	1.008	1.005	1.009	1.006	1.004	1.007	1.004						
87/84	1.003	1.003	1.002	1.003	1.004	1.002	1.007	1.010	1.007	1.004	1.005	1.006	1.004	1.006						
90/87	**1.001**	**1.003**	**1.003**	**1.003**	**1.003**	**1.004**	**1.008**	**1.008**	**1.008**	**1.008**	**1.004**	**1.005**	**1.005**	**1.005**						
93/90	1.001	1.002	1.004	1.003	1.002	1.005	1.006	1.008	1.006	1.007	1.006	1.003	1.004							
96/93	1.002	1.003	1.001	1.004	1.002	1.006	1.006	1.003	1.002	1.003	1.004	1.004	1.003							

Source: WCIRB accident year experience calls

Quarterly Incurred Medical Loss Development Factors *

Through June 30, 2018

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

Source: WCIRB acident year experience calls

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

Quarterly Paid Indemnity Loss Development Factors

Through June 30, 2018

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

Source: WCIRB acident year experience calls

Quarterly Paid Medical Loss Development Factors *

Through June 30, 2018

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

Source: WCIRB acident year experience calls

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

Reported Indemnity Claim Count Development

Accident Year	\	\	\	\	\	\	\	Development	\	\	\	\	\	\	\	\
	6-18	18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126	126-138	138-150	150-162	162-174	174-186	186-198
1993																1.000
1994															1.000	1.000
1995														1.000	1.001	1.000
1996													1.000	1.000	1.000	1.000
1997												1.000	1.000	1.000	1.000	1.000
1998											1.000	1.001	1.000	1.000	1.000	1.000
1999										1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000									1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000
2001								0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002							1.000	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000
2003						0.998	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	
2004					0.999	1.000	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000		
2005				1.000	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000			
2006			1.007	1.003	1.001	1.000	1.001	1.000	1.000	1.001	1.000	1.000				
2007		1.022	1.009	1.005	1.003	1.002	1.000	1.000	1.001	1.000	1.000					
2008	2.483	1.040	1.013	1.008	1.003	1.002	1.001	1.001	1.001	1.000						
2009	2.682	1.050	1.018	1.008	1.004	1.002	1.002	1.001	1.000							
2010	2.831	1.057	1.018	1.008	1.005	1.002	1.002	1.001								
2011	2.897	1.068	1.019	1.009	1.004	1.002	1.002									
2012	2.936	1.073	1.019	1.009	1.004	1.002										
2013	2.980	1.065	1.017	1.008	1.004											
2014	2.917	1.066	1.017	1.007												
2015	2.962	1.065	1.013													
2016	2.935	1.069														
2017	2.856															

								Latest Year								
Age-to-Age																
	2.856	1.069	1.013	1.007	1.004	1.002	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Age-to-Ultimate																
	3.149	1.103	1.031	1.017	1.010	1.007	1.004	1.003	1.002	1.001	1.001	1.000	1.001	1.001	1.001	1.001

Quarterly Reported Indemnity Claim Count Development Factors

Accident Year	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	1.009	1.006	1.004	1.003	1.003	1.002	1.003	1.002
2009	2.679	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	2.689	1.708	1.407	1.124	1.037	1.021	1.016	1.011	1.008	1.005	1.005	1.003	1.004	1.003	1.001
2011	2.690	1.740	1.423	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	2.750	1.726	1.420	1.122	1.050	1.028	1.018	1.012	1.009	1.007	1.004	1.004	1.003	1.003	1.002
2013	2.818	1.738	1.420	1.138	1.045	1.027	1.016	1.010	1.009	1.007	1.004	1.004	1.004	1.002	1.002
2014	2.776	1.723	1.421	1.129	1.045	1.025	1.017	1.012	1.010	1.005	1.004	1.004	1.004	1.002	1.002
2015	2.793	1.743	1.414	1.135	1.047	1.024	1.016	1.012	1.008	1.005	1.003	1.003	1.002		
2016	2.732	1.720	1.413	1.140	1.046	1.027	1.017	1.013	1.010						
2017	2.823	1.690	1.414	1.130	1.044										
2018	2.815														

Reported Indemnity Claim Settlement Ratios

Accident Year	6	18	30	42	54	66	78	90	102	114	126	138	150	162	174	186	198
1993																	99.0%
1994																98.7%	98.8%
1995															98.3%	98.5%	98.6%
1996														97.9%	98.1%	98.3%	98.5%
1997												97.3%	97.6%	97.9%	98.1%	98.3%
1998											96.5%	96.9%	97.3%	97.6%	97.9%	98.1%
1999										95.6%	96.3%	96.8%	97.2%	97.5%	97.8%	98.0%
2000									94.1%	95.1%	95.9%	96.4%	96.9%	97.3%	97.7%	97.9%
2001								91.4%	92.9%	94.0%	94.9%	95.7%	96.3%	96.8%	97.2%	97.5%
2002							89.6%	91.6%	93.1%	94.3%	95.3%	96.1%	96.7%	97.1%	97.6%	97.9%
2003						86.8%	89.5%	91.5%	93.2%	94.5%	95.5%	96.1%	96.7%	97.3%	97.7%	
2004					83.3%	86.8%	89.5%	91.6%	93.4%	94.9%	95.8%	96.4%	97.1%	97.5%		
2005				78.4%	83.4%	87.1%	89.8%	92.0%	93.8%	95.0%	96.0%	96.7%	97.3%			
2006			69.8%	77.8%	83.2%	86.9%	89.8%	92.2%	93.7%	95.0%	96.0%	96.7%				
2007		56.8%	68.8%	77.2%	82.6%	86.7%	90.1%	92.3%	94.1%	95.4%	96.3%					
2008	40.4%	55.0%	67.3%	75.9%	82.1%	87.0%	90.2%	92.7%	94.3%	95.6%						
2009	13.8%	38.7%	53.1%	65.8%	75.0%	81.9%	86.7%	90.3%	92.7%	94.4%						
2010	14.7%	39.0%	54.0%	66.8%	76.8%	83.4%	88.2%	91.4%	93.7%							
2011	16.5%	39.5%	54.6%	68.2%	78.0%	84.6%	89.1%	92.3%								
2012	16.0%	39.5%	55.7%	69.7%	79.3%	85.9%	90.3%									
2013	16.2%	39.1%	57.0%	71.2%	81.1%	87.5%										
2014	15.2%	39.8%	58.1%	72.7%	82.7%											
2015	15.2%	41.0%	60.4%	75.2%												
2016	16.1%	43.3%	63.1%													
2017	17.2%	45.7%														
2018	18.5%															

Estimated Ultimate Indemnity Claim Settlement Ratios

Accident Year	6	18	30	42	54	66	78	90	102	114	126	138	150	162	174	186	198
1993																	98.8%
1994																98.5%	98.6%
1995																98.2%	98.4%
1996														97.6%	97.9%	98.1%	98.3%
1997													97.0%	97.4%	97.6%	97.9%	98.1%
1998												96.2%	96.7%	97.1%	97.4%	97.7%	98.0%
1999											95.4%	96.0%	96.6%	97.0%	97.3%	97.7%	97.9%
2000										93.9%	94.9%	95.6%	96.2%	96.7%	97.2%	97.5%	97.8%
2001									91.2%	92.7%	93.8%	94.7%	95.5%	96.1%	96.6%	97.0%	97.4%
2002								89.6%	91.6%	93.0%	94.2%	95.2%	96.0%	96.5%	97.0%	97.4%	97.8%
2003							87.0%	89.6%	91.5%	93.1%	94.4%	95.4%	96.1%	96.6%	97.2%	97.6%	
2004						83.4%	87.0%	89.6%	91.6%	93.4%	94.8%	95.7%	96.4%	97.0%	97.4%		
2005					78.2%	83.3%	87.0%	89.8%	91.9%	93.7%	95.0%	95.9%	96.6%	97.2%			
2006				69.3%	77.5%	82.9%	86.7%	89.6%	92.0%	93.6%	94.9%	95.9%	96.7%				
2007			55.7%	68.0%	76.7%	82.3%	86.5%	89.9%	92.2%	94.0%	95.3%	96.3%					
2008		37.6%	53.3%	66.0%	75.1%	81.5%	86.6%	89.9%	92.5%	94.2%	95.5%						
2009	4.7%	35.5%	51.2%	64.6%	74.1%	81.3%	86.2%	90.0%	92.5%	94.3%							
2010	4.7%	35.6%	52.0%	65.5%	75.9%	82.8%	87.8%	91.2%	93.5%								
2011	5.1%	35.6%	52.6%	66.9%	77.2%	84.1%	88.8%	92.1%									
2012	4.9%	35.4%	53.6%	68.4%	78.4%	85.3%	89.9%										
2013	4.9%	35.5%	55.0%	69.9%	80.3%	86.9%											
2014	4.7%	36.1%	56.2%	71.5%	81.9%												
2015	4.7%	37.3%	58.6%	74.0%													
2016	5.0%	39.3%	61.2%														
2017	5.5%	41.4%															
2018	5.9%																

Evaluated as of (in months):

Quarterly Ultimate Settlement Ratios

Accident Year	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
							Evaluated as of (in months):									
2009	0.7%	4.7%	12.3%	21.3%	29.7%	35.7%	40.0%	44.0%	47.7%	51.3%	55.0%	58.5%	61.5%	64.6%	67.1%	69.6%
2010	0.7%	4.8%	11.9%	21.1%	29.9%	35.9%	40.3%	44.6%	48.3%	52.3%	55.8%	59.3%	62.5%	65.9%	68.9%	71.8%
2011	0.8%	5.1%	12.0%	21.3%	29.7%	35.9%	40.4%	44.7%	48.6%	52.9%	56.8%	60.8%	64.1%	67.1%	70.2%	72.9%
2012	0.8%	5.1%	12.1%	21.2%	29.5%	35.9%	40.7%	45.6%	49.7%	54.0%	58.3%	62.1%	65.5%	68.7%	71.6%	74.3%
2013	0.9%	5.1%	11.8%	20.9%	29.3%	35.9%	41.3%	46.3%	50.9%	55.3%	59.4%	63.4%	66.9%	70.2%	73.2%	75.9%
2014	0.8%	4.8%	11.7%	20.7%	29.5%	36.2%	42.0%	47.1%	51.8%	56.3%	60.5%	64.5%	67.9%	71.4%	74.3%	77.1%
2015	0.8%	4.8%	12.1%	21.0%	30.2%	37.5%	43.1%	48.5%	53.5%	58.6%	62.9%	66.9%	70.5%	73.8%		
2016	0.8%	5.1%	12.3%	21.9%	31.6%	39.4%	45.3%	51.1%	56.1%	61.2%						
2017	0.8%	5.6%	13.3%	23.8%	33.7%	41.4%										
2018	1.0%	5.9%														

Accident Year	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
						Quarterly Incremental Change									
2009	4.0%	7.5%	9.1%	8.3%	6.0%	4.4%	4.0%	3.7%	3.6%	3.7%	3.5%	3.0%	3.0%	2.5%	2.5%
2010	4.1%	7.2%	9.2%	8.8%	6.0%	4.3%	4.3%	3.8%	3.9%	3.5%	3.5%	3.2%	3.4%	3.0%	2.9%
2011	4.3%	6.9%	9.3%	8.4%	6.1%	4.5%	4.3%	3.9%	4.3%	3.9%	4.0%	3.3%	3.1%	3.0%	2.7%
2012	4.3%	7.1%	9.1%	8.3%	6.4%	4.8%	4.9%	4.1%	4.3%	4.2%	3.9%	3.4%	3.2%	2.9%	2.7%
2013	4.2%	6.7%	9.1%	8.4%	6.6%	5.4%	5.0%	4.5%	4.5%	4.1%	3.9%	3.5%	3.3%	2.9%	2.8%
2014	4.0%	6.9%	9.0%	8.8%	6.7%	5.7%	5.1%	4.7%	4.5%	4.2%	4.0%	3.3%	3.5%	2.9%	2.8%
2015	4.0%	7.3%	8.9%	9.2%	7.3%	5.6%	5.3%	5.1%	5.1%	4.3%	4.0%	3.6%	3.3%		
2016	4.2%	7.2%	9.6%	9.7%	7.8%	5.9%	5.8%	5.0%	5.1%						
2017	4.7%	7.7%	10.6%	9.8%	7.8%										
2018	5.0%														

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 84% to 100% of the total California workers' compensation insured market measured using 2017 earned premium levels).

Source: WCIRB quarterly calls for experience

California Workers' Compensation
Estimated Indemnity Claim Frequency by Accident Year

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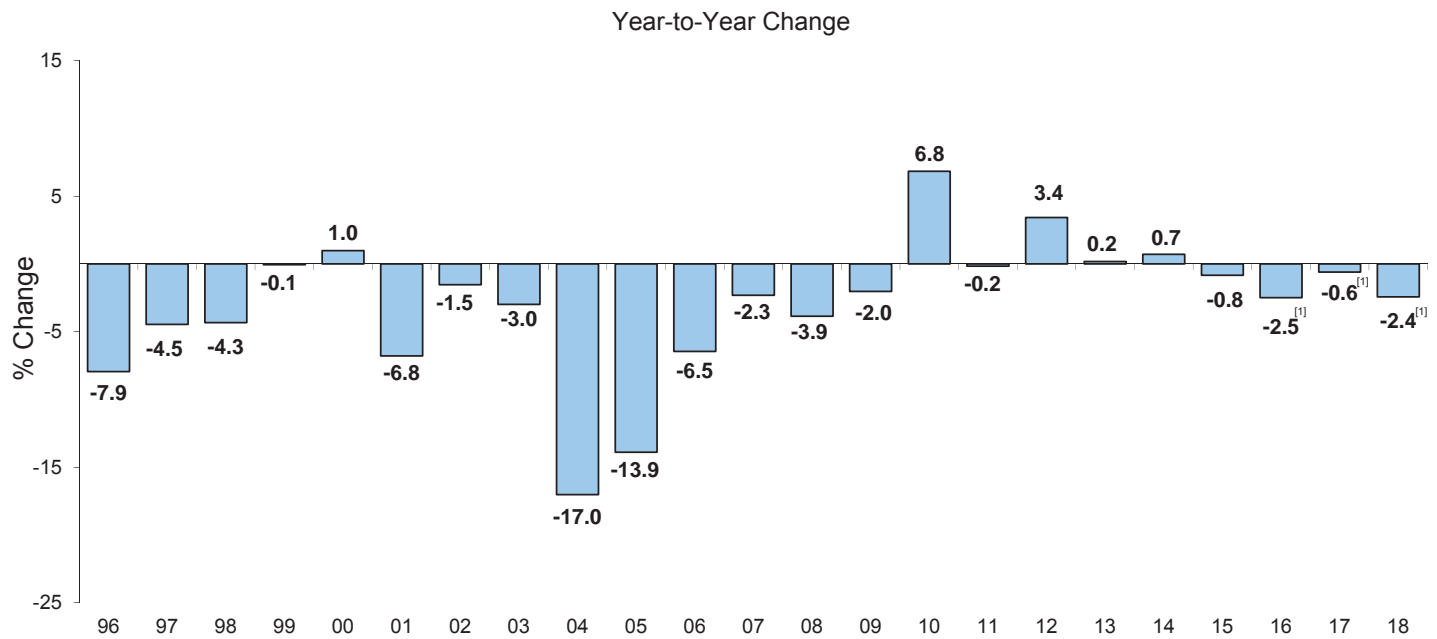
[1] The 2015-2016 estimate is based on partial year unit statistical data.   The 2016-2017 and 2017-2018 estimates are based on comparison of claim counts based on WCIRB accident year experience as of June 30, 2018 relative to the estimated change in statewide employment. Prior years are based on unit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

Item AC18-09-02
Cumulative Trauma Claim Study

At recent Actuarial Committee meetings and in recent pure premium rate filings, it has been noted that despite decreases in several cost components, the rate of cumulative trauma (CT) claims has continued to rise. At the December 6, 2017 meeting, the Committee recommended staff study the recent high levels of CT claims in detail. Staff's preliminary findings will be presented at the meeting.

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