

Actuarial Committee

Meeting Agenda

Date	Time	Location	Staff Contact
March 21, 2017	9:30 AM	WCIRB California 1221 Broadway, Suite 900 Oakland, CA	David M. Bellusci
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Released: March 14, 2017

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

I. Approval of Minutes

Meeting held on December 6, 2016

II. Working Group Meeting Summaries

Actuarial Research Working Group Meeting held February 17, 2017

III. Unfinished Business

A. AC14-08-07: SB 863 Cost Monitoring – Adjustments to Pure Premium Ratemaking

IV. New Business

A. AC17-03-01: First Quarter 2017 Review of Diagnostics

B. AC17-03-02: 12/31/16 Experience – Review of Methodologies

C. AC17-03-03: Study of Claim Settlement Rate Adjustments to Loss Development

D. AC17-03-04: Experience Rating – Treatment of Small Medical Claims

V. Matters Arising at Time of Meeting

VI. Next Meeting Date: April 3, 2017

VII. Adjournment

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Actuarial Research Working Group

Meeting Summary

To: Participants of the Actuarial Research Working Group
From: Ward Brooks
Date: March 7, 2017

RE: Summary of February 17, 2017 Meeting

Insurer Meeting Participants Were Reminded of the Antitrust Notice

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Discussion Topics

At the meeting, the following topics were discussed.

1. Relationships among Claim Costs and Payrolls by Worker Wage Intervals

The Working Group was informed that staff had reviewed information on the relationship between claim costs and workers' average wage levels. Key wage points that staff investigated were those associated with California's average annual salary and the 2016 social security earnings limit of \$118,500. (The 2017 limit is \$127,200.) Staff presented to the Working Group a number of measures of claim costs by wage interval. Generally, severity costs increased to a point, then leveled off at the state average annual salary or the social security earnings limit. Generally, costs consistently declined as a share of payrolls beyond the lowest wage groups.

Parallel analyses were completed for groups of classifications to confirm that the results were not the result of classification mix. The clerical classification, 8810, was reviewed as its own group. Classifications for which 8810 is implicit in the classification description were reviewed as a group. Construction classifications were reviewed as a group and all other classifications were also reviewed as a group. The patterns observed for all classifications combined were also observed for the different subsets of classifications. A Working Group member requested that this analysis be conducted by retro hazard group. This analysis was conducted subsequent to the meeting and similar patterns prevailed.

Staff estimated that the share of California payrolls earned above \$118,500 were approximately 25% for the insured system. Staff found significant differences in the shares of payrolls excess \$118,500—being very high for physicians and lawyers, for example, while very low for landscape gardeners.

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2. Retrospective Rating Plan Updates—Hazard Group Assignments

The Working Group was reminded that at the June 28, 2016 and October 19, 2016 meetings, staff had reviewed with the Working Group all the major simulation modules used to develop the retrospective rating database as well as the vector trend methodology, by which indemnity and medical trend adjustments vary by size of loss. At the October 19, 2016 meeting, the Working Group was informed that the retro database was completed and that staff would now review updating hazard groups.

Staff advised the Working Group that additional requested artifacts would be developed with the updated retro. The distributions of simulated claims by age and size by hazard group, for example, would be available. (Currently, these distributions are not available by hazard group.) Staff reviewed with the Working Group the preliminary loss elimination ratios for the main database and for the above and other potential artifacts. To support these new artifacts, which generally involve thinner slices of the data, staff had expanded the number of simulations from 5 per claim to 100 per claim. Staff noted that closed claims not simulated to reopen would be present in the database 100 times at their reported value and staff was evaluating whether to adjust for these closed claims.

Staff informed the Working Group that given the increased number of simulations, staff had evaluated the retro database by insurer and evaluated the potential to provide insurers with loss elimination ratios based on their own data subset from the retro database. The Working Group was informed that staff found the results by insurer, even for smaller insurers, were reasonable to provide meaningful information. Given these results, staff advised the Working Group that insurer subsets were expected to be made available with the publication of the updated loss elimination ratios.

A Working Group member noted that there had been decreases in the indicated loss elimination ratios (LERs) for the updated retro database. The prior database was based on policy years 2007 at 5th, 2008 at 4th, and 2009 at 3rd, report levels. The new database was based on policy years 2009 at 5th, 2010 at 4th, and 2011 at 3rd. Staff informed the Working Group that the decreases in the LERs sourced from the different starting periods. There was a decrease of about 0.050 at the \$100,000 accident limit before any trending, on-level or stochastic development, for example. (An increase would have been expected due to inflation.) Also, the share of claims open in the starting databases had fallen from nearly 10% to approximately 9.5%. Staff determined that the primary changes in the overall level of the LERs were attributable to the size of loss distributions used in the different starting databases rather than any methodological change.

The Working Group was informed that the error-out thresholds for extreme observations had been reviewed using both the prior approach and a new approach developed this year to adjust historical observations to a current level to assess incidence of extremely large observations. The two approaches both gave similar estimates of extreme large losses. Staff noted, however, that in developing the updated retro database, no simulations had exceeded either error-out threshold. Staff attributed this to sufficient refinement of the methodology and tables used in the simulation.

Staff informed the Working Group that the current methodology simulates claims for up to 50 years of maturity. The Working Group was reminded that staff had reviewed the observed distribution of injured worker ages at ultimate as part of the last retro update and noted that the oldest accident observed in the data was currently 78 years. The Working Group was also informed that staff had compared the results simulating claims for 50, 78 and 100 years. The incremental difference in loss elimination ratios simulating out to 78 years was only 0.001. There was no material incremental difference simulating out to 100 years and the incidence of claims

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continuing to be open and develop to 78 and 100 years was infinitesimal. Given these results, staff advised the Working Group that staff would simulate claims for 100 years.

Staff noted that a special review of large, multi-claimant occurrences had been conducted to ensure that these data were reasonable. The Working Group was reminded that California's unit statistical catastrophe code was used to identify multi-claimant accidents. The special handling of these claims in experience rating helped to ensure the accuracy of this coding for the vast majority of claims. Staff noted that this coding was used to convert the claim-level database to an occurrence-level database. Staff reviewed with the Working Group some of the occurrences with very large numbers of claimants. The most common such occurrence involved smoke inhalation events. The nature of the events was determined by linking these claims to the WCIRB's transactional medical data and reviewing the diagnostic codes associated with the claims. Another common occurrence involved motor vehicle accidents. Staff reviewed the coefficients of variation for these two kinds of occurrences, noting that the coefficients of variation for inhalation events was considerably lower than for motor vehicle events, even for occurrences with a common the number of claims. Staff noted that for occurrences involving four or more claimants, about 66% of the occurrences' total incurred losses was associated with the largest claim from each occurrence and 16% was associated with the second largest claim from each occurrence.

Staff reviewed for the Working Group the research underlying the development of update hazard group assignments. The Working Group was reminded that hazard group assignments are used in classification ratemaking to load losses excess \$500,000 by hazard group.

The Working Group was reminded that as 100 simulations were used for each claim, staff evaluated development of the credibility used for hazard group assignment by reference to the volatility of the simulations themselves. (An open claim would typically have 100 unique simulated ultimate values. Closed claims might simulate to reopen from zero to 100 times and have a corresponding number of unique simulated ultimate values.) The Working Group was informed that staff developed a credibility method based on the interquartile range (IQR) of the \$500,000 LERs from each classification's simulations, with large losses smoothed. The variability of the results was well captured by the IQRs of the \$500,000 LERs for larger classifications. However, for classifications with few (or no) claims simulating above \$500,000, the IQR-based approach was problematic. The Working Group was informed that staff would revisit this approach in the future.

The Working Group was informed that staff developed credibility for classifications' \$500,000 LERs as a function of the number of simulations. Indicated credibilities as a function of the number of simulations were fit to a log-logistic curve. Each classification's simulated \$500,000 LER was credibility weighted with the LER of the classification's current hazard group. Note that this credibility-weighted LER is used only for hazard group assignment.

Indicated hazard groups were then developed using cluster analysis on the credibility-weighted \$500,000 LERs to assign each classification to one of seven hazard groups. Staff reviewed for the Working Group the variety of clustering methods evaluated. The Working Group was informed that staff selected a k-means (with k =7) approach using Ward's linkage.

Staff reviewed results for classifications with significant changes in hazard group assignment. All changes appeared to be appropriate and associated with changes in the underlying starting data. In many cases, industrial shifts were known that were suspected of contributing to the changes. For classifications with low volumes of observations, staff evaluated using additional years of experience in addition to credibility, noting that the credibility process itself integrated some history via the complement of credibility. Staff noted that the resources devoted to developing

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'solutions' for small classifications was informed by the ongoing review of the appropriateness of small classifications.

Staff noted that classifications' credibility-weighted \$500,000 LERs formed a fairly continuous distribution rather than discrete clusters. To recognize this, the Working Group was informed that while staff plans to publish discrete retrospective rating hazard groups (RHGs) in the standard tables, staff would also publish, in supplemental materials, the hazard group assignments at a decimal level. Staff noted that the volume of the data supports this level of refinement, which may be used to better understand the relationships among classifications' hazard group assignments. For example, two classifications where one is in hazard group 3 and one is in hazard group 4, might have decimal assignments of 2.6 and 3.6 or decimal assignments of 3.4 and 3.6. In the former case, the classifications' loss elimination ratios are expected to be further apart than in the latter case. This additional information will facilitate understanding of the impact of discretization on classifications' hazard group assignments and future drift of assignments. Staff reviewed the development of the decimal hazard group assignments. The Working Group agreed that this information would be beneficial.

3. Experience Rating 'First Aid Claim' Alternative

The Working Group was reminded that at the March 2, 2016 meeting, the Working Group reviewed experience rating plan options that excluded the first \$250, \$500 or \$1,000 of each claim as alternatives to reduce incentive not to report small claims for experience rating. The exclusion was for medical and indemnity combined as the additional complexity of excluding only medical was not found to be cost effective. The Working Group was reminded that the alternative excluding the first \$250 of each claim was found to result in only a small loss of predictive accuracy and that the findings were reviewed in 2016 by the Actuarial Committee and Classification and Rating Committee, which both agreed that a change to the experience rating plan to exclude the first \$250 dollars of each claim should be further studied with an updated year of experience.

The Working Group was informed that staff had completed parameterization of a fifth year (projection policy year 2014) to confirm that the findings for the most recent evaluable period were comparable to those found for the four prior years (policy years 2010-2013) studied. The Working Group reviewed staff's findings.

The Working Group was informed that, pending approval by WCIRB committees, staff plans to file this 'First Aid Claim' alternative this June as part of the WCIRB's Regulatory Filing to be effective with modifications for policies incepting January 1, 2019.

Item AC14-08-07

SB 863 Cost Monitoring – Adjustments to Pure Premium Ratemaking

In the last several pure premium rate filings, the WCIRB reflected the estimated cost impact of Senate Bill No. 863 (SB 863) on pure premium rates. These estimates were based on the WCIRB's initial prospective cost evaluation of SB 863 as updated in a series of annual retrospective evaluations of emerging post-SB 863 experience. The WCIRB's final comprehensive retrospective evaluation of the cost impact of SB 863 was reviewed by the Committee at the November 8, 2016 meeting and published on November 17, 2016.¹

The WCIRB's 2016 SB 863 Cost Monitoring Report noted changes to the assessment of the cost impact of SB 863 provisions related to supplemental job displacement benefits, temporary disability duration as it relates to independent medical review (IMR) and medical provider network (MPN) changes, and the changes to the physician fee schedule related to the resource-based relative value scale (RBRVS). Staff recommends these changes—as detailed in the 2016 SB 863 Cost Monitoring Report—be reflected in the on-level factors and, when applicable, the loss development factors to be reflected in a potential July 1, 2017 Pure Premium Rate Filing.

The WCIRB's 2016 SB 863 Cost Monitoring Report also noted that SB 863 provisions related to IMR, independent bill review, MPNs, RBRVS, and other provisions affecting medical costs have likely resulted in significant reductions in the utilization of medical services. Specifically, the WCIRB estimated an approximate 10% decrease in overall medical severities as a result of changes to medical utilization levels resulting from SB 863.

As discussed at prior meetings and in recent pure premium rate filings, changes to medical utilization levels resulting from reforms can potentially impact post-reform medical services on older accident years. However, contrary to changes to medical fee schedules or reimbursement rates that impact all of those types of services performed after the effective date, shifts in medical utilization levels may be less pronounced in more mature years where injuries and treatment patterns are more developed and medical treatment levels are less likely to change significantly. Furthermore, fee schedule and other similar changes occur with specific and distinct effective dates that allow for effects on payment patterns to be more directly measured and adjusted for, while the impact of changes in medical utilization levels on loss development patterns are less clear and may occur gradually.

In the January 1, 2017 Pure Premium Rate Filing, the WCIRB judgmentally distributed the 10% decrease in medical severities incrementally by accident year by assigning 20% of the impact to accident year 2012, 20% to accident year 2013, and 60% to accident year 2014. This distribution was based on an analysis of pre-reform and post-reform loss development patterns.² Table 2 shows the estimated change in on-level medical severity based on September 30, 2016 experience after reflecting the on-level adjustments on this basis. As shown, this approach results in a large increase in the on-level medical severity for accident year 2014 and continued decreases for accident years 2012 and 2013. As a result, the current approach may be assigning a disproportionate amount of the total impact to the 2014 accident year compared to that assigned to the prior accident years.

Staff reviewed an alternative approach for distributing the 10% medical utilization decrease across accident years based on estimated paid medical development. This approach bases the share of the 10% utilization decrease on the estimated unpaid medical development as of December 31, 2013³ for each

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

² See Item AC14-08-07 of the March 22, 2016 meeting.

³ The RBRVS fee schedule changes did not go into effect until January 1, 2014. In addition the new IMR and IBR processes did not start having a significant impact on treatment levels until the end of 2013.

accident year through 48 months relative to the total paid development estimated at 48 months. The 48-month cutoff point was judgmentally selected as the approximate point where the SB 863 reforms are assumed to not be significantly impacting medical treatment patterns. The distribution of the 10% medical utilization decrease by accident year based on this approach is shown in Table 1. Staff recommends adjusting the medical on-level factors on this basis. Staff reviewed several additional approaches, including an analysis of medical transactions and calendar year paid medical, but these alternatives did not appear to improve the distribution of the estimated SB 863 impacts on medical severity by accident year relative to staff's recommended approach.

Table 1 – Estimated Impact of SB 863 Medical Utilization Change by Accident Year					
Accident Year	Age in Months @12/31/13	Estimated Unpaid @12/31/13	Unpaid to 48 Mos. Relative to Paid @48 Mos.	Cumulative Impact of -10% Medical Util. Change	Incremental Impact of -10% Medical Util. Change
2010	48	56%	0%	0%	0%
2011	36	66%	22%	-2%	-2%
2012	24	77%	48%	-5%	-3%
2013	12	91%	80%	-8%	-3%
2014	0	100%	100%	-10%	-2%

Table 2 shows the estimated change in ultimate medical severity as of September 30, 2016 before any on-level adjustments compared to that adjusted based on staff's recommended approach.

Table 2 – Estimated Change in Ultimate Medical Severity Based on September 30, 2016 Experience			
Accident Year	No On-level Adjustments	On-leveled: 1/1/17 Filing Approach	On-leveled: Staff Recommended
2010	1.3%	1.5%	1.5%
2011	0.1%	0.6%	2.7%
2012	-4.6%	-1.9%	-0.9%
2013	-4.9%	-2.3%	-1.3%
2014	-1.8%	4.3%	0.1%

Item AC17-03-01

First Quarter 2017 Review of Diagnostics

Twice a year WCIRB staff compiles a comprehensive list of measures to be reviewed by the Claims Working Group and the Actuarial Committee in order to identify and quantify changes in claim patterns and trends and help determine the most appropriate methodologies to be used in the development of pure premium rates. The diagnostics are segregated into the following areas:¹

1. Market and claim characteristic information (exhibit numbers start with M)
2. Claim count information (exhibit numbers start with C)
3. Loss development information (exhibit numbers start with D)
4. Claim severity information (exhibit numbers start with S)
5. Loss adjustment expense information (exhibit numbers start with E)

Please note the following:

1. The percentage of medical-only claims continues to decline, while indemnity claims are evenly divided between temporary disability only claims and claims involving permanent disability (Exhibit M4).
2. The share of claims reported as settled through compromise and release on unit statistical data has continued to increase. In policy year 2012 the percentage increased to 38.8% from 33.3% in 2011 and 29.9% in 2010 (Exhibit M6.1).
3. The number of expedited hearings remained steady in the third and fourth quarters of 2016 after a large increase in the second quarter (Exhibit M8.1).
4. As anticipated with the adoption of Senate Bill No. 1160 in September of 2016 which became effective on January 1, 2017, lien filings increased in the fourth quarter of 2016. The increase was almost entirely driven by a large increase in the number of liens filed in the greater Los Angeles area (Exhibit M9).
5. Indemnity claim settlement ratios continued to increase in the third quarter of calendar year 2016 (Exhibit C2.1). Settlement rates on permanent disability claims continue to rise, while settlement rates on temporary disability claims are fairly stable (Exhibit C2.2).
6. The proportion of total incurred loss development coming from closed claims increased significantly over the last year (Exhibit C5).
7. The number of quarterly incremental claim counts decreased for both indemnity and medical-only claims in the third quarter of 2016. This was the first quarter with a decrease in both these measures in over six years (Exhibit C11).
8. The proportion of indemnity claims involving cumulative trauma in the Los Angeles Basin area continues to occur at high levels with almost 15% of first unit statistical report claims for accident year 2015 reported as involving cumulative injury (Exhibit C17).
9. Despite the increase in cumulative injury claims, the frequency of indemnity claims in the Los Angeles Basin area declined for the first time since accident year 2011. (Exhibit C21).

¹ Certain diagnostics for which updates are available on an annual basis that were reviewed at the August 3, 2016 meeting was excluded from this summary but will be updated and available for review at the August 2, 2017 meeting.

10. Reported accident year 2016 severities through September 30, 2016 generally show very modest growth relative to accident year 2015 (Exhibits S2 through S5)
11. Paid allocated loss adjustment expenses per indemnity claim increased modestly over the last year after more significant increases in the prior two calendar years (Exhibit E5).
12. The proportion of permanent disability claims represented continues to increase in both Northern and Southern California (Exhibit E7).

Exhibit Numbering Guide March 2017

Exhibit #	Exhibit Name
Market/Claim Characteristics	
M4	Distribution of Estimated Ultimate Number of Claims by Injury Type
M5	Percentage of Claims Open by Injury Type and Region - First through Third Report Level
M6	Percentage of Claim Count and Average Severity by Method of Settlement
M8	Statewide Number of Division of Workers' Compensation (DWC) Quarterly Expedited Hearings
M9	Number of Division of Workers' Compensation (DWC) Quarterly Lien Filed Counts
M14	IMR Filed Counts
Claim Count	
C2	Estimated Ultimate Indemnity Claim Settlement Ratios & Indemnity Claim Settlement Rates by Injury Type & Quarterly Ultimate Settlement Ratios
C3	Ratio of Incremental Closed Indemnity Claims to Prior Open Indemnity Claims
C4	Reopening Rates Based on Unit Statistical Data & by Injury Type
C5	Closed-Closed Development Based on Unit Statistical Data
C6	California Workers' Compensation Estimated Indemnity Claim Frequency by Accident Year as of September 30, 2016
C7	2016 Accident Year Indemnity Claim Frequency Model & Indemnity Claim Frequency History and Projections
C11	Changes in Incremental Indemnity Claim Counts and Medical Only Claim Counts
C15	Partial Accident Year Cumulative Injury Indemnity Claim Counts by Policy Year and Report Level
C17	Claim Count Ratios by Region Based on Unit Statistical Data at 1st Report Level
C18	Ratio of Total Indemnity Claim Counts to Total Claim Counts
C21	Indemnity Claim Frequency by Geographic Region at First Report Level
Loss Development	
D4	Ratios of Incremental Paid Losses to Prior Outstanding Losses by Accident Year
D6	Comparison of Projected Ultimate Loss Ratios - Accident Year 2011-2015
Claim Severity	
S2	Average Incurred Indemnity Loss Per Reported Indemnity Claim & Incurred Medical Loss per Reported Claim
S3	Average Indemnity Case Outstanding & Outstanding Medical Loss Per Open Indemnity Claim
S4	Average Paid Indemnity & Medical Loss per Indemnity Claim & Average Paid Medical Loss Per Claim
S5	Average Paid Indemnity Loss & Medical per Closed Indemnity Claim
S6	Ratio of Incremental Paid Indemnity & Medical to Indemnity Claims Open During Period
S8	Estimated Ultimate Indemnity & Medical Severities by Injury Type
S10	Temporary Disability Benefits Paid at 12 and 24 Months & Changes in the Number of Weeks of Temporary
S16	Claim Counts and Losses on Claims in Excess of \$250,000 & \$500,000 & \$1,000,000
Loss Adjustment Expense	
E5	Average Paid ALAE Per Reported Indemnity Claim - Private Insurers
E6	Ratio of Cumulative Paid ALAE to Loss - Private Insurers
E7	Percentage of Represented and Unrepresented Permanent Disability Claims by Region - First/Second Survey Level
E13	Changes in the Number and Cost of Medical-Legal Reports
Discontinued/Moved Exhibits	
D1	Quarterly Incurred & Paid Indemnity & Medical Loss Development Factors
S1	Projection of Indemnity & Medical Severity Trends by Accident Year

Distribution of Estimated Ultimate Number of Claims by Injury Type

I. Distribution of Ultimate Number of Indemnity Claims

Accident <u>Year</u>	Permanent <u>Indemnity**</u>	Temporary <u>Indemnity</u>	<u>Total</u>
2001	52.8%	47.2%	100%
2002	54.3%	45.7%	100%
2003	53.7%	46.3%	100%
2004	49.8%	50.2%	100%
2005	46.2%	53.8%	100%
2006	47.2%	52.8%	100%
2007	48.2%	51.8%	100%
2008	50.5%	49.5%	100%
2009	51.8%	48.2%	100%
2010	51.3%	48.7%	100%
2011	50.9%	49.1%	100%
2012	50.0%	50.0%	100%
2013	49.2%	50.8%	100%
2014	48.7%	51.3%	100%
2015*	50.0%	50.0%	100%

II. Distribution of Ultimate Number of All Claims

Accident <u>Year</u>	Permanent <u>Indemnity**</u>	Temporary <u>Indemnity</u>	Medical <u>Only</u>	<u>Total</u>
2001	17.9%	16.0%	66.1%	100%
2002	18.9%	15.9%	65.2%	100%
2003	18.7%	16.1%	65.2%	100%
2004	15.6%	15.7%	68.7%	100%
2005	13.5%	15.7%	70.8%	100%
2006	13.6%	15.2%	71.2%	100%
2007	14.2%	15.3%	70.5%	100%
2008	15.5%	15.2%	69.3%	100%
2009	17.1%	15.9%	67.0%	100%
2010	17.7%	16.8%	65.5%	100%
2011	18.1%	17.4%	64.5%	100%
2012	18.2%	18.2%	63.6%	100%
2013	18.5%	19.1%	62.4%	100%
2014	18.3%	19.3%	62.4%	100%
2015*	19.1%	19.0%	61.9%	100%

* Accident year 2015 experience is partial in that it only reflects experience from policy year 2014.

** Permanent indemnity consists of the death, permanent total, and permanent partial injury types.

Source: WCIRB unit statistical data

Percentage of Claims Open by Injury Type and Region

Permanent Partial & Temporary

Injury Type	Report Level	Region*	Policy Year							Latest Year Reported Claim Distribution
			2008	2009	2010	2011	2012	2013	2014	
Permanent Partial	1	Bay Area	91%	91%	90%	88%	86%	85%	84%	14%
Permanent Partial	1	Los Angeles	91%	91%	89%	88%	85%	84%	83%	55%
Permanent Partial	1	Remainder of CA	91%	89%	88%	87%	84%	82%	82%	31%
		ALL REGIONS COMBINED	91%	90%	89%	88%	85%	84%	83%	100%
Permanent Partial	2	Bay Area	69%	70%	68%	65%	62%	62%		14%
Permanent Partial	2	Los Angeles	74%	74%	72%	68%	63%	63%		55%
Permanent Partial	2	Remainder of CA	70%	69%	67%	63%	61%	60%		31%
		ALL REGIONS COMBINED	72%	72%	70%	66%	62%	62%		100%
Permanent Partial	3	Bay Area	50%	50%	47%	45%	42%			15%
Permanent Partial	3	Los Angeles	58%	57%	52%	49%	45%			55%
Permanent Partial	3	Remainder of CA	51%	50%	46%	43%	41%			30%
		ALL REGIONS COMBINED	54%	54%	50%	47%	44%			100%

Injury Type	Report Level	Region*	Policy Year							Latest Year Reported Claim Distribution
			2008	2009	2010	2011	2012	2013	2014	
Temporary	1	Bay Area	41%	44%	44%	44%	46%	44%	42%	18%
Temporary	1	Los Angeles	44%	49%	50%	49%	51%	53%	50%	48%
Temporary	1	Remainder of CA	38%	40%	41%	42%	43%	45%	41%	35%
		ALL REGIONS COMBINED	41%	45%	46%	45%	47%	48%	45%	100%
Temporary	2	Bay Area	23%	23%	26%	26%	27%	24%		17%
Temporary	2	Los Angeles	28%	31%	32%	32%	33%	32%		47%
Temporary	2	Remainder of CA	21%	23%	24%	26%	26%	26%		37%
		ALL REGIONS COMBINED	24%	27%	28%	29%	29%	29%		100%
Temporary	3	Bay Area	12%	14%	14%	15%	15%			17%
Temporary	3	Los Angeles	18%	21%	22%	21%	20%			45%
Temporary	3	Remainder of CA	12%	14%	15%	16%	15%			38%
		ALL REGIONS COMBINED	15%	17%	18%	18%	18%			100%

*Los Angeles Includes Los Angeles County and remainder of Los Angeles Basin

Source: WCIRB unit statistical data

Percentage of Claim Count and Average Severity by Method of Settlement
Geographic Region: All Regions Combined

Policy Year 2009				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	30.1%	26,678	31,283	57,962
Stipulated Award	6.1%	21,084	22,944	44,028
All Other Settlements	11.1%	18,193	18,056	36,248
Not Subject to Settlement	<u>52.7%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	23,963	27,100	51,063

Policy Year 2010				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	29.9%	25,707	31,015	56,722
Stipulated Award	5.4%	20,852	21,494	42,347
All Other Settlements	13.0%	19,666	18,602	38,268
Not Subject to Settlement	<u>51.8%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	23,540	26,614	50,154

Policy Year 2011				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	33.3%	25,092	29,425	54,518
Stipulated Award	6.4%	20,044	19,562	39,606
All Other Settlements	17.2%	21,370	20,599	41,968
Not Subject to Settlement	<u>43.1%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	23,400	25,648	49,047

Policy Year 2012*				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	38.8%	23,546	27,284	50,830
Stipulated Award	7.4%	18,724	17,428	36,151
All Other Settlements	19.9%	20,930	19,999	40,929
Not Subject to Settlement	<u>33.9%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	22,219	23,986	46,205

*Policy Year 2012 is preliminary

Source: closed and resolved permanent disability claims from third report level unit statistical data

Percentage of Claim Count and Average Severity by Method of Settlement
Geographic Region: Bay Area

Policy Year 2009				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	26.6%	33,431	36,584	70,015
Stipulated Award	8.8%	22,922	20,063	42,985
All Other Settlements	10.1%	20,673	16,422	37,095
Not Subject to Settlement	<u>54.5%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	28,569	28,918	57,487

Policy Year 2010				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	25.5%	29,113	30,832	59,945
Stipulated Award	8.2%	20,178	15,996	36,174
All Other Settlements	12.6%	21,431	20,040	41,472
Not Subject to Settlement	<u>53.7%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	25,440	25,269	50,709

Policy Year 2011				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	28.7%	29,250	30,539	59,789
Stipulated Award	7.2%	19,678	20,236	39,914
All Other Settlements	16.9%	23,257	20,713	43,969
Not Subject to Settlement	<u>47.3%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	26,026	25,989	52,015

Policy Year 2012*				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	33.3%	28,179	29,966	58,145
Stipulated Award	9.2%	20,327	18,143	38,470
All Other Settlements	19.9%	23,901	20,465	44,366
Not Subject to Settlement	<u>37.6%</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Total/Average	100.0%	25,657	25,194	50,851

*Policy Year 2012 is preliminary

Source: closed and resolved permanent disability claims from third report level unit statistical data

Percentage of Claim Count and Average Severity by Method of Settlement
Geographic Region: Los Angeles**

Policy Year 2009				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	31.8%	24,943	29,327	54,271
Stipulated Award	4.6%	21,914	22,793	44,707
All Other Settlements	12.8%	17,880	19,319	37,199
Not Subject to Settlement	<u>50.8%</u>	-----	-----	-----
Total/Average	100.0%	22,825	26,115	48,940

Policy Year 2010				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	31.9%	25,186	31,028	56,214
Stipulated Award	4.2%	20,226	21,304	41,531
All Other Settlements	13.7%	18,556	18,030	36,586
Not Subject to Settlement	<u>50.2%</u>	-----	-----	-----
Total/Average	100.0%	22,942	26,630	49,572

Policy Year 2011				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	34.4%	23,863	28,321	52,183
Stipulated Award	5.6%	20,174	19,577	39,751
All Other Settlements	17.9%	20,407	21,147	41,554
Not Subject to Settlement	<u>42.1%</u>	-----	-----	-----
Total/Average	100.0%	22,440	25,263	47,703

Policy Year 2012*				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	40.1%	21,837	24,949	46,787
Stipulated Award	6.5%	18,406	16,740	35,146
All Other Settlements	20.3%	20,234	19,881	40,115
Not Subject to Settlement	<u>33.1%</u>	-----	-----	-----
Total/Average	100.0%	21,017	22,613	43,630

*Policy Year 2012 is preliminary

**Includes Los Angeles County and remainder of Los Angeles Basin

Source: closed and resolved permanent disability claims from third report level unit statistical data

Percentage of Claim Count and Average Severity by Method of Settlement
Geographic Region: Other

Policy Year 2009				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	29.1%	26,566	32,177	58,744
Stipulated Award	7.1%	19,169	24,810	43,979
All Other Settlements	9.0%	17,520	16,238	33,758
Not Subject to Settlement	<u>54.8%</u>	-----	-----	-----
Total/Average	100.0%	23,599	27,839	51,438

Policy Year 2010				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	28.9%	25,085	31,073	56,158
Stipulated Award	5.8%	22,046	25,642	47,688
All Other Settlements	12.0%	20,701	18,855	39,556
Not Subject to Settlement	<u>53.3%</u>	-----	-----	-----
Total/Average	100.0%	23,582	27,261	50,843

Policy Year 2011				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	33.7%	25,434	30,794	56,228
Stipulated Award	7.2%	20,055	19,225	39,279
All Other Settlements	16.4%	22,134	19,582	41,715
Not Subject to Settlement	<u>42.7%</u>	-----	-----	-----
Total/Average	100.0%	23,810	26,125	49,935

Policy Year 2012*				
	<u>Claim Distribution</u>	<u>Average Indemnity</u>	<u>Average Medical</u>	<u>Average Incurred</u>
Compromise & Release	39.2%	24,606	30,247	54,853
Stipulated Award	8.0%	18,262	17,977	36,239
All Other Settlements	19.3%	20,686	19,977	40,662
Not Subject to Settlement	<u>33.5%</u>	-----	-----	-----
Total/Average	100.0%	22,706	25,792	48,498

*Policy Year 2012 is preliminary

Source: closed and resolved permanent disability claims from third report level unit statistical data

Quarterly Expedited Hearings by Region

<u>Time Period</u>	<u>Northern California</u>	<u>Central California</u>	<u>Southern California</u>	<u>Expedited Hearing</u>	<u>Change from Same Quarter in Prior Year</u>
1st Qtr 2011	---	---	---	2,503	---
2nd Qtr 2011	---	---	---	2,098	---
3rd Qtr 2011	---	---	---	2,462	---
4th Qtr 2011	---	---	---	2,439	---
1st Qtr 2012	---	---	---	2,480	-0.9%
2nd Qtr 2012	---	---	---	2,525	20.4%
3rd Qtr 2012	---	---	---	3,786	53.8%
4th Qtr 2012	---	---	---	2,673	9.6%
1st Qtr 2013	---	---	---	3,480	40.3%
2nd Qtr 2013	---	---	---	3,615	43.2%
3rd Qtr 2013	---	---	---	4,109	8.5%
4th Qtr 2013	---	---	---	4,013	50.1%
1st Qtr 2014	---	---	---	3,813	9.6%
2nd Qtr 2014	14.4%	24.5%	61.1%	4,463	23.5%
3rd Qtr 2014	16.8%	23.6%	59.7%	4,404	7.2%
4th Qtr 2014	17.0%	16.8%	66.2%	3,926	-2.2%
1st Qtr 2015	16.0%	18.1%	65.9%	4,062	6.5%
2nd Qtr 2015	17.4%	15.3%	67.3%	4,350	-2.5%
3rd Qtr 2015	17.6%	20.0%	62.4%	3,698	-16.0%
4th Qtr 2015	19.0%	20.2%	60.7%	4,133	5.3%
1st Qtr 2016	18.3%	20.8%	60.9%	4,622	13.8%
2nd Qtr 2016	16.8%	20.2%	63.0%	6,283	44.4%
3rd Qtr 2016	16.9%	20.4%	62.7%	6,403	73.1%
4th Qtr 2016	18.1%	20.7%	61.2%	6,222	50.5%

Quarterly Expedited Hearings - DOR Reasons by Region

Northern California

<u>Time Period</u>	<u>Medical Treatment</u>	<u>TD</u>	<u>Other</u>	<u>Expedited Hearing</u>	<u>Change from Same Quarter in Prior Year</u>
1st Qtr 2014	---	---	---	---	---
2nd Qtr 2014	81.4%	12.6%	6.0%	643	---
3rd Qtr 2014	76.8%	16.3%	6.9%	738	---
4th Qtr 2014	74.4%	22.4%	3.2%	666	---
1st Qtr 2015	76.0%	19.6%	4.4%	651	---
2nd Qtr 2015	74.8%	19.6%	5.6%	757	17.7%
3rd Qtr 2015	76.1%	19.9%	4.0%	652	-11.6%
4th Qtr 2015	74.5%	22.2%	3.4%	787	18.3%
1st Qtr 2016	74.9%	21.5%	3.5%	846	30.0%
2nd Qtr 2016	77.7%	18.6%	3.7%	1,055	39.4%
3rd Qtr 2016	78.0%	17.3%	4.7%	1,085	66.3%
4th Qtr 2016	75.1%	21.6%	3.3%	1,124	42.8%

Central California

<u>Time Period</u>	<u>Medical Treatment</u>	<u>TD</u>	<u>Other</u>	<u>Expedited Hearing</u>	<u>Change from Same Quarter in Prior Year</u>
1st Qtr 2014	---	---	---	---	---
2nd Qtr 2014	86.6%	12.1%	1.4%	1,092	---
3rd Qtr 2014	85.1%	13.0%	1.9%	1,037	---
4th Qtr 2014	85.9%	12.3%	1.8%	661	---
1st Qtr 2015	81.7%	17.4%	0.9%	734	---
2nd Qtr 2015	90.5%	7.9%	1.6%	667	-38.9%
3rd Qtr 2015	84.6%	13.6%	1.8%	738	-28.8%
4th Qtr 2015	85.5%	12.4%	2.1%	835	26.3%
1st Qtr 2016	84.5%	13.4%	2.1%	963	31.2%
2nd Qtr 2016	85.1%	13.0%	1.9%	1,272	90.8%
3rd Qtr 2016	86.5%	12.2%	1.3%	1,306	76.9%
4th Qtr 2016	87.8%	11.2%	0.9%	1,290	54.5%

Southern California

<u>Time Period</u>	<u>Medical Treatment</u>	<u>TD</u>	<u>Other</u>	<u>Expedited Hearing</u>	<u>Change from Same Quarter in Prior Year</u>
1st Qtr 2014	---	---	---	---	---
2nd Qtr 2014	69.3%	22.6%	8.1%	2,728	---
3rd Qtr 2014	69.0%	18.7%	12.3%	2,629	---
4th Qtr 2014	68.7%	19.5%	11.9%	2,599	---
1st Qtr 2015	63.6%	22.2%	14.2%	2,677	---
2nd Qtr 2015	66.9%	20.6%	12.5%	2,926	7.3%
3rd Qtr 2015	65.1%	20.0%	14.9%	2,307	-12.2%
4th Qtr 2015	64.4%	20.8%	14.8%	2,511	-3.4%
1st Qtr 2016	66.4%	18.8%	14.8%	2,813	5.1%
2nd Qtr 2016	67.2%	19.4%	13.3%	3,956	35.2%
3rd Qtr 2016	66.3%	20.6%	13.2%	4,012	73.9%
4th Qtr 2016	68.0%	20.0%	12.0%	3,808	51.7%

* See California Labor Code, Sec. 5502

** Prior to 8/9/2008, DWC's workload adjudication data was available from the legacy system. DWC transitioned to a

*** Preliminary Estimate

Source: DWC

Liens Filed Counts*

Counts by Region

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

Counts by Type

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

* Lien Counts exclude SDI/EDD Liens

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

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

Source: EAMS Liens Data

IMR Filed CountsQuarterly IMRs filed

<u>Year & Quarter</u>	<u>IMRs Filed</u>	<u>Change from Same Quarter in Prior Year</u>
2013 1Q & 2Q	878	---
2013 3Q	31,950	---
2013 4Q	51,092	---
2014 1Q	49,928	---
2014 2Q	59,983	---
2014 3Q	59,606	86.6%
2014 4Q	58,567	14.6%
2015 1Q	61,142	22.5%
2015 2Q	65,418	9.1%
2015 3Q	65,889	10.5%
2015 4Q	61,327	4.7%
2016 1Q	60,772	-0.6%
2016 2Q	64,852	-0.9%
2016 3Q	62,411	-5.3%
2016 4Q	61,318	0.0%

Yearly IMR Counts

	<u>Original IMR Applications</u>	<u>Duplicates</u>	<u>Ineligible</u>	<u>Total Rejected</u>	<u>Eligible IMRs</u>	<u>Eligible IMR Yearly Change</u>
2013 IMR Counts	83,920	15,560	15,516	31,076	52,844	---
2014 IMR Counts	228,084	55,503	29,269	84,772	143,312	171.2%
2015 IMR Counts	253,776	58,088	30,079	88,167	165,609	15.6%
2016 IMR Counts	249,353	53,986	22,547	76,533	172,820	4.4%

Source: DWC Collected from IMR Vendor

DWC Via Commission on Health and Safety & Workers' Compensation 2015 Annual Report

Estimated Ultimate Indemnity Claim Settlement Ratios

Accident	Evaluated as of (in months):									
<u>Year</u>	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1997										95.3%
1998									93.6%	94.8%
1999								91.6%	93.3%	94.5%
2000							88.4%	90.9%	92.7%	94.0%
2001						82.6%	86.8%	89.6%	91.6%	93.0%
2002					76.8%	83.1%	87.3%	90.0%	91.9%	93.3%
2003				67.5%	77.3%	83.6%	87.5%	89.9%	91.8%	93.2%
2004			56.7%	69.9%	78.8%	84.0%	87.3%	89.8%	91.7%	93.6%
2005		44.1%	59.4%	71.7%	79.4%	84.1%	87.5%	89.9%	92.3%	93.8%
2006	13.5%	45.4%	60.6%	72.2%	79.5%	84.2%	87.4%	90.5%	92.6%	94.0%
2007	13.2%	43.8%	58.7%	70.4%	78.2%	83.0%	87.4%	90.5%	92.5%	94.3%
2008	13.1%	41.9%	56.7%	68.6%	76.8%	83.1%	87.6%	90.6%	93.0%	
2009	12.2%	39.8%	54.9%	67.1%	76.3%	82.8%	87.3%	90.8%		
2010	11.7%	39.9%	55.6%	68.6%	78.0%	84.1%	88.7%			
2011	11.8%	40.0%	56.4%	69.6%	79.0%	85.3%				
2012	11.9%	40.3%	57.7%	71.0%	80.3%					
2013	11.4%	40.6%	58.8%	72.8%						
2014	11.4%	41.6%	60.4%							
2015	11.7%	42.8%								
2016	12.1%									

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 74% to 99% of the total California workers' compensation insured market measured using 2015 earned premium levels).

Source: WCIRB quarterly calls for experience

Indemnity Claim Settlement Ratios by Injury Type

Permanent Partial						Temporary					
AY/RL	1	2	3	4	5	AY/RL	1	2	3	4	5
1996	11.3%	34.7%	57.3%	71.5%	79.4%	1996	78.4%	85.8%	90.7%	92.8%	97.6%
1997	9.7%	33.2%	55.7%	69.7%	77.5%	1997	74.8%	88.9%	93.0%	98.0%	97.4%
1998	8.9%	30.8%	53.7%	67.5%	74.4%	1998	78.0%	90.1%	95.4%	95.4%	96.5%
1999	8.7%	29.3%	50.4%	62.5%	69.2%	1999	75.1%	88.4%	92.3%	94.5%	95.6%
2000	8.0%	26.8%	45.2%	57.3%	66.2%	2000	70.6%	84.3%	89.3%	92.1%	93.4%
2001	7.1%	22.2%	41.2%	57.7%	69.5%	2001	66.1%	79.5%	87.1%	89.7%	91.5%
2002	5.2%	19.3%	41.7%	60.3%	71.7%	2002	64.7%	81.0%	87.0%	90.7%	93.1%
2003	4.1%	20.8%	44.3%	61.3%	72.5%	2003	67.8%	81.6%	88.4%	92.6%	94.8%
2004	5.2%	22.5%	44.0%	60.0%	71.4%	2004	70.1%	84.8%	91.6%	95.6%	95.6%
2005	5.9%	22.6%	43.1%	59.4%	69.7%	2005	69.7%	84.0%	90.7%	92.7%	95.5%
2006	6.5%	23.6%	44.3%	59.5%	69.1%	2006	71.4%	86.7%	91.9%	95.0%	95.5%
2007	6.0%	23.9%	43.6%	58.1%	68.2%	2007	71.3%	85.3%	91.7%	93.8%	95.0%
2008	6.1%	24.0%	43.3%	58.0%	69.9%	2008	70.0%	84.2%	89.3%	92.2%	94.3%
2009	6.0%	23.5%	42.5%	58.5%	70.7%	2009	67.9%	81.0%	87.0%	91.0%	93.2%
2010	7.2%	25.3%	45.8%	62.3%	73.6%	2010	64.9%	78.3%	85.5%	89.8%	92.5%
2011	7.9%	27.4%	48.7%	64.5%	76.4%	2011	63.3%	77.4%	84.8%	89.4%	91.0%
2012	9.2%	30.7%	51.7%	66.0%		2012	62.6%	77.4%	85.3%	89.6%	
2013	10.3%	32.4%	54.7%			2013	61.6%	77.8%	85.7%		
2014	10.9%	33.1%				2014	62.9%	76.5%			
2015	12.2%					2015	63.5%				

Cumulative Injury*						Non-Cumulative Injury					
AY/RL	1	2	3	4	5	AY/RL	1	2	3	4	5
1996	14.9%	36.2%	56.9%	71.2%	79.1%	1996	52.3%	66.2%	78.1%	85.2%	90.1%
1997	17.3%	37.0%	54.9%	67.2%	76.0%	1997	46.4%	64.3%	76.8%	85.2%	88.7%
1998	16.3%	33.1%	51.0%	64.1%	71.9%	1998	46.7%	63.3%	76.6%	83.2%	86.9%
1999	16.1%	31.6%	48.4%	60.6%	68.7%	1999	45.1%	61.7%	73.6%	80.3%	83.7%
2000	13.5%	29.7%	45.3%	57.1%	66.5%	2000	42.4%	58.5%	69.6%	76.3%	81.0%
2001	12.8%	26.8%	43.6%	57.3%	67.8%	2001	38.1%	52.3%	65.2%	74.5%	81.1%
2002	12.3%	26.7%	43.9%	59.4%	70.1%	2002	35.2%	50.1%	64.5%	75.7%	82.5%
2003	12.5%	27.6%	45.6%	59.9%	69.5%	2003	36.6%	51.8%	67.1%	77.6%	84.2%
2004	15.6%	30.3%	46.8%	60.5%	69.8%	2004	40.3%	56.3%	70.1%	79.6%	84.8%
2005	13.2%	27.6%	42.5%	55.1%	64.7%	2005	43.3%	58.6%	71.4%	79.5%	85.3%
2006	13.1%	27.7%	42.7%	54.8%	64.2%	2006	43.6%	59.9%	72.0%	80.4%	84.7%
2007	13.5%	28.4%	42.9%	55.0%	65.0%	2007	42.7%	58.6%	71.1%	78.7%	83.7%
2008	12.0%	26.9%	41.4%	54.1%	65.4%	2008	40.7%	56.8%	68.7%	77.1%	83.6%
2009	10.9%	24.3%	39.2%	54.0%	66.7%	2009	39.3%	54.8%	67.1%	76.7%	83.3%
2010	13.0%	26.3%	43.0%	59.1%	71.1%	2010	38.4%	54.4%	68.0%	77.8%	84.3%
2011	10.7%	26.8%	45.6%	60.8%	72.1%	2011	38.5%	55.3%	69.1%	78.7%	85.0%
2012	11.4%	29.7%	47.1%	60.8%		2012	39.3%	57.3%	71.3%	80.1%	
2013	13.8%	31.8%	50.3%			2013	39.8%	58.8%	73.2%		
2014	13.7%	31.9%				2014	41.0%	58.7%			
2015	14.0%					2015	41.6%				

All Indemnity					
AY/RL	1	2	3	4	5
1996	49.8%	64.2%	76.7%	84.3%	89.4%
1997	44.4%	62.4%	75.3%	83.9%	87.8%
1998	44.6%	61.2%	74.9%	81.8%	85.9%
1999	42.9%	59.4%	71.7%	78.8%	82.6%
2000	40.1%	56.2%	67.7%	74.9%	79.9%
2001	36.1%	50.2%	63.5%	73.1%	80.0%
2002	33.3%	48.1%	62.8%	74.3%	81.5%
2003	34.5%	49.7%	65.2%	76.1%	82.9%
2004	38.3%	54.1%	68.1%	78.0%	83.5%
2005	41.1%	56.4%	69.3%	77.7%	83.8%
2006	41.4%	57.6%	69.9%	78.5%	83.2%
2007	40.5%	56.3%	69.0%	76.9%	82.3%
2008	38.4%	54.4%	66.5%	75.3%	82.2%
2009	36.6%	51.9%	64.4%	74.5%	81.7%
2010	35.9%	51.6%	65.4%	76.0%	82.9%
2011	35.6%	52.4%	66.7%	76.9%	83.7%
2012	36.3%	54.3%	68.7%	78.0%	
2013	36.6%	55.5%	70.4%		
2014	37.5%	55.3%			
2015	38.1%				

Notes:

*Cumulative Injury includes both cumulative injury and occupational disease.

Latest diagonal (italics) is based on a partial accident year.

Settlement rates are based on claim counts developed to 5th report.

Source: WCIRB Unit Statistical data

Quarterly Ultimate Settlement Ratios

Accident	Evaluated as of (in months):															
<u>Year</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>30</u>	<u>33</u>	<u>36</u>	<u>39</u>	<u>42</u>	<u>45</u>	<u>48</u>
2007	0.8%	5.3%	13.2%	23.6%	32.9%	39.4%	43.9%	48.2%	51.8%	55.6%	58.8%	62.6%	65.4%	68.0%	70.5%	72.8%
2008	0.8%	5.4%	13.2%	22.9%	31.4%	37.6%	42.0%	45.9%	49.6%	53.3%	56.8%	60.3%	63.2%	66.0%	68.6%	71.1%
2009	0.7%	4.7%	12.2%	21.2%	29.4%	35.4%	39.8%	43.9%	47.5%	51.2%	55.0%	58.5%	61.6%	64.6%	67.2%	69.7%
2010	0.7%	4.7%	11.7%	20.9%	29.6%	35.6%	39.9%	44.3%	48.1%	52.1%	55.6%	59.1%	62.3%	65.6%	68.6%	71.5%
2011	0.8%	5.1%	11.8%	21.0%	29.4%	35.5%	40.0%	44.4%	48.3%	52.5%	56.4%	60.4%	63.6%	66.7%	69.7%	72.5%
2012	0.8%	4.9%	11.9%	20.9%	29.0%	35.5%	40.3%	45.1%	49.3%	53.5%	57.7%	61.6%	65.0%	68.2%	71.1%	73.9%
2013	0.9%	4.9%	11.4%	20.4%	28.8%	35.3%	40.7%	45.6%	50.3%	54.7%	58.9%	62.9%	66.5%	69.8%	72.8%	
2014	0.7%	4.6%	11.4%	20.2%	29.1%	35.9%	41.6%	46.8%	51.5%	56.1%	60.5%					
2015	0.8%	4.6%	11.7%	20.6%	29.7%	37.1%	42.8%									
2016	0.8%	5.1%	12.2%													

Accident	Quarterly Incremental Change															
<u>Year</u>	<u>3-6</u>	<u>6-9</u>	<u>9-12</u>	<u>12-15</u>	<u>15-18</u>	<u>18-21</u>	<u>21-24</u>	<u>24-27</u>	<u>27-30</u>	<u>30-33</u>	<u>33-36</u>	<u>36-39</u>	<u>39-42</u>	<u>42-45</u>	<u>45-48</u>	
2007	4.4%	8.0%	10.3%	9.3%	6.5%	4.5%	4.3%	3.6%	3.8%	3.2%	3.8%	2.8%	2.6%	2.5%	2.4%	
2008	4.6%	7.8%	9.7%	8.5%	6.2%	4.4%	3.9%	3.6%	3.7%	3.5%	3.5%	2.9%	2.8%	2.6%	2.4%	
2009	4.0%	7.5%	9.0%	8.2%	6.0%	4.4%	4.0%	3.6%	3.7%	3.8%	3.6%	3.0%	3.1%	2.6%	2.5%	
2010	4.0%	7.0%	9.2%	8.6%	6.0%	4.4%	4.3%	3.8%	4.0%	3.6%	3.5%	3.1%	3.3%	3.0%	2.9%	
2011	4.3%	6.8%	9.2%	8.3%	6.1%	4.6%	4.4%	3.9%	4.3%	3.9%	4.0%	3.3%	3.0%	3.0%	2.8%	
2012	4.1%	7.0%	9.0%	8.1%	6.5%	4.8%	4.8%	4.1%	4.2%	4.2%	3.8%	3.4%	3.2%	2.9%	2.8%	
2013	4.0%	6.5%	9.0%	8.5%	6.5%	5.4%	4.9%	4.7%	4.5%	4.1%	4.0%	3.6%	3.3%	3.0%		
2014	3.9%	6.8%	8.9%	8.8%	6.8%	5.7%	5.1%	4.8%	4.6%	4.4%						
2015	3.8%	7.1%	8.9%	9.1%	7.4%	5.7%										
2016	4.3%	7.1%														

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 92% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

Source: WCIRB quarterly calls for experience

Ratio of Incremental Closed Indemnity Claims to Prior Open Indemnity Claims

Accident	Development								
<u>Year</u>	<u>9-21</u>	<u>21-33</u>	<u>33-45</u>	<u>45-57</u>	<u>57-69</u>	<u>69-81</u>	<u>81-93</u>	<u>93-105</u>	<u>105-117</u>
1999									17.7%
2000								19.5%	17.8%
2001							21.6%	18.7%	16.5%
2002						25.0%	21.2%	18.9%	16.7%
2003					27.9%	23.6%	19.6%	18.3%	17.6%
2004				29.6%	24.4%	20.5%	19.7%	18.7%	22.7%
2005			30.4%	27.3%	22.7%	21.6%	19.3%	23.1%	20.6%
2006		28.0%	29.5%	26.3%	23.1%	20.3%	24.4%	22.1%	19.4%
2007	35.3%	26.5%	28.3%	26.2%	22.3%	25.8%	24.6%	21.1%	23.7%
2008	33.2%	25.5%	27.5%	26.1%	27.0%	26.9%	24.2%	25.3%	
2009	31.5%	25.1%	27.1%	28.0%	27.3%	26.2%	27.5%		
2010	31.9%	26.1%	29.3%	29.9%	28.0%	28.8%			
2011	32.0%	27.3%	30.4%	30.9%	29.8%				
2012	32.2%	29.2%	31.6%	32.0%					
2013	33.0%	30.7%	33.9%						
2014	34.1%	32.3%							
2015	35.2%								

Notes: - All figures in each accident year contain information from the same combination of insurers, all of whom submitted complete data for all evaluations for that accident year. Therefore, each accident year may contain a different mix of insurers (ranging from 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

Source: WCIRB quarterly calls for experience

Ratio of Incremental Closed Indemnity Claims to Prior Open Indemnity Claims

Accident	Development														
<u>Year</u>	<u>3-6</u>	<u>6-9</u>	<u>9-12</u>	<u>12-15</u>	<u>15-18</u>	<u>18-21</u>	<u>21-24</u>	<u>24-27</u>	<u>27-30</u>	<u>30-33</u>	<u>33-36</u>	<u>36-39</u>	<u>39-42</u>	<u>42-45</u>	<u>45-48</u>
2007	4.5%	8.4%	11.9%	12.2%	9.7%	7.5%	7.7%	6.9%	8.0%	7.2%	9.2%	7.5%	7.5%	7.7%	8.1%
2008	4.6%	8.2%	11.1%	11.1%	9.0%	7.0%	6.7%	6.7%	7.3%	7.5%	8.1%	7.4%	7.5%	7.7%	7.7%
2009	4.0%	7.8%	10.3%	10.4%	8.5%	6.8%	6.7%	6.5%	7.1%	7.7%	7.9%	7.3%	8.0%	7.3%	7.7%
2010	4.1%	7.4%	10.4%	10.9%	8.5%	6.8%	7.2%	6.9%	7.6%	7.4%	7.9%	7.7%	8.8%	8.8%	9.1%
2011	4.3%	7.1%	10.4%	10.6%	8.6%	7.1%	7.3%	6.9%	8.3%	8.2%	9.1%	8.2%	8.3%	9.1%	9.1%
2012	4.1%	7.4%	10.2%	10.2%	9.1%	7.5%	8.1%	7.5%	8.4%	9.1%	9.1%	8.9%	9.2%	9.1%	9.6%
2013	4.1%	6.8%	10.1%	10.6%	9.1%	8.3%	8.3%	8.6%	9.0%	9.1%	9.7%	9.7%	10.0%	10.0%	
2014	3.9%	7.1%	10.0%	11.1%	9.6%	9.0%	8.8%	9.0%	9.4%	10.0%					
2015	3.9%	7.5%	10.1%	11.5%	10.5%	9.1%									
2016	4.3%	7.5%													

Note: 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 92% to 99% of the total California workers' compensation insured market measured using 2015 earned premium levels).

Source: WCIRB quarterly calls for experience

Reopening Rates Based on Unit Statistical Data

PY/RL	Reopening Rates						
	1st to 2nd	2nd to 3rd	3rd to 4th	4th to 5th	5th to 6th	6th to 7th	7th to 8th
2001	0.84%	0.50%	0.34%	0.30%	---	---	---
2002	0.92%	0.45%	0.35%	0.33%	0.24%	0.19%	0.16%
2003	0.68%	0.43%	0.38%	0.31%	0.24%	0.23%	0.18%
2004	0.60%	0.40%	0.32%	0.27%	0.27%	0.18%	0.12%
2005	0.63%	0.34%	0.29%	0.29%	0.25%	0.14%	0.11%
2006	0.62%	0.38%	0.39%	0.37%	0.22%	0.15%	0.13%
2007	0.64%	0.60%	0.53%	0.29%	0.23%	0.17%	0.13%
2008	1.24%	0.80%	0.38%	0.32%	0.27%	0.17%	
2009	1.22%	0.48%	0.40%	0.38%	0.26%		
2010	0.74%	0.53%	0.45%	0.35%			
2011	0.86%	0.60%	0.48%				
2012	0.92%	0.60%					
2013	0.88%						

PY/RL	Average Incurred for Reopened Claims						
	2nd	3rd	4th	5th	6th	7th	8th
2001	27,368	34,714	44,371	52,850	---	---	---
2002	30,525	32,543	44,273	59,359	63,946	79,544	76,263
2003	23,295	26,362	47,715	50,915	57,195	62,371	72,056
2004	20,348	27,536	35,748	50,349	50,964	71,644	75,968
2005	24,800	30,865	41,020	47,858	59,755	66,347	79,249
2006	25,237	29,803	36,576	45,402	62,900	65,690	76,528
2007	24,977	25,653	36,417	57,370	67,285	75,642	83,651
2008	17,783	22,985	45,903	58,719	65,007	79,584	
2009	19,985	32,723	43,640	56,804	67,874		
2010	25,513	33,258	47,060	56,240			
2011	26,482	34,265	45,394				
2012	26,314	34,764					
2013	26,974						

Note: Numbers in *Italics* are from the Preliminary set.

Source: WCIRB unit statistical data

Reopening Rates by Injury Type

Permanent Indemnity								Temporary Indemnity							
PY/RL	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	PY/RL	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8
2001	3.10%	2.54%	1.65%	1.49%	---	---	---	2001	1.55%	0.92%	0.66%	0.43%	---	---	---
2002	6.37%	1.93%	1.74%	1.60%	1.13%	0.92%	0.76%	2002	1.63%	0.92%	0.55%	0.44%	0.25%	0.15%	0.13%
2003	2.51%	2.15%	1.96%	1.66%	1.23%	1.15%	0.86%	2003	1.24%	0.81%	0.62%	0.40%	0.26%	0.16%	0.14%
2004	2.08%	2.33%	1.75%	1.72%	1.57%	1.01%	0.71%	2004	1.11%	0.80%	0.60%	0.34%	0.30%	0.20%	0.10%
2005	2.73%	1.94%	2.00%	1.94%	1.60%	0.87%	0.65%	2005	1.17%	0.67%	0.48%	0.36%	0.28%	0.14%	0.11%
2006	2.34%	2.23%	2.30%	2.27%	1.47%	0.92%	0.77%	2006	1.14%	0.82%	0.57%	0.46%	0.28%	0.18%	0.14%
2007	2.47%	3.03%	2.82%	1.86%	1.32%	0.98%	0.77%	2007	1.20%	0.94%	0.71%	0.40%	0.28%	0.16%	0.13%
2008	4.02%	3.54%	2.17%	1.87%	1.44%	0.86%		2008	1.67%	1.12%	0.57%	0.40%	0.29%	0.18%	
2009	3.81%	2.42%	1.91%	1.80%	1.26%			2009	1.80%	0.81%	0.60%	0.47%	0.27%		
2010	2.15%	2.23%	2.09%	1.56%				2010	1.23%	0.91%	0.64%	0.50%			
2011	2.68%	2.38%	2.20%					2011	1.55%	1.04%	0.71%				
2012	2.68%	2.88%						2012	1.51%	0.97%					
2013	3.38%							2013	1.46%						

All Indemnity								Medical Only							
PY/RL	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	PY/RL	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8
2001	1.70%	1.26%	0.99%	0.86%	---	---	---	2001	0.66%	0.30%	0.13%	0.08%	---	---	---
2002	1.97%	1.13%	0.97%	0.93%	0.66%	0.52%	0.44%	2002	0.70%	0.26%	0.13%	0.08%	0.05%	0.04%	0.03%
2003	1.32%	1.10%	1.08%	0.91%	0.69%	0.63%	0.48%	2003	0.56%	0.26%	0.14%	0.08%	0.05%	0.05%	0.05%
2004	1.17%	1.09%	0.94%	0.83%	0.81%	0.54%	0.36%	2004	0.49%	0.23%	0.13%	0.08%	0.08%	0.04%	0.03%
2005	1.28%	0.90%	0.91%	0.91%	0.78%	0.43%	0.33%	2005	0.51%	0.21%	0.11%	0.10%	0.07%	0.03%	0.03%
2006	1.23%	1.09%	1.08%	1.10%	0.74%	0.48%	0.41%	2006	0.50%	0.21%	0.19%	0.14%	0.04%	0.03%	0.03%
2007	1.29%	1.37%	1.35%	0.93%	0.70%	0.51%	0.41%	2007	0.53%	0.42%	0.29%	0.09%	0.06%	0.04%	0.03%
2008	1.86%	1.66%	1.09%	0.97%	0.79%	0.49%		2008	1.12%	0.58%	0.16%	0.10%	0.07%	0.04%	
2009	1.98%	1.19%	1.05%	1.01%	0.71%			2009	1.07%	0.29%	0.18%	0.14%	0.07%		
2010	1.32%	1.24%	1.16%	0.94%				2010	0.62%	0.33%	0.19%	0.10%			
2011	1.68%	1.40%	1.25%					2011	0.68%	0.36%	0.18%				
2012	1.67%	1.51%						2012	0.75%	0.30%					
2013	1.72%							2013	0.67%						

All Claims							
PY/RL	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8
2001	0.84%	0.50%	0.34%	0.30%	---	---	---
2002	0.92%	0.45%	0.35%	0.33%	0.24%	0.19%	0.16%
2003	0.68%	0.43%	0.38%	0.31%	0.24%	0.23%	0.18%
2004	0.60%	0.40%	0.32%	0.27%	0.27%	0.18%	0.12%
2005	0.63%	0.34%	0.29%	0.29%	0.25%	0.14%	0.11%
2006	0.62%	0.38%	0.39%	0.37%	0.22%	0.15%	0.13%
2007	0.64%	0.60%	0.53%	0.29%	0.23%	0.17%	0.13%
2008	1.24%	0.80%	0.38%	0.32%	0.27%	0.17%	
2009	1.22%	0.48%	0.40%	0.38%	0.26%		
2010	0.74%	0.53%	0.45%	0.35%			
2011	0.86%	0.60%	0.48%				
2012	0.92%	0.60%					
2013	0.88%						

Note: Injury types are fixed at denominator age.
Numbers in *Italics* are from the Preliminary set.

Source: WCIRB unit statistical data

Closed-Closed Development Based on Unit Statistical Data

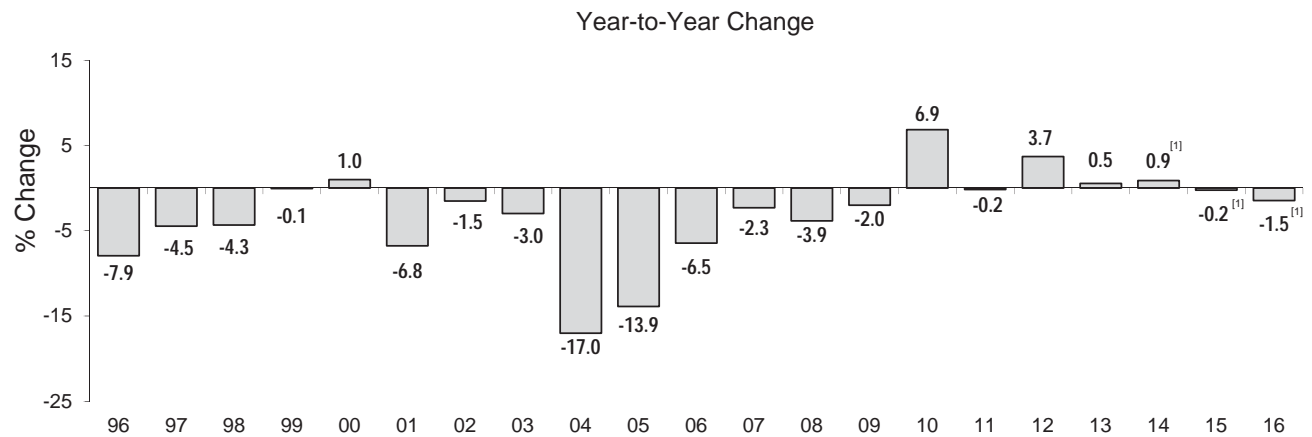
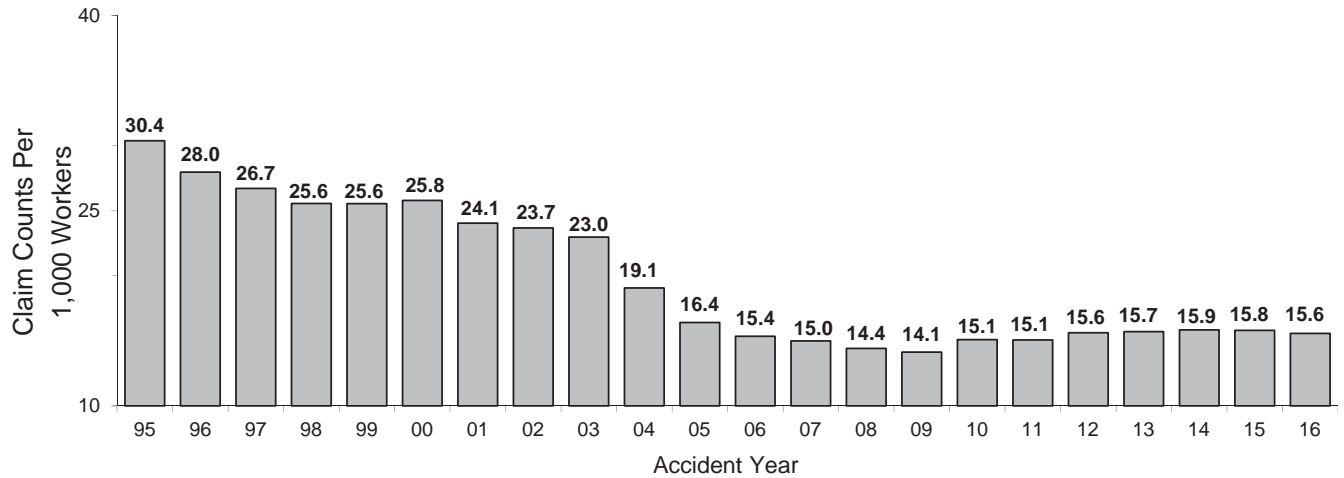
PY/RL	Developing Closed Claim Rates						
	1st to 2nd	2nd to 3rd	3rd to 4th	4th to 5th	5th to 6th	6th to 7th	7th to 8th
2001	16.66%	12.58%	9.61%	7.86%	---	---	---
2002	20.85%	13.76%	10.47%	10.22%	14.10%	7.81%	4.53%
2003	24.16%	13.85%	12.12%	18.44%	9.70%	5.04%	5.54%
2004	22.60%	14.45%	21.30%	9.15%	5.26%	5.26%	1.11%
2005	20.78%	20.68%	8.28%	4.98%	4.34%	1.36%	1.11%
2006	27.49%	9.95%	5.46%	4.42%	1.84%	1.49%	1.43%
2007	20.05%	6.62%	5.38%	2.53%	2.36%	1.90%	1.48%
2008	11.84%	6.47%	3.85%	3.43%	2.80%	2.08%	
2009	11.69%	5.58%	4.72%	3.83%	2.93%		
2010	10.20%	6.10%	4.45%	3.36%			
2011	10.88%	5.43%	3.75%				
2012	10.42%	5.26%					
2013	9.85%						

Closed-Closed Total Incurred Development as a Percent of Total Incurred Development on All Claims							
PY/RL	1st to 2nd	2nd to 3rd	3rd to 4th	4th to 5th	5th to 6th	6th to 7th	7th to 8th
2001	0.83%	2.11%	2.95%	6.25%	---	---	---
2002	0.78%	2.28%	5.14%	3.80%	8.49%	6.39%	4.49%
2003	1.43%	2.43%	5.04%	8.44%	6.10%	3.57%	4.00%
2004	1.64%	2.18%	6.20%	4.24%	3.13%	3.65%	3.13%
2005	1.49%	3.49%	2.91%	3.23%	3.49%	3.52%	3.54%
2006	1.93%	1.88%	2.61%	3.12%	3.18%	3.23%	5.20%
2007	1.43%	1.57%	2.46%	3.25%	4.55%	2.93%	5.70%
2008	0.99%	1.62%	2.32%	3.81%	4.41%	6.20%	
2009	1.01%	1.46%	2.96%	4.18%	5.86%		
2010	0.87%	1.94%	3.53%	5.37%			
2011	1.05%	2.26%	4.40%				
2012	1.32%	3.12%					
2013	1.42%						

Note: Numbers in *Italics* are from the Preliminary set.

Source: WCIRB unit statistical data

**California Workers' Compensation
Estimated Indemnity Claim Frequency by Accident Year
As of September 30, 2016**



^[1] The 2014 estimate is based on partial year unit statistical data. The 2015 and 2016 estimates are based on comparison of claim counts based on WCIRB accident year experience as of September 30, 2016 relative to the estimated change in statewide employment. Prior years are based on unit statistical data.

2016 Accident Year Indemnity Claim Frequency Model
As of PY 2014 Preliminary 1st Set & December 2016 UCLA

AY	Annual %	Annual Log Differences						
	Changes Intra- Class Ind Freq	Intra-Class Indemnity Frequency per \$M Exposure at PY 2015 Level			AY+1 Indemnity	Cumulative	Economic Variables	CalOSHA Dummy
	Total	Total	Cumulative	Non-cum.	Benefit Level	Injury Index	(1st Prin. Comp.)	Variable
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	-0.079	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	-6.9%	-0.072	-0.017	-0.076	-0.007	0.059	-0.100	0.000
2002	-2.8%	-0.029	0.001	-0.031	0.060	0.033	-0.197	0.000
2003	-3.2%	-0.032	-0.009	-0.035	-0.065	0.026	-0.022	0.000
2004	-16.8%	-0.185	-0.212	-0.182	-0.398	-0.030	0.098	0.000
2005	-13.6%	-0.147	-0.299	-0.134	0.051	-0.165	0.143	0.000
2006	-5.7%	-0.059	-0.050	-0.059	0.016	0.009	0.090	0.000
2007	-1.6%	-0.017	0.021	-0.019	0.049	0.040	-0.095	0.000
2008	-2.7%	-0.027	0.038	-0.033	0.006	0.071	-0.320	0.000
2009	-0.2%	-0.002	0.168	-0.018	0.066	0.186	-0.414	0.000
2010	8.9%	0.085	0.139	0.079	0.012	0.060	-0.077	0.000
2011	1.3%	0.013	0.033	0.010	0.003	0.022	0.048	0.000
2012	4.9%	0.048	0.117	0.040	-0.008	0.077	0.122	0.000
2013	0.9%	0.009	0.171	-0.013	0.071	0.185	0.154	0.000
2014	1.0%	0.010	0.100	-0.005	0.003	0.105	0.170	0.000
2015*	-1.2%	-0.012	0.063	-0.027	0.003	0.091	0.179	0.000
2016	-0.5%	-0.005	-0.005	-0.005	0.004	0.000	0.141	0.000
2017	-1.6%	-0.016	-0.016	-0.016	0.003	0.000	0.038	0.000
2018	-1.9%	-0.019	-0.019	-0.019	0.003	0.000	0.004	0.000
2019	-1.9%	-0.019	-0.019	-0.019	0.003	0.000	0.002	0.000

Y = Hazardousness-Adjusted Noncumulative Indemnity Claim Frequency

Constant	-0.020
Std Err of Y Est	0.041
R Squared	0.577
No. of Observations	37
Degrees of Freedom	32

X Coefficient(s)	0.174	0.282	0.098	-0.135
Std Err of Coef.	0.075	0.063	0.046	0.079

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. Economic variables are historical through 2015; December 2016 UCLA Anderson Forecasts for 2016 on. Regression is over AY 1979 through AY 2015. AY 2016 through AY 2019 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 2015 is preliminary and change is based on a comparison of 2015 accidents on 2014 policies to 2014 accidents on 2013 policies.

Indemnity Claim Frequency History and Projections

AY	Intra-Class Indemnity Claim Frequency(a)	Inter-Class Indemnity Claim Frequency Index(b)	Overall Indemnity Claim Frequency	Annual Percent Changes		
				Intra-Class	Inter-Class	Overall
1979	0.578	0.921	0.696	---	---	---
1980	0.540	0.914	0.646	-6.54%	-0.75%	-7.24%
1981	0.521	0.900	0.613	-3.54%	-1.56%	-5.04%
1982	0.513	0.882	0.591	-1.59%	-2.00%	-3.56%
1983	0.544	0.873	0.622	6.20%	-0.98%	5.17%
1984	0.596	0.871	0.680	9.53%	-0.18%	9.32%
1985	0.609	0.867	0.690	2.05%	-0.51%	1.52%
1986	0.594	0.859	0.668	-2.39%	-0.92%	-3.28%
1987	0.603	0.854	0.674	1.53%	-0.56%	0.97%
1988	0.607	0.854	0.678	0.69%	-0.06%	0.64%
1989	0.622	0.853	0.695	2.47%	-0.08%	2.39%
1990	0.679	0.845	0.751	9.04%	-0.89%	8.07%
1991	0.681	0.832	0.741	0.28%	-1.58%	-1.30%
1992	0.605	0.820	0.649	-11.09%	-1.45%	-12.37%
1993	0.515	0.810	0.545	-14.91%	-1.25%	-15.98%
1994	0.449	0.809	0.476	-12.76%	-0.06%	-12.81%
1995	0.428	0.811	0.454	-4.64%	0.16%	-4.49%
1996	0.399	0.800	0.418	-6.78%	-1.25%	-7.94%
1997	0.386	0.791	0.399	-3.27%	-1.23%	-4.46%
1998	0.372	0.786	0.382	-3.76%	-0.60%	-4.34%
1999	0.377	0.774	0.382	1.45%	-1.48%	-0.05%
2000	0.392	0.752	0.386	4.02%	-2.91%	0.99%
2001	0.365	0.753	0.360	-6.91%	0.13%	-6.79%
2002	0.355	0.763	0.354	-2.83%	1.34%	-1.53%
2003	0.344	0.764	0.344	-3.18%	0.20%	-2.99%
2004	0.286	0.763	0.285	-16.85%	-0.21%	-17.02%
2005	0.247	0.760	0.245	-13.63%	-0.31%	-13.90%
2006	0.233	0.754	0.230	-5.69%	-0.81%	-6.46%
2007	0.229	0.749	0.224	-1.64%	-0.68%	-2.31%
2008	0.223	0.740	0.216	-2.70%	-1.18%	-3.85%
2009	0.222	0.727	0.211	-0.20%	-1.82%	-2.02%
2010	0.242	0.713	0.226	8.89%	-1.87%	6.86%
2011	0.245	0.703	0.225	1.28%	-1.42%	-0.15%
2012	0.257	0.695	0.234	4.91%	-1.18%	3.67%
2013	0.259	0.692	0.235	0.88%	-0.34%	0.53%
2014(c)	0.262	0.692	0.237	0.97%	-0.10%	0.87%
2014(d)	0.261	0.692	0.236	---	---	---
2015(e)	0.258	0.690	0.233	-1.23%	-0.25%	-1.48%
2016	0.252	0.692	0.228	-2.33%	0.30%	-2.04%
2017	0.244	0.689	0.220	-3.33%	-0.40%	-3.71%
2018	0.235	0.686	0.211	-3.65%	-0.50%	-4.13%
2019	0.226	0.685	0.203	-3.67%	-0.04%	-3.71%
PY						
2008	0.222	0.734	0.214			
2009	0.231	0.721	0.218	3.86%	-1.84%	1.90%
2010	0.243	0.709	0.226	5.33%	-1.67%	3.61%
2011	0.250	0.699	0.229	2.91%	-1.31%	1.55%
2012	0.258	0.694	0.234	3.06%	-0.81%	2.24%
2013	0.260	0.692	0.236	0.92%	-0.23%	0.68%
2014	0.260	0.691	0.235	-0.14%	-0.17%	-0.30%
2015	0.255	0.691	0.231	-1.86%	-0.01%	-1.88%
2016	0.248	0.691	0.224	-2.77%	-0.01%	-2.78%
2017	0.240	0.688	0.216	-3.47%	-0.44%	-3.89%
2018	0.231	0.686	0.207	-3.66%	-0.29%	-3.95%

Notes: (a) All frequencies are per \$M exposure at PY 2015 Level.
 (b) Index is to AY 1961.
 (c) 2014 accidents on 2014 and 2013 policies.
 (d) 2014 accidents on 2013 policies only.
 (e) AY 2015 is preliminary and percent changes are based on a comparison of 2015 accidents on 2014 policies to 2014 accidents on 2013 policies.
 (f) Forecasts below thick solid line.

Source: WCIRB Indemnity Frequency Model

Changes in Incremental Indemnity Claim Counts and Medical Only Claim Counts

Calendar Quarter Evaluation	Change in Statewide Incremental Number of Indemnity Claims		Change in Statewide Incremental Number of Medical-Only Claims	
	Change in Quarterly Increment from Same Quarter at Prior Calendar Year	Change in 4-Quarter Increment from Same Quarter at Prior Calendar Year	Change in Quarterly Increment from Same Quarter at Prior Calendar Year	Change in 4-Quarter Increment from Same Quarter at Prior Calendar Year
3/31/2007	-2.4%	---	---	---
6/30/2007	-10.2%	---	-13.5%	---
9/30/2007	0.3%	---	1.2%	---
12/31/2007	-13.4%	-6.3%	-19.4%	---
3/31/2008	-5.8%	-7.2%	-14.8%	-11.6%
6/30/2008	-3.9%	-5.7%	-2.8%	-9.0%
9/30/2008	-19.2%	-10.7%	-17.6%	-13.9%
12/31/2008	-16.7%	-11.4%	-3.8%	-10.3%
3/31/2009	-27.1%	-16.8%	-27.5%	-13.2%
6/30/2009	-14.2%	-19.4%	-27.0%	-19.4%
9/30/2009	-8.2%	-16.8%	-16.7%	-19.2%
12/31/2009	2.5%	-12.8%	-15.8%	-22.0%
3/31/2010	7.4%	-4.1%	-5.2%	-17.1%
6/30/2010	3.9%	1.0%	-1.9%	-10.6%
9/30/2010	6.7%	5.1%	-6.3%	-7.6%
12/31/2010	7.2%	6.3%	3.3%	-2.6%
3/31/2011	2.7%	5.1%	-4.1%	-2.3%
6/30/2011	-1.2%	3.8%	-8.9%	-4.1%
9/30/2011	3.4%	2.9%	-1.3%	-2.7%
12/31/2011	4.5%	2.3%	-7.8%	-5.5%
3/31/2012	-0.3%	1.5%	-1.8%	-4.6%
6/30/2012	8.1%	4.0%	-0.1%	-2.7%
9/30/2012	5.7%	4.5%	3.4%	-1.5%
12/31/2012	6.8%	5.1%	5.7%	1.9%
3/31/2013	4.9%	6.4%	-1.7%	1.9%
6/30/2013	11.0%	7.1%	9.4%	4.3%
9/30/2013	6.3%	7.3%	-2.0%	2.8%
12/31/2013	5.3%	6.9%	0.2%	1.4%
3/31/2014	11.9%	8.5%	3.3%	2.5%
6/30/2014	0.8%	5.9%	-3.3%	-0.6%
9/30/2014	3.4%	5.1%	5.7%	1.5%
12/31/2014	2.9%	4.5%	6.3%	3.0%
3/31/2015	0.6%	2.0%	8.0%	4.1%
6/30/2015	5.9%	3.2%	4.9%	6.2%
9/30/2015	3.6%	3.3%	6.2%	6.3%
12/31/2015	4.2%	3.6%	3.4%	5.6%
3/31/2016	5.3%	4.7%	4.8%	4.9%
6/30/2016	2.5%	3.8%	5.3%	4.9%
9/30/2016	-1.2%	2.6%	-4.1%	2.1%

Source: WCIRB quarterly calls for experience

Partial Accident Year Cumulative Injury Indemnity Claim Counts by Policy Year and Report Level

1st Half Partial PY.RL Sources						Share of Total Indemnity Count 1st Half Partial PY.RL Sources				
AY	(AY-1).1	(AY-1).2	(AY-1).3	(AY-1).4	(AY-1).5	(AY-1).1	(AY-1).2	(AY-1).3	(AY-1).4	(AY-1).5
1995	2,545	4,088	5,050	6,176	6,300	4.6%	5.9%	6.7%	7.9%	8.0%
1996	2,759	4,739	5,519	5,844	5,873	4.9%	6.4%	6.8%	7.2%	7.0%
1997	4,371	5,394	5,991	6,107	6,231	6.1%	6.6%	7.2%	7.2%	7.5%
1998	4,594	5,522	5,829	6,000	5,959	5.8%	6.5%	6.7%	7.1%	7.1%
1999	5,305	5,933	6,501	6,642	6,940	6.3%	6.8%	7.5%	7.6%	7.9%
2000	5,575	6,663	7,058	7,407	7,475	6.5%	7.6%	7.9%	8.2%	8.3%
2001	5,752	6,797	7,578	7,681	7,699	7.2%	7.8%	8.5%	8.6%	8.7%
2002	5,401	7,047	7,242	7,382	7,412	7.1%	8.3%	8.5%	8.6%	8.7%
2003	6,144	6,953	7,183	7,329	7,432	8.0%	8.6%	8.9%	9.1%	9.2%
2004	5,374	5,723	5,860	5,961	6,086	8.4%	8.7%	8.9%	9.0%	9.2%
2005	3,184	3,665	3,969	4,243	4,568	5.7%	6.4%	6.8%	7.3%	7.7%
2006	2,989	3,569	3,924	4,231	4,348	5.5%	6.4%	7.0%	7.5%	7.8%
2007	3,037	3,645	4,036	4,274	4,413	5.9%	6.8%	7.4%	7.8%	8.1%
2008	2,914	3,659	4,180	4,458	4,636	5.9%	7.0%	7.9%	8.4%	8.6%
2009	2,974	3,932	4,524	4,822	5,152	6.7%	8.2%	9.3%	9.8%	10.4%
2010	3,456	4,497	5,013	5,527	5,755	7.5%	9.1%	9.9%	10.9%	11.3%
2011	3,366	4,434	5,307	5,685	5,984	7.2%	8.7%	10.3%	10.9%	11.4%
2012	3,559	5,148	5,844	6,469		7.1%	9.4%	10.4%	11.4%	
2013	4,756	6,370	7,341			8.9%	11.0%	12.4%		
2014	5,558	7,583				10.0%	12.7%			
2015	6,015					11.1%				

1st Half Partial PY.RL Development Factors						1st Half Share of Ttl Ind Fifths
AY	(AY-1).1 to (AY-1).2	(AY-1).2 to (AY-1).3	(AY-1).3 to (AY-1).4	(AY-1).4 to (AY-1).5	Final Fifths	
1995	1.6066	1.2351	1.2231	1.0201	6,300	8.0%
1996	1.7174	1.1646	1.0588	1.0049	5,873	7.0%
1997	1.2339	1.1107	1.0195	1.0203	6,231	7.5%
1998	1.2020	1.0556	1.0292	0.9932	5,959	7.1%
1999	1.1184	1.0957	1.0217	1.0448	6,940	7.9%
2000	1.1952	1.0592	1.0495	1.0091	7,475	8.3%
2001	1.1816	1.1149	1.0136	1.0024	7,699	8.7%
2002	1.3048	1.0276	1.0194	1.0040	7,412	8.7%
2003	1.1316	1.0332	1.0203	1.0140	7,432	9.2%
2004	1.0649	1.0239	1.0173	1.0210	6,086	9.2%
2005	1.1509	1.0829	1.0692	1.0766	4,568	7.7%
2006	1.1941	1.0995	1.0782	1.0275	4,348	7.8%
2007	1.2003	1.1071	1.0591	1.0324	4,413	8.1%
2008	1.2559	1.1423	1.0663	1.0400	4,636	8.6%
2009	1.3223	1.1505	1.0658	1.0684	5,152	10.4%
2010	1.3012	1.1147	1.1025	1.0413	5,755	11.3%
2011	1.3173	1.1969	1.0713	1.0548	5,984	11.4%
2012	1.4465	1.1352	1.0868	1.0548	6,823	12.0%
2013	1.3395	1.1656	1.0868	1.0548	8,415	14.1%
2014	1.3919	1.1656	1.0868	1.0548	10,132	16.4%
2015	1.3919	1.1656	1.0868	1.0548	11,188	18.3%

Notes:

Cumulative injury claims include occupational disease.

Selected link ratios are geometric mean of latest two links and are shown in bold.

The partial accident years shown represent claims occurring during the year from policies written the previous year. For example, AY 2015 claims occurred in 2015 from policies written in 2014.

Source: WCIRB unit statistical data

Claim Count Ratios by Region Based on Unit Statistical Data at 1st Report Level

Region	Ratio of Permanent Disability Claims to Indemnity Claims for Accident Year														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bay Area	0.410	0.396	0.374	0.355	0.305	0.300	0.280	0.292	0.302	0.311	0.322	0.307	0.291	0.299	<i>0.308</i>
Los Angeles/LA Basin	0.496	0.484	0.478	0.453	0.392	0.377	0.385	0.401	0.401	0.395	0.401	0.396	0.367	0.372	<i>0.391</i>
All Other	0.450	0.434	0.413	0.375	0.319	0.312	0.300	0.317	0.318	0.329	0.325	0.322	0.295	0.310	<i>0.335</i>
All Regions	0.462	0.449	0.436	0.407	0.349	0.339	0.335	0.352	0.355	0.358	0.361	0.356	0.330	0.339	<i>0.359</i>
Region	Annual Change														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bay Area	---	-3.4%	-5.5%	-5.2%	-14.1%	-1.7%	-6.4%	4.1%	3.5%	3.0%	3.4%	-4.6%	-5.2%	2.8%	2.9%
Los Angeles/LA Basin	---	-2.3%	-1.2%	-5.3%	-13.4%	-3.9%	2.2%	4.0%	0.2%	-1.5%	1.6%	-1.2%	-7.4%	1.4%	5.1%
All Other	---	-3.4%	-4.9%	-9.3%	-14.8%	-2.4%	-3.7%	5.7%	0.3%	3.6%	-1.3%	-0.8%	-8.5%	5.2%	7.8%
All Regions	---	-2.7%	-2.9%	-6.7%	-14.1%	-3.0%	-1.1%	4.9%	1.0%	0.8%	0.8%	-1.4%	-7.4%	2.9%	5.7%
Region	Ratio of Indemnity Claims to Total Claims for Accident Year														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bay Area	0.335	0.340	0.344	0.306	0.281	0.284	0.288	0.292	0.304	0.314	0.322	0.322	0.331	0.329	<i>0.329</i>
Los Angeles/LA Basin	0.351	0.359	0.363	0.331	0.300	0.295	0.302	0.312	0.337	0.352	0.358	0.372	0.389	0.393	<i>0.394</i>
All Other	0.338	0.341	0.341	0.311	0.286	0.280	0.283	0.289	0.301	0.316	0.324	0.329	0.340	0.338	<i>0.339</i>
All Regions	0.343	0.348	0.351	0.319	0.291	0.287	0.292	0.300	0.318	0.332	0.339	0.348	0.361	0.362	<i>0.363</i>
Region	Annual Change														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bay Area	---	1.5%	1.0%	-10.9%	-8.2%	1.1%	1.2%	1.4%	4.0%	3.6%	2.5%	0.0%	2.8%	-0.7%	<i>0.1%</i>
Los Angeles/LA Basin	---	2.3%	1.1%	-8.7%	-9.5%	-1.8%	2.6%	3.1%	8.2%	4.3%	1.7%	4.0%	4.7%	1.0%	<i>0.1%</i>
All Other	---	0.9%	-0.1%	-8.7%	-8.0%	-2.2%	1.2%	2.1%	4.1%	4.9%	2.6%	1.6%	3.2%	-0.6%	<i>0.2%</i>
All Regions	---	1.7%	0.7%	-9.1%	-8.7%	-1.4%	1.8%	2.5%	6.1%	4.5%	2.1%	2.5%	3.8%	0.2%	<i>0.3%</i>
Region	Cumulative Injury Claims per 100 Indemnity Claims for Accident Year														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bay Area	7.62	8.33	7.78	7.15	5.89	5.28	6.18	6.13	6.32	6.41	6.03	5.87	7.57	7.41	<i>6.32</i>
Los Angeles/LA Basin	7.70	8.51	9.19	9.05	6.78	6.48	6.95	7.06	8.53	9.35	8.72	9.51	11.69	12.68	<i>14.57</i>
All Other	5.14	5.97	6.15	5.97	4.27	4.37	4.38	4.41	4.97	5.78	5.12	5.17	6.15	6.74	<i>7.21</i>
All Regions	6.72	7.52	7.82	7.58	5.69	5.49	5.87	5.96	6.92	7.63	7.02	7.41	9.10	9.81	<i>10.81</i>
Region	Annual Change														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bay Area	---	9.3%	-6.6%	-8.1%	-17.6%	-10.2%	16.9%	-0.8%	3.2%	1.5%	-5.9%	-2.7%	28.9%	-2.0%	<i>-14.7%</i>
Los Angeles/LA Basin	---	10.4%	8.0%	-1.5%	-25.1%	-4.5%	7.2%	1.7%	20.7%	9.6%	-6.7%	9.0%	23.0%	8.5%	<i>14.9%</i>
All Other	---	16.1%	3.1%	-2.9%	-28.6%	2.5%	0.2%	0.6%	12.7%	16.3%	-11.4%	0.9%	19.0%	9.6%	<i>6.9%</i>
All Regions	---	11.9%	4.0%	-3.0%	-25.0%	-3.5%	7.0%	1.5%	16.1%	10.3%	-8.1%	5.6%	22.9%	7.8%	<i>10.2%</i>

Figures in italics are based on preliminary partial data.

Ratio of Total Indemnity Claim Counts to Total Claim Counts

Accident	Evaluated as of (in months):									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1997										0.321
1998									0.321	0.321
1999								0.330	0.330	0.330
2000							0.338	0.338	0.338	0.338
2001						0.346	0.345	0.344	0.344	0.344
2002					0.362	0.360	0.361	0.360	0.360	0.359
2003				0.361	0.359	0.358	0.357	0.356	0.355	0.355
2004			0.322	0.321	0.319	0.319	0.318	0.317	0.317	0.316
2005		0.301	0.296	0.295	0.294	0.294	0.293	0.293	0.293	0.292
2006	0.319	0.298	0.296	0.296	0.295	0.295	0.294	0.294	0.294	0.294
2007	0.307	0.298	0.298	0.299	0.299	0.299	0.299	0.298	0.298	0.298
2008	0.305	0.307	0.310	0.311	0.312	0.312	0.312	0.312	0.312	
2009	0.315	0.327	0.332	0.334	0.334	0.335	0.335	0.335		
2010	0.323	0.341	0.348	0.350	0.351	0.352	0.352			
2011	0.329	0.353	0.360	0.363	0.364	0.364				
2012	0.331	0.353	0.362	0.365	0.365					
2013	0.341	0.365	0.373	0.375						
2014	0.342	0.361	0.369							
2015	0.340	0.362								
2016	0.340									

Note: 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 66% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

Source: WCIRB quarterly calls for experience

Indemnity Claim Frequency by Geographic Region

Bay Area

Indemnity Claim Frequency per \$100M of Exposure at AY 2014 Level						Annual Change					
AY/RL	1	2	3	4	5	AY/RL	1	2	3	4	5
2001	26.69	27.63	27.85	27.86	27.66	2001	---	---	---	---	---
2002	25.48	26.67	27.17	27.05	27.13	2002	-4.5%	-3.5%	-2.5%	-2.9%	-1.9%
2003	24.83	25.99	25.92	26.04	26.31	2003	-2.5%	-2.6%	-4.6%	-3.7%	-3.0%
2004	21.23	21.50	21.64	21.89	21.70	2004	-14.5%	-17.3%	-16.5%	-15.9%	-17.5%
2005	18.17	18.32	18.59	18.50	18.61	2005	-14.4%	-14.8%	-14.1%	-15.5%	-14.2%
2006	17.07	17.40	17.32	17.40	17.30	2006	-6.1%	-5.0%	-6.8%	-5.9%	-7.0%
2007	16.18	16.29	16.46	16.53	16.56	2007	-5.2%	-6.4%	-5.0%	-5.0%	-4.3%
2008	14.82	15.26	15.39	15.52	15.52	2008	-8.4%	-6.3%	-6.5%	-6.1%	-6.2%
2009	13.63	13.99	14.17	14.23	14.27	2009	-8.1%	-8.3%	-8.0%	-8.3%	-8.1%
2010	14.14	14.71	14.85	14.95	14.98	2010	3.8%	5.1%	4.8%	5.0%	5.0%
2011	13.61	14.21	14.42	14.54	14.61	2011	-3.8%	-3.4%	-2.9%	-2.7%	-2.5%
2012	13.56	14.21	14.47	14.60		2012	-0.3%	0.0%	0.3%	0.4%	
2013	13.03	13.59	13.80			2013	-3.9%	-4.3%	-4.7%		
2014	12.98	13.71				2014	-0.4%	0.9%			
2015	12.77					2015	-1.6%				

Los Angeles/L.A. Basin

Indemnity Claim Frequency per \$100M of Exposure at AY 2014 Level						Annual Change					
AY/RL	1	2	3	4	5	AY/RL	1	2	3	4	5
2001	36.48	38.08	38.91	39.23	39.57	2001	---	---	---	---	---
2002	35.74	38.81	39.34	39.68	39.64	2002	-2.0%	1.9%	1.1%	1.1%	0.2%
2003	36.59	38.19	38.41	38.43	38.46	2003	2.4%	-1.6%	-2.4%	-3.1%	-3.0%
2004	30.59	31.37	31.39	31.57	31.77	2004	-16.4%	-17.9%	-18.3%	-17.8%	-17.4%
2005	25.64	26.35	26.67	26.91	27.22	2005	-16.2%	-16.0%	-15.0%	-14.8%	-14.3%
2006	24.18	24.97	25.32	25.63	25.63	2006	-5.7%	-5.2%	-5.1%	-4.8%	-5.8%
2007	23.42	24.41	24.82	24.96	25.03	2007	-3.2%	-2.3%	-2.0%	-2.6%	-2.3%
2008	22.52	23.82	24.23	24.37	24.49	2008	-3.8%	-2.4%	-2.4%	-2.4%	-2.2%
2009	22.29	23.70	24.16	24.40	24.51	2009	-1.0%	-0.5%	-0.3%	0.1%	0.1%
2010	24.09	25.44	25.98	26.21	26.34	2010	8.0%	7.3%	7.5%	7.4%	7.5%
2011	23.92	25.63	26.24	26.51	26.66	2011	-0.7%	0.8%	1.0%	1.1%	1.2%
2012	25.66	27.56	28.17	28.56		2012	7.3%	7.5%	7.4%	7.7%	
2013	26.25	28.07	28.80			2013	2.3%	1.9%	2.2%		
2014	27.14	29.74				2014	3.4%	5.9%			
2015	26.82					2015	-1.2%				

All Other

Indemnity Claim Frequency per \$100M of Exposure at AY 2014 Level						Annual Change					
AY/RL	1	2	3	4	5	AY/RL	1	2	3	4	5
2001	44.12	45.11	45.47	45.18	44.98	2001	---	---	---	---	---
2002	41.54	43.83	43.42	43.19	43.33	2002	-5.8%	-2.9%	-4.5%	-4.4%	-3.7%
2003	41.22	41.68	41.47	41.53	41.39	2003	-0.8%	-4.9%	-4.5%	-3.9%	-4.5%
2004	35.28	35.72	35.75	35.48	34.97	2004	-14.4%	-14.3%	-13.8%	-14.6%	-15.5%
2005	30.70	31.13	30.93	30.72	30.96	2005	-13.0%	-12.9%	-13.5%	-13.4%	-11.5%
2006	28.53	28.57	28.48	28.62	28.53	2006	-7.1%	-8.2%	-7.9%	-6.8%	-7.9%
2007	27.23	27.51	27.74	27.68	27.84	2007	-4.6%	-3.7%	-2.6%	-3.3%	-2.4%
2008	25.01	25.75	25.90	26.19	26.32	2008	-8.2%	-6.4%	-6.6%	-5.4%	-5.4%
2009	24.17	25.06	25.51	25.72	25.82	2009	-3.3%	-2.7%	-1.5%	-1.8%	-1.9%
2010	25.59	26.89	27.25	27.45	27.58	2010	5.9%	7.3%	6.8%	6.7%	6.8%
2011	25.41	26.63	27.08	27.26	27.41	2011	-0.7%	-1.0%	-0.6%	-0.7%	-0.6%
2012	25.81	27.04	27.46	27.76		2012	1.6%	1.5%	1.4%	1.8%	
2013	25.89	27.03	27.50			2013	0.3%	0.0%	0.1%		
2014	26.01	27.53				2014	0.5%	1.8%			
2015	24.85					2015	-4.4%				

All Regions

Indemnity Claim Frequency per \$100M of Exposure at AY 2014 Level						Annual Change					
AY/RL	1	2	3	4	5	AY/RL	1	2	3	4	5
2001	36.27	37.50	38.02	38.07	38.09	2001	---	---	---	---	---
2002	34.93	37.27	37.50	37.54	37.59	2002	-3.7%	-0.6%	-1.4%	-1.4%	-1.3%
2003	35.10	36.23	36.24	36.30	36.34	2003	0.5%	-2.8%	-3.4%	-3.3%	-3.3%
2004	29.69	30.24	30.29	30.35	30.23	2004	-15.4%	-16.5%	-16.4%	-16.4%	-16.8%
2005	25.30	25.78	25.93	25.95	26.19	2005	-14.8%	-14.7%	-14.4%	-14.5%	-13.4%
2006	23.70	24.15	24.26	24.46	24.40	2006	-6.3%	-6.3%	-6.5%	-5.8%	-6.8%
2007	22.74	23.29	23.58	23.64	23.73	2007	-4.1%	-3.6%	-2.8%	-3.3%	-2.8%
2008	21.31	22.22	22.48	22.66	22.76	2008	-6.3%	-4.6%	-4.7%	-4.1%	-4.1%
2009	20.62	21.60	21.98	22.17	22.26	2009	-3.2%	-2.8%	-2.2%	-2.2%	-2.2%
2010	21.93	23.06	23.45	23.64	23.74	2010	6.4%	6.8%	6.7%	6.6%	6.6%
2011	21.66	22.93	23.39	23.59	23.72	2011	-1.2%	-0.6%	-0.2%	-0.2%	-0.1%
2012	22.45	23.81	24.27	24.56		2012	3.6%	3.8%	3.7%	4.1%	
2013	22.49	23.76	24.26			2013	0.2%	-0.2%	0.0%		
2014	22.79	24.55				2014	1.3%	3.3%			
2015	22.13					2015	-2.9%				

Figures in italics are based on preliminary partial data.

Source: WCIRB unit statistical data

Ratios of Incremental Paid Losses to Prior Outstanding Losses by Accident Year

Accident Year	Paid Indemnity Development								
	9-21	21-33	33-45	45-57	57-69	69-81	81-93	93-105	105-117
1992									0.294
1993								0.378	0.292
1994							0.363	0.274	0.194
1995						0.403	0.298	0.245	0.188
1996					0.463	0.327	0.291	0.233	0.185
1997				0.506	0.398	0.330	0.278	0.209	0.189
1998			0.581	0.457	0.374	0.305	0.237	0.222	0.215
1999		0.726	0.558	0.461	0.393	0.306	0.274	0.237	0.213
2000	1.081	0.719	0.548	0.456	0.362	0.322	0.312	0.260	0.228
2001	1.157	0.735	0.591	0.488	0.384	0.366	0.289	0.267	0.227
2002	1.117	0.717	0.564	0.462	0.432	0.364	0.326	0.265	0.249
2003	1.026	0.696	0.552	0.502	0.410	0.338	0.276	0.259	0.252
2004	0.953	0.575	0.536	0.421	0.374	0.321	0.302	0.273	0.294
2005	0.999	0.705	0.567	0.481	0.397	0.336	0.300	0.307	0.261
2006	1.130	0.707	0.531	0.447	0.387	0.348	0.310	0.272	0.220
2007	1.385	0.777	0.568	0.469	0.421	0.374	0.338	0.262	0.293
2008	1.478	0.803	0.631	0.519	0.443	0.389	0.327	0.274	
2009	1.543	0.804	0.639	0.530	0.455	0.390	0.348		
2010	1.617	0.842	0.662	0.562	0.484	0.436			
2011	1.673	0.817	0.635	0.524	0.468				
2012	1.665	0.825	0.641	0.556					
2013	1.607	0.816	0.683						
2014	1.615	0.885							
2015	1.630								

Accident Year	Paid Medical Development								
	9-21	21-33	33-45	45-57	57-69	69-81	81-93	93-105	105-117
1992									0.205
1993								0.245	0.209
1994							0.280	0.205	0.196
1995						0.269	0.228	0.231	0.170
1996					0.336	0.275	0.265	0.216	0.163
1997				0.390	0.353	0.287	0.264	0.174	0.164
1998			0.477	0.378	0.320	0.265	0.191	0.169	0.166
1999		0.641	0.503	0.411	0.354	0.242	0.204	0.198	0.203
2000	1.263	0.684	0.520	0.404	0.293	0.236	0.233	0.241	0.181
2001	1.368	0.746	0.533	0.401	0.303	0.288	0.276	0.215	0.206
2002	1.442	0.690	0.430	0.360	0.340	0.326	0.262	0.237	0.187
2003	1.264	0.560	0.384	0.377	0.355	0.264	0.254	0.217	0.189
2004	1.054	0.485	0.445	0.400	0.329	0.295	0.244	0.231	0.224
2005	0.989	0.491	0.441	0.398	0.361	0.292	0.238	0.282	0.205
2006	0.992	0.518	0.431	0.377	0.326	0.285	0.256	0.217	0.174
2007	1.135	0.575	0.473	0.391	0.353	0.329	0.274	0.214	0.197
2008	1.174	0.570	0.490	0.432	0.384	0.323	0.258	0.217	
2009	1.209	0.584	0.505	0.468	0.391	0.305	0.260		
2010	1.246	0.611	0.551	0.461	0.384	0.338			
2011	1.279	0.609	0.510	0.423	0.372				
2012	1.225	0.584	0.497	0.436					
2013	1.197	0.559	0.493						
2014	1.190	0.581							
2015	1.138								

Note: 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 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

All Entries reflect the paid cost of medical cost containment programs.

Source: WCIRB quarterly calls for experience

**Comparison of Projected Ultimate Loss Ratios
Accident Year 2011**

	Indemnity												Current WCIRB		
Methodology	Based on Experience Evaluated as of (in months):												Estimate of		
	12	15	18	21	24	27	33	39	45	51	57	63	69	Ultimate	
3-Year Avg. Incurred	0.287	0.297	0.303	0.309	0.310	0.311	0.312	0.309	0.308	0.304	0.299	0.296	0.293	0.300	
Latest Year Incurred	0.311	0.314	0.319	0.329	0.320	0.313	0.307	0.306	0.305	0.302	0.294	0.293	0.292	0.300	
3-Year Avg. Paid	0.258	0.267	0.277	0.283	0.290	0.297	0.305	0.312	0.313	0.311	0.310	0.307	0.303	0.300	
Latest Year Paid	0.289	0.297	0.304	0.307	0.308	0.312	0.316	0.315	0.313	0.307	0.305	0.307	0.304	0.300	
Reform-Adj. Paid [1]	0.279	0.285	0.291	0.295	0.298	0.301	0.305	0.313	0.311	0.306	0.303	0.305	0.302	0.300	
Latest Yr. Adj. for Case Reserves	0.333	0.344	---	---	---	0.332	---	0.314	---	0.306	---	0.294	---	0.300	
Latest Yr. Adj. for Settlement [2]	0.285	0.292	---	---	0.301	0.301	---	0.309	---	0.302	---	0.303	0.300	0.300	
Percent Change														69 Mos.	
	12 to 15	15 to 18	18 to 21	21 to 24	24 to 27	27 to 33	33 to 39	39 to 45	45 to 51	51 to 57	57 to 63	63 to 69	Current Estimate	Difference from	
3-Year Avg. Incurred	3.5%	2.0%	2.0%	0.3%	0.3%	0.3%	-1.0%	-0.3%	-1.3%	-1.6%	-1.0%	-1.0%	-2.3%		
Latest Year Incurred	1.0%	1.6%	3.1%	-2.7%	-2.2%	-1.9%	-0.3%	-0.3%	-1.0%	-2.6%	-0.3%	-0.3%	-2.7%		
3-Year Avg. Paid	3.5%	3.7%	2.2%	2.5%	2.4%	2.7%	2.3%	0.3%	-0.6%	-0.3%	-1.0%	-1.3%	1.0%		
Latest Year Paid	2.8%	2.4%	1.0%	0.3%	1.3%	1.3%	-0.3%	-0.6%	-1.9%	-0.7%	0.7%	-1.0%	1.3%		
Reform-Adj. Paid	2.2%	2.1%	1.4%	1.0%	1.0%	1.3%	2.6%	-0.6%	-1.6%	-1.0%	0.7%	-1.0%	0.7%		
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---	---	---	---	---	---	---	---		
Latest Yr. Adj. for Settlement	---	---	---	---	---	---	---	---	---	---	---	-1.0%	0.0%		
Medical														Current WCIRB	
	Based on Experience Evaluated as of (in months):												Estimate of		
	12	15	18	21	24	[3]	27	33	39	45	51	57	63	69	Ultimate
3-Year Avg. Incurred	0.558	0.595	0.614	0.624	0.590		0.588	0.575	0.568	0.547	0.524	0.497	0.465	0.439	0.500
Latest Year Incurred	0.584	0.607	0.638	0.643	0.602		0.605	0.572	0.554	0.524	0.503	0.478	0.450	0.429	0.500
3-Year Avg. Paid	0.478	0.511	0.530	0.544	0.490		0.499	0.517	0.545	0.545	0.546	0.534	0.520	0.505	0.500
Latest Year Paid	0.515	0.555	0.574	0.585	0.504		0.510	0.533	0.576	0.558	0.539	0.522	0.512	0.499	0.500
Reform-Adj. Paid [1]	0.525	0.562	0.579	0.590	0.503		0.512	0.548	0.585	0.564	0.545	0.527	0.518	0.503	0.500
Latest Yr. Adj. for Case Reserves	0.613	0.656	---	---	---		0.624	---	0.570	---	0.512	---	0.450	---	0.500
Latest Yr. Adj. for Settlement [2]	0.530	0.567	---	---	0.504		0.511	---	0.580	---	0.540	---	0.515	0.500	0.500
Percent Change														69 Mos.	
	12 to 15	15 to 18	18 to 21	21 to 24	24 to 27	27 to 33	33 to 39	39 to 45	45 to 51	51 to 57	57 to 63	63 to 69	Current Estimate	Difference from	
3-Year Avg. Incurred	6.6%	3.2%	1.6%	---	-0.3%	-2.2%	-1.2%	-3.7%	-4.2%	-5.2%	-6.4%	-5.6%	-12.2%		
Latest Year Incurred	3.9%	5.1%	0.8%	---	0.5%	-5.5%	-3.1%	-5.4%	-4.0%	-5.0%	-5.9%	-4.7%	-14.2%		
3-Year Avg. Paid	6.9%	3.7%	2.6%	---	1.8%	3.6%	5.4%	0.0%	0.2%	-2.2%	-2.6%	-2.9%	1.0%		
Latest Year Paid	7.8%	3.4%	1.9%	---	1.2%	4.5%	8.1%	-3.1%	-3.4%	-3.2%	-1.9%	-2.5%	-0.2%		
Reform-Adj. Paid	7.0%	3.0%	1.9%	---	1.8%	7.0%	6.8%	-3.6%	-3.4%	-3.3%	-1.7%	-2.9%	0.6%		
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---	---	---	---	---	---	---	---		
Latest Yr. Adj. for Settlement	---	---	---	---	---	---	---	---	---	---	---	-2.9%	0.0%		

[1] For all evaluations through 21-months, estimates of ultimate loss ratios based on the Reform-Adjusted Paid methodology reflect adjustment for the impact of the 2002-2004 reforms only. For the 24, 27, and 33-month evaluations, the adjustment reflects both the 2002-2004 reforms and the SB 863 reforms. For subsequent evaluations, the adjustment reflects the SB 863 reforms only.

[2] The Latest Year Claim-Settlement Methodology for projecting ultimate loss ratios also contemplates adjustments for reforms. See [1] above.

[3] Starting with the 24-month evaluation, all methodologies reflect medical losses excluding the cost of medical cost containment expenses.

Source: WCIRB quarterly calls for experience

**Comparison of Projected Ultimate Loss Ratios
Accident Year 2012**

<u>Methodology</u>	Indemnity											Current WCIRB
	Based on Experience Evaluated as of (in months):											Estimate of
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>33</u>	<u>39</u>	<u>45</u>	<u>51</u>	<u>57</u>	<u>Ultimate</u>
3-Year Avg. Incurred	0.281	0.281	0.288	0.288	0.284	0.283	0.281	0.276	0.269	0.267	0.264	0.271
Latest Year Incurred	0.291	0.281	0.287	0.280	0.277	0.278	0.277	0.273	0.262	0.262	0.262	0.271
3-Year Avg. Paid	0.268	0.270	0.278	0.282	0.285	0.290	0.290	0.287	0.285	0.281	0.277	0.271
Latest Year Paid	0.290	0.289	0.293	0.294	0.290	0.291	0.287	0.282	0.279	0.281	0.276	0.271
Reform-Adj. Paid [1]	0.271	0.275	0.281	0.283	0.281	0.289	0.285	0.281	0.277	0.279	0.275	0.271
Latest Yr. Adj. for Case Reserves	---	0.313	---	---	---	0.294	---	0.282	---	0.269	---	0.271
Latest Yr. Adj. for Settlement [2]	0.275	0.275	---	---	0.276	0.285	---	0.276	---	0.275	0.271	0.271
Percent Change												57 Mos.
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>	<u>21 to 24</u>	<u>24 to 27</u>	<u>27 to 33</u>	<u>33 to 39</u>	<u>39 to 45</u>	<u>45 to 51</u>	<u>51 to 57</u>		Difference from
3-Year Avg. Incurred	0.0%	2.5%	0.0%	-1.4%	-0.4%	-0.7%	-1.8%	-2.5%	-0.7%	-1.1%		Current Estimate
Latest Year Incurred	-3.4%	2.1%	-2.4%	-1.1%	0.4%	-0.4%	-1.4%	-4.0%	0.0%	0.0%		
3-Year Avg. Paid	0.7%	3.0%	1.4%	1.1%	1.8%	0.0%	-1.0%	-0.7%	-1.4%	-1.4%		
Latest Year Paid	-0.3%	1.4%	0.3%	-1.4%	0.3%	-1.4%	-1.7%	-1.1%	0.7%	-1.8%		
Reform-Adj. Paid	1.5%	2.2%	0.7%	-0.7%	2.8%	-1.4%	-1.4%	-1.4%	0.7%	-1.4%		
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---	---	---	---	---		
Latest Yr. Adj. for Settlement	---	---	---	---	3.3%	---	---	---	---	-1.5%		
Medical												Current WCIRB
	Based on Experience Evaluated as of (in months):											Estimate of
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>33</u>	<u>39</u>	<u>45</u>	<u>51</u>	<u>57</u>	<u>Ultimate</u>
3-Year Avg. Incurred	0.542	0.538	0.541	0.530	0.518	0.512	0.491	0.464	0.434	0.404	0.380	0.439
Latest Year Incurred	0.565	0.559	0.549	0.525	0.496	0.497	0.468	0.441	0.413	0.387	0.367	0.439
3-Year Avg. Paid	0.427	0.435	0.449	0.458	0.458	0.486	0.485	0.486	0.474	0.461	0.444	0.439
Latest Year Paid	0.456	0.454	0.469	0.477	0.475	0.516	0.496	0.476	0.460	0.452	0.437	0.439
Reform-Adj. Paid [1]	0.451	0.459	0.482	0.500	0.503	0.535	0.507	0.489	0.470	0.461	0.444	0.439
Latest Yr. Adj. for Case Reserves	---	0.597	---	---	---	0.533	---	0.464	---	0.400	---	0.439
Latest Yr. Adj. for Settlement [2]	0.452	0.459	---	---	0.498	0.530	---	0.483	---	0.456	0.439	0.439
Percent Change												57 Mos.
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>	<u>21 to 24</u>	<u>24 to 27</u>	<u>27 to 33</u>	<u>33 to 39</u>	<u>39 to 45</u>	<u>45 to 51</u>	<u>51 to 57</u>		Difference from
3-Year Avg. Incurred	-0.7%	0.6%	-2.0%	-2.3%	-1.2%	-4.1%	-5.5%	-6.5%	-6.9%	-5.9%		Current Estimate
Latest Year Incurred	-1.1%	-1.8%	-4.4%	-5.5%	0.2%	-5.8%	-5.8%	-6.3%	-6.3%	-5.2%		
3-Year Avg. Paid	1.9%	3.2%	2.0%	0.0%	6.1%	-0.2%	0.2%	-2.5%	-2.7%	-3.7%		
Latest Year Paid	-0.4%	3.3%	1.7%	-0.4%	8.6%	-3.9%	-4.0%	-3.4%	-1.7%	-3.3%		
Reform-Adj. Paid	1.8%	5.0%	3.7%	0.6%	6.4%	-5.2%	-3.6%	-3.9%	-1.9%	-3.7%		
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---	---	---	---	---		
Latest Yr. Adj. for Settlement	---	---	---	---	6.4%	---	---	---	---	-3.7%		

[1] For all evaluations through 24-months, estimates of ultimate loss ratios based on the Reform-Adjusted Paid methodology reflect adjustment for the impact of the 2002-2004 reforms and the SB 863 reforms. For subsequent evaluations, the adjustment reflects the SB 863 reforms only.

[2] The Latest Year Claim-Settlement Methodology for projecting ultimate loss ratios also contemplates adjustments for reforms. See [1] above.

Source: WCIRB quarterly calls for experience

**Comparison of Projected Ultimate Loss Ratios
Accident Year 2013**

<u>Methodology</u>	Indemnity									Current WCIRB
	Based on Experience Evaluated as of (in months):									Estimate of
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>33</u>	<u>39</u>	<u>45</u>	<u>Ultimate</u>
3-Year Avg. Incurred	0.260	0.258	0.253	0.253	0.249	0.246	0.237	0.233	0.230	0.240
Latest Year Incurred	0.254	0.253	0.245	0.247	0.244	0.241	0.228	0.226	0.227	0.240
3-Year Avg. Paid	0.252	0.259	0.259	0.260	0.257	0.255	0.254	0.251	0.246	0.240
Latest Year Paid	0.254	0.260	0.257	0.255	0.250	0.248	0.247	0.249	0.244	0.240
Reform-Adj. Paid [1]	0.243	0.264	0.262	0.259	0.254	0.252	0.251	0.252	0.245	0.240
Latest Yr. Adj. for Case Reserves	---	0.274	---	---	---	0.250	---	0.238	---	0.240
Latest Yr. Adj. for Settlement [2]	0.238	0.260	---	---	0.250	0.247	---	0.246	0.240	0.240
Percent Change										45 Mos. Difference from
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>	<u>21 to 24</u>	<u>24 to 27</u>	<u>27 to 33</u>	<u>33 to 39</u>	<u>39 to 45</u>		<u>Current Estimate</u>
3-Year Avg. Incurred	-0.8%	-1.9%	0.0%	-1.6%	-1.2%	-3.7%	-1.7%	-1.3%		-4.2%
Latest Year Incurred	-0.4%	-3.2%	0.8%	-1.2%	-1.2%	-5.4%	-0.9%	0.4%		-5.4%
3-Year Avg. Paid	2.8%	0.0%	0.4%	-1.2%	-0.8%	-0.4%	-1.2%	-2.0%		2.5%
Latest Year Paid	2.4%	-1.2%	-0.8%	-2.0%	-0.8%	-0.4%	0.8%	-2.0%		1.7%
Reform-Adj. Paid	8.6%	-0.8%	-1.1%	-1.9%	-0.8%	-0.4%	0.4%	-2.8%		2.1%
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---	---	---		---
Latest Yr. Adj. for Settlement	9.2%	---	---	---	-1.2%	---	---	-2.4%		0.0%
Medical										Current WCIRB
	Based on Experience Evaluated as of (in months):									Estimate of
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>33</u>	<u>39</u>	<u>45</u>	<u>Ultimate</u>
3-Year Avg. Incurred	0.470	0.462	0.448	0.436	0.423	0.407	0.373	0.339	0.319	0.368
Latest Year Incurred	0.447	0.443	0.419	0.408	0.402	0.379	0.347	0.320	0.304	0.368
3-Year Avg. Paid	0.395	0.414	0.408	0.410	0.407	0.412	0.402	0.390	0.375	0.368
Latest Year Paid	0.412	0.444	0.424	0.420	0.405	0.401	0.387	0.380	0.366	0.368
Reform-Adj. Paid [1]	0.455	0.473	0.445	0.435	0.416	0.419	0.400	0.393	0.376	0.368
Latest Yr. Adj. for Case Reserves	---	0.491	---	---	---	0.403	---	0.337	---	0.368
Latest Yr. Adj. for Settlement [2]	0.451	0.470	---	---	0.413	0.413	---	0.386	0.368	0.368
Percent Change										45 Mos. Difference from
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>	<u>21 to 24</u>	<u>24 to 27</u>	<u>27 to 33</u>	<u>33 to 39</u>	<u>39 to 45</u>		<u>Current Estimate</u>
3-Year Avg. Incurred	-1.7%	-3.0%	-2.7%	-3.0%	-3.8%	-8.4%	-9.1%	-5.9%		-13.3%
Latest Year Incurred	-0.9%	-5.4%	-2.6%	-1.5%	-5.7%	-8.4%	-7.8%	-5.0%		-17.4%
3-Year Avg. Paid	4.8%	-1.4%	0.5%	-0.7%	1.2%	-2.4%	-3.0%	-3.8%		1.9%
Latest Year Paid	7.8%	-4.5%	-0.9%	-3.6%	-1.0%	-3.5%	-1.8%	-3.7%		-0.5%
Reform-Adj. Paid	4.0%	-5.9%	-2.2%	-4.4%	0.7%	-4.5%	-1.8%	-4.3%		2.2%
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---	---	---		---
Latest Yr. Adj. for Settlement	4.2%	---	---	---	0.0%	---	---	-4.7%		0.0%

[1] For the 12-month evaluation, estimates of ultimate loss ratios based on the Reform-Adjusted Paid methodology reflect adjustment for the impact of the 2002-2004 reforms and the SB 863 reforms. For subsequent evaluations, the adjustment reflects the SB 863 reforms only.

[2] The Latest Year Claim-Settlement Methodology for projecting ultimate loss ratios also contemplates adjustments for reforms. See [1] above.

Source: WCIRB quarterly calls for experience

**Comparison of Projected Ultimate Loss Ratios
Accident Year 2014**

Indemnity								Current WCIRB
<u>Methodology</u>	<u>Based on Experience Evaluated as of (in months):</u>							<u>Estimate of</u>
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>33</u>	<u>Ultimate</u>
3-Year Avg. Incurred	0.233	0.231	0.227	0.221	0.221	0.220	0.219	0.238
Latest Year Incurred	0.224	0.221	0.218	0.210	0.213	0.211	0.215	0.238
3-Year Avg. Paid	0.236	0.236	0.237	0.237	0.238	0.237	0.236	0.238
Latest Year Paid	0.229	0.228	0.229	0.229	0.234	0.236	0.234	0.238
Reform-Adj. Paid [1]	0.245	0.246	0.248	0.247	0.251	0.252	0.246	0.238
Latest Yr. Adj. for Case Reserves	---	0.244	---	---	0.235	0.232	---	0.238
Latest Yr. Adj. for Settlement [2]	0.241	0.241	---	---	0.243	0.244	0.238	0.238
<u>Percent Change</u>								33 Mos. Difference
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>	<u>21 to 24</u>	<u>24 to 27</u>	<u>27 to 33</u>		<u>from</u>
								<u>Current Estimate</u>
3-Year Avg. Incurred	-0.9%	-1.7%	-2.6%	0.0%	-0.5%	-0.5%		-8.0%
Latest Year Incurred	-1.3%	-1.4%	-3.7%	1.4%	-0.9%	1.9%		-9.7%
3-Year Avg. Paid	0.0%	0.4%	0.0%	0.4%	-0.4%	-0.4%		-0.8%
Latest Year Paid	-0.4%	0.4%	0.0%	2.2%	0.9%	-0.8%		-1.7%
Reform-Adj. Paid	0.4%	0.8%	-0.4%	1.6%	0.4%	-2.4%		3.4%
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---		---
Latest Yr. Adj. for Settlement	0.0%	---	---	---	0.4%	-2.5%		0.0%
Medical								Current WCIRB
	<u>Based on Experience Evaluated as of (in months):</u>							<u>Estimate of</u>
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>33</u>	<u>Ultimate</u>
3-Year Avg. Incurred	0.398	0.380	0.360	0.343	0.326	0.306	0.287	0.335
Latest Year Incurred	0.370	0.344	0.326	0.310	0.300	0.280	0.269	0.335
3-Year Avg. Paid	0.370	0.374	0.367	0.363	0.355	0.355	0.342	0.335
Latest Year Paid	0.362	0.360	0.356	0.348	0.344	0.344	0.333	0.335
Reform-Adj. Paid [1]	0.367	0.380	0.371	0.361	0.355	0.359	0.343	0.335
Latest Yr. Adj. for Case Reserves	---	0.381	---	---	0.335	0.303	---	0.335
Latest Yr. Adj. for Settlement [2]	0.364	0.374	---	---	0.349	0.352	0.335	0.335
<u>Percent Change</u>								33 Mos. Difference
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>	<u>21 to 24</u>	<u>24 to 27</u>	<u>27 to 33</u>		<u>from</u>
								<u>Current Estimate</u>
3-Year Avg. Incurred	-4.5%	-5.3%	-4.7%	-5.0%	-6.1%	-6.2%		-14.3%
Latest Year Incurred	-7.0%	-5.2%	-4.9%	-3.2%	-6.7%	-3.9%		-19.7%
3-Year Avg. Paid	1.1%	-1.9%	-1.1%	-2.2%	0.0%	-3.7%		2.1%
Latest Year Paid	-0.6%	-1.1%	-2.2%	-1.1%	0.0%	-3.2%		-0.6%
Reform-Adj. Paid	3.5%	-2.4%	-2.7%	-1.7%	1.1%	-4.5%		2.4%
Latest Yr. Adj. for Case Reserves	---	---	---	---	---	---		---
Latest Yr. Adj. for Settlement	2.7%	---	---	---	0.9%	-4.8%		0.0%

[1] For all evaluations, estimates of ultimate loss ratios based on the Reform-Adjusted Paid methodology reflect adjustment for the impact of the SB 863 reforms.

[2] The Latest Year Claim-Settlement Methodology for projecting ultimate loss ratios also contemplates adjustments for reforms. See [1] above.

Source: WCIRB quarterly calls for experience

**Comparison of Projected Ultimate Loss Ratios
Accident Year 2015**

Indemnity					Current WCIRB
<u>Methodology</u>	<u>Based on Experience Evaluated as of (in months):</u>				<u>Estimate of Ultimate</u>
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	
3-Year Avg. Incurred	0.223	0.224	0.222	0.221	0.242
Latest Year Incurred	0.215	0.215	0.217	0.219	0.242
3-Year Avg. Paid	0.235	0.237	0.237	0.236	0.242
Latest Year Paid	0.234	0.239	0.240	0.238	0.242
Reform-Adj. Paid [1]	0.252	0.255	0.254	0.250	0.242
Latest Yr. Adj. for Case Reserves	0.238	0.236	---	---	0.242
Latest Yr. Adj. for Settlement [2]	0.244	0.247	0.245	0.242	0.242
<u>Percent Change</u>					21 Mos. Difference from
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>		<u>Current Estimate</u>
3-Year Avg. Incurred	0.4%	-0.9%	-0.5%		-8.7%
Latest Year Incurred	0.0%	0.9%	0.9%		-9.5%
3-Year Avg. Paid	0.9%	0.0%	-0.4%		-2.5%
Latest Year Paid	2.1%	0.4%	-0.8%		-1.7%
Reform-Adj. Paid	1.2%	-0.4%	-1.6%		3.3%
Latest Yr. Adj. for Case Reserves	---	---	---		
Latest Yr. Adj. for Settlement	1.2%	-0.8%	-1.2%		0.0%
Medical					Current WCIRB
	<u>Based on Experience Evaluated as of (in months):</u>				<u>Estimate of Ultimate</u>
	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	
3-Year Avg. Incurred	0.339	0.313	0.295	0.286	0.329
Latest Year Incurred	0.306	0.280	0.271	0.265	0.329
3-Year Avg. Paid	0.348	0.350	0.346	0.339	0.329
Latest Year Paid	0.338	0.336	0.336	0.328	0.329
Reform-Adj. Paid [1]	0.347	0.352	0.348	0.338	0.329
Latest Yr. Adj. for Case Reserves	0.350	0.306	---	---	0.329
Latest Yr. Adj. for Settlement [2]	0.341	0.345	0.341	0.329	0.329
<u>Percent Change</u>					21 Mos. Difference from
	<u>12 to 15</u>	<u>15 to 18</u>	<u>18 to 21</u>		<u>Current Estimate</u>
3-Year Avg. Incurred	-7.7%	-5.8%	-3.1%		-13.1%
Latest Year Incurred	-8.5%	-3.2%	-2.2%		-19.5%
3-Year Avg. Paid	0.6%	-1.1%	-2.0%		3.0%
Latest Year Paid	-0.6%	0.0%	-2.4%		-0.3%
Reform-Adj. Paid	1.4%	-1.1%	-2.9%		2.7%
Latest Yr. Adj. for Case Reserves	---	---	---		
Latest Yr. Adj. for Settlement	1.2%	-1.2%	-3.5%		0.0%

[1] For all evaluations, estimates of ultimate loss ratios based on the Reform-Adjusted Paid methodology reflect adjustment for the impact of the SB 863 reforms.

[2] The Latest Year Claim-Settlement Methodology for projecting ultimate loss ratios also contemplates adjustments for reforms. See [1] above.

Source: WCIRB quarterly calls for experience

Average Incurred Indemnity Loss per Reported Indemnity Claim

Accident	Evaluated as of (in months):									
<u>Year</u>	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1998										20,678
1999									22,400	22,495
2000								22,864	23,046	23,189
2001							24,792	25,125	25,449	25,643
2002						22,993	23,405	23,776	24,032	24,317
2003					22,265	23,026	23,645	24,090	24,565	24,974
2004				17,218	17,993	18,810	19,338	19,956	20,335	20,647
2005			13,299	14,785	15,924	16,754	17,518	18,118	18,435	18,660
2006		11,199	14,272	15,914	17,144	18,140	18,890	19,339	19,601	19,736
2007	7,396	11,781	15,625	17,734	19,011	20,051	20,772	21,357	21,598	21,845
2008	7,692	12,706	16,932	19,527	21,090	22,038	22,726	23,157	23,459	
2009	7,945	13,210	17,492	20,188	21,791	22,881	23,498	23,899		
2010	7,876	12,964	17,379	19,818	21,336	22,270	22,872			
2011	7,936	13,398	17,474	19,855	21,114	21,910				
2012	8,155	13,367	17,368	19,354	20,622					
2013	8,418	13,403	17,072	19,074						
2014	8,521	13,495	17,553							
2015	8,806	14,072								
2016	8,960									

Accident	Annual Change									
<u>Year</u>	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1999										8.8%
2000									2.9%	3.1%
2001								9.9%	10.4%	10.6%
2002							-5.6%	-5.4%	-5.6%	-5.2%
2003						0.1%	1.0%	1.3%	2.2%	2.7%
2004					-19.2%	-18.3%	-18.2%	-17.2%	-17.2%	-17.3%
2005				-14.1%	-11.5%	-10.9%	-9.4%	-9.2%	-9.3%	-9.6%
2006			7.3%	7.6%	7.7%	8.3%	7.8%	6.7%	6.3%	5.8%
2007		5.2%	9.5%	11.4%	10.9%	10.5%	10.0%	10.4%	10.2%	10.7%
2008	4.0%	7.9%	8.4%	10.1%	10.9%	9.9%	9.4%	8.4%	8.6%	
2009	3.3%	4.0%	3.3%	3.4%	3.3%	3.8%	3.4%	3.2%		
2010	-0.9%	-1.9%	-0.6%	-1.8%	-2.1%	-2.7%	-2.7%			
2011	0.8%	3.4%	0.5%	0.2%	-1.0%	-1.6%				
2012	2.8%	-0.2%	-0.6%	-2.5%	-2.3%					
2013	3.2%	0.3%	-1.7%	-1.4%						
2014	1.2%	0.7%	2.8%							
2015	3.3%	4.3%								
2016	1.8%									

Annual Trend*										
All-Yr	2.0%	2.0%	2.7%	2.6%	1.7%	0.8%	-0.4%	-0.9%	-1.4%	-1.3%
R ²	0.962	0.791	0.660	0.547	0.191	0.039	0.009	0.060	0.167	0.138

* Trend is based on an exponential distribution.

Note: 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 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

Source: WCIRB quarterly calls for experience

Average Incurred Medical Loss per Reported Claim

Accident	Evaluated as of (in months):									
<u>Year</u>	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1998										6,214
1999									6,929	7,139
2000								7,592	7,838	7,970
2001							8,615	8,989	9,384	9,719
2002						8,747	9,175	9,542	9,877	10,168
2003					8,112	8,643	9,043	9,426	9,818	10,124
2004				6,184	6,721	7,172	7,640	8,007	8,304	8,532
2005			5,303	5,863	6,295	6,879	7,290	7,652	7,967	8,082
2006		4,938	5,933	6,588	7,145	7,663	8,095	8,434	8,635	8,726
2007	4,171	5,416	6,655	7,491	8,166	8,762	9,237	9,579	9,751	9,832
2008	4,476	6,157	7,521	8,556	9,399	9,998	10,426	10,714	10,841	
2009	4,955	6,838	8,512	9,675	10,653	11,293	11,665	11,886		
2010	5,102	7,109	8,952	10,247	11,090	11,625	11,952			
2011	5,306	7,679	9,510	10,752	11,535	11,955				
2012	5,588	7,784	9,454	10,381	10,985					
2013	5,648	7,809	9,185	9,988						
2014	5,642	7,467	8,739							
2015	5,811	7,491								
2016	5,772									

Accident	Annual Change									
<u>Year</u>	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1999										14.9%
2000									13.1%	11.6%
2001								18.4%	19.7%	21.9%
2002							6.5%	6.1%	5.3%	4.6%
2003						-1.2%	-1.4%	-1.2%	-0.6%	-0.4%
2004					-17.2%	-17.0%	-15.5%	-15.1%	-15.4%	-15.7%
2005				-5.2%	-6.3%	-4.1%	-4.6%	-4.4%	-4.1%	-5.3%
2006			11.9%	12.4%	13.5%	11.4%	11.0%	10.2%	8.4%	8.0%
2007		9.7%	12.2%	13.7%	14.3%	14.3%	14.1%	13.6%	12.9%	12.7%
2008	7.3%	13.7%	13.0%	14.2%	15.1%	14.1%	12.9%	11.8%	11.2%	
2009	10.7%	11.0%	13.2%	13.1%	13.3%	13.0%	11.9%	10.9%		
2010	3.0%	4.0%	5.2%	5.9%	4.1%	2.9%	2.5%			
2011	4.0%	8.0%	6.2%	4.9%	4.0%	2.8%				
2012	5.3%	1.4%	-0.6%	-3.5%	-4.8%					
2013	1.1%	0.3%	-2.8%	-3.8%						
2014	-0.1%	-4.4%	-4.8%							
2015	3.0%	0.3%								
2016	-0.7%									

Annual Trend*										
All-Yr	3.6%	4.7%	6.3%	7.4%	6.7%	5.2%	3.7%	3.0%	2.7%	3.2%
R ²	0.866	0.751	0.782	0.864	0.756	0.596	0.438	0.385	0.340	0.346

* Trend is based on an exponential distribution.

Note: 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 67% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

Source: WCIRB quarterly calls for experience

Average Indemnity Case Outstanding per Open Indemnity Claim

Accident	Evaluated as of (in months):									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1998										33,518
1999									29,951	30,729
2000								24,458	25,201	26,322
2001							20,671	21,935	23,733	24,925
2002						17,335	17,896	18,979	20,352	22,607
2003					16,215	17,725	20,073	22,377	26,023	29,815
2004				13,867	14,937	17,338	18,887	22,361	24,566	27,458
2005			10,892	12,153	14,337	16,560	20,316	23,771	25,723	27,895
2006		10,103	12,246	14,372	17,028	20,115	22,639	25,681	27,825	29,363
2007	6,665	10,201	13,095	15,551	17,451	19,442	22,405	26,149	27,937	30,545
2008	6,824	10,811	13,779	16,167	17,914	19,843	22,711	25,206	29,260	
2009	7,092	11,324	13,800	16,009	17,976	20,478	22,319	24,946		
2010	7,045	10,977	13,808	15,418	17,387	19,063	21,114			
2011	7,138	11,665	14,023	16,424	18,299	20,104				
2012	7,353	11,529	14,239	15,587	17,705					
2013	7,605	11,608	13,865	15,394						
2014	7,743	11,846	14,481							
2015	8,143	12,632								
2016	8,248									

Accident	Annual Change									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1999										-8.3%
2000									-15.9%	-14.3%
2001								-10.3%	-5.8%	-5.3%
2002							-13.4%	-13.5%	-14.2%	-9.3%
2003						2.2%	12.2%	17.9%	27.9%	31.9%
2004					-7.9%	-2.2%	-5.9%	-0.1%	-5.6%	-7.9%
2005				-12.4%	-4.0%	-4.5%	7.6%	6.3%	4.7%	1.6%
2006			12.4%	18.3%	18.8%	21.5%	11.4%	8.0%	8.2%	5.3%
2007		1.0%	6.9%	8.2%	2.5%	-3.3%	-1.0%	1.8%	0.4%	4.0%
2008	2.4%	6.0%	5.2%	4.0%	2.7%	2.1%	1.4%	-3.6%	4.7%	
2009	3.9%	4.7%	0.2%	-1.0%	0.3%	3.2%	-1.7%	-1.0%		
2010	-0.7%	-3.1%	0.1%	-3.7%	-3.3%	-6.9%	-5.4%			
2011	1.3%	6.3%	1.6%	6.5%	5.2%	5.5%				
2012	3.0%	-1.2%	1.5%	-5.1%	-3.2%					
2013	3.4%	0.7%	-2.6%	-1.2%						
2014	1.8%	2.1%	4.4%							
2015	5.2%	6.6%								
2016	1.3%									

Annual Trend*										
All-Yr	2.4%	2.2%	2.4%	2.0%	2.1%	1.9%	1.8%	2.0%	1.2%	-0.2%
R ²	0.965	0.890	0.689	0.447	0.557	0.577	0.452	0.372	0.099	0.002

Note: 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 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Average Outstanding Medical Loss Per Open Indemnity Claim

Accident	Evaluated as of (in months):									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1998										70,750
1999									57,592	69,913
2000								44,521	53,369	60,857
2001							31,610	40,456	53,548	65,553
2002						24,620	31,429	40,009	49,169	60,927
2003					20,365	27,259	35,183	43,547	55,635	68,408
2004				17,321	22,840	29,120	37,128	46,503	55,664	67,898
2005			16,359	20,142	24,129	32,407	40,792	50,924	61,459	68,557
2006		15,162	19,565	24,379	30,187	38,045	46,081	58,363	68,548	75,584
2007	12,466	15,519	19,870	24,805	31,397	38,289	47,853	58,969	67,051	75,553
2008	12,945	17,053	21,026	26,148	32,607	39,951	48,941	58,466	67,650	
2009	13,858	17,404	21,855	26,350	32,787	39,984	47,266	55,858		
2010	14,026	17,517	22,273	27,191	32,820	38,745	45,146			
2011	14,573	19,163	23,462	29,004	35,794	40,830				
2012	15,416	19,172	23,396	26,995	31,858					
2013	14,727	18,926	22,180	26,082						
2014	14,843	18,223	21,278							
2015	15,576	18,672								
2016	15,541									

Accident	Annual Change									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1999										-1.2%
2000									-7.3%	-13.0%
2001								-9.1%	0.3%	7.7%
2002							-0.6%	-1.1%	-8.2%	-7.1%
2003						10.7%	11.9%	8.8%	13.2%	12.3%
2004					12.2%	6.8%	5.5%	6.8%	0.1%	-0.7%
2005				16.3%	5.6%	11.3%	9.9%	9.5%	10.4%	1.0%
2006			19.6%	21.0%	25.1%	17.4%	13.0%	14.6%	11.5%	10.2%
2007		2.4%	1.6%	1.7%	4.0%	0.6%	3.8%	1.0%	-2.2%	0.0%
2008	3.8%	9.9%	5.8%	5.4%	3.9%	4.3%	2.3%	-0.9%	0.9%	
2009	7.1%	2.1%	3.9%	0.8%	0.6%	0.1%	-3.4%	-4.5%		
2010	1.2%	0.6%	1.9%	3.2%	0.1%	-3.1%	-4.5%			
2011	3.9%	9.4%	5.3%	6.7%	9.1%	5.4%				
2012	5.8%	0.0%	-0.3%	-6.9%	-11.0%					
2013	-4.5%	-1.3%	-5.2%	-3.4%						
2014	0.8%	-3.7%	-4.1%							
2015	4.9%	2.5%								
2016	-0.2%									

Annual Trend*										
All-Yr	2.3%	2.4%	2.7%	4.3%	5.6%	5.8%	5.3%	4.7%	3.0%	1.2%
R ²	0.846	0.723	0.574	0.651	0.764	0.840	0.833	0.787	0.625	0.230

Note: 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 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* Trend is based on an exponential distribution

Source: WCIRB quarterly calls for experience

Average Paid Indemnity Loss per Indemnity Claim

Accident	Evaluated as of (in months):									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1998										19,053
1999									20,503	20,902
2000								20,712	21,274	21,685
2001							22,078	22,889	23,501	23,953
2002						20,065	21,141	21,890	22,396	22,820
2003					18,538	20,077	21,106	21,831	22,443	22,996
2004				13,014	14,798	16,013	16,912	17,663	18,310	18,917
2005			8,905	11,380	13,020	14,155	15,022	15,773	16,489	16,997
2006		5,756	9,528	11,979	13,707	15,025	16,110	16,959	17,602	18,029
2007	2,119	6,213	10,363	13,244	15,287	16,816	18,007	18,937	19,561	20,145
2008	2,323	6,697	11,192	14,634	17,077	18,797	20,011	20,872	21,475	
2009	2,364	6,710	11,518	15,124	17,691	19,482	20,769	21,678		
2010	2,331	6,702	11,505	15,172	17,663	19,369	20,588			
2011	2,373	6,798	11,650	15,103	17,451	19,081				
2012	2,455	6,897	11,649	15,071	17,308					
2013	2,451	6,913	11,663	15,117						
2014	2,450	7,011	12,147							
2015	2,477	7,316								
2016	2,616									

Accident	Annual Change									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1999										9.7%
2000									3.8%	3.7%
2001								10.5%	10.5%	10.5%
2002							-4.2%	-4.4%	-4.7%	-4.7%
2003						0.1%	-0.2%	-0.3%	0.2%	0.8%
2004					-20.2%	-20.2%	-19.9%	-19.1%	-18.4%	-17.7%
2005				-12.6%	-12.0%	-11.6%	-11.2%	-10.7%	-9.9%	-10.1%
2006			7.0%	5.3%	5.3%	6.2%	7.2%	7.5%	6.8%	6.1%
2007		7.9%	8.8%	10.6%	11.5%	11.9%	11.8%	11.7%	11.1%	11.7%
2008	9.7%	7.8%	8.0%	10.5%	11.7%	11.8%	11.1%	10.2%	9.8%	
2009	1.7%	0.2%	2.9%	3.3%	3.6%	3.6%	3.8%	3.9%		
2010	-1.4%	-0.1%	-0.1%	0.3%	-0.2%	-0.6%	-0.9%			
2011	1.8%	1.4%	1.3%	-0.5%	-1.2%	-1.5%				
2012	3.5%	1.5%	0.0%	-0.2%	-0.8%					
2013	-0.1%	0.2%	0.1%	0.3%						
2014	0.0%	1.4%	4.2%							
2015	1.1%	4.4%								
2016	5.6%									

Annual Trend*										
All-Yr	1.7%	2.0%	3.0%	3.0%	1.8%	0.8%	-0.5%	-1.1%	-1.6%	-1.5%
R ²	0.809	0.794	0.787	0.686	0.196	0.032	0.011	0.070	0.186	0.157

Note: 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 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Average Paid Medical Loss Per Indemnity Claim*

Accident	Evaluated as of (in months):									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
2000										19,059
2001									21,763	22,689
2002								21,335	22,283	23,053
2003							19,841	20,998	21,980	22,861
2004						16,594	17,987	19,168	20,296	21,330
2005					15,217	16,951	18,417	19,606	21,015	21,974
2006				14,415	16,882	18,839	20,507	21,940	23,103	23,938
2007			12,707	16,303	19,006	21,317	23,374	24,984	26,132	27,077
2008		9,018	13,883	17,918	21,198	23,914	25,949	27,404	28,511	
2009	3,611	9,262	14,450	18,924	22,654	25,450	27,414	28,845		
2010*	3,611	9,142	14,446	19,271	22,815	25,322	27,212			
2011*	3,193	8,568	13,914	18,233	21,357	23,702				
2012*	3,095	8,420	13,401	17,405	20,219					
2013	3,265	8,100	12,782	16,435						
2014	3,052	7,888	12,475							
2015	3,164	7,954								
2016	3,234									

Accident	Annual Change									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
2001										19.0%
2002									2.4%	1.6%
2003								-1.6%	-1.4%	-0.8%
2004							-9.3%	-8.7%	-7.7%	-6.7%
2005						2.2%	2.4%	2.3%	3.5%	3.0%
2006					10.9%	11.1%	11.3%	11.9%	9.9%	8.9%
2007				13.1%	12.6%	13.2%	14.0%	13.9%	13.1%	13.1%
2008			9.3%	9.9%	11.5%	12.2%	11.0%	9.7%	9.1%	
2009		2.7%	4.1%	5.6%	6.9%	6.4%	5.6%	5.3%		
2010*	0.0%	-1.3%	0.0%	1.8%	0.7%	-0.5%	-0.7%			
2011*	-11.6%	-6.3%	-3.7%	-5.4%	-6.4%	-6.4%				
2012*	-3.1%	-1.7%	-3.7%	-4.5%	-5.3%					
2013	5.5%	-3.8%	-4.6%	-5.6%						
2014	-6.5%	-2.6%	-2.4%							
2015	3.7%	0.8%								
2016	2.2%									

Annual Trend**										
All-Yr	-1.8%	-2.4%	-1.0%	1.6%	4.6%	6.8%	6.7%	5.3%	3.5%	3.0%
R ²	0.468	0.887	0.162	0.163	0.585	0.840	0.847	0.691	0.531	0.540

Note: 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 67% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* Entries for accident years 2010 and 2011 only reflect the paid cost of medical cost containment programs attributable to policies with effective dates prior to July 1, 2010. Entries for accident year 2012 and forward exclude the paid cost of medical cost containment programs.

** Trend is based on an exponential distribution

Source: WCIRB quarterly calls for experience

Average Paid Medical Loss Per Claim*

Accident	Evaluated as of (in months):									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1998										5,137
1999									5,804	6,035
2000								6,333	6,642	6,861
2001							7,224	7,611	7,903	8,212
2002						7,270	7,765	8,128	8,463	8,725
2003					6,464	7,052	7,467	7,868	8,206	8,510
2004				4,517	5,171	5,676	6,106	6,469	6,821	7,150
2005			3,411	4,238	4,880	5,383	5,807	6,154	6,580	6,860
2006		2,551	3,745	4,660	5,369	5,936	6,427	6,845	7,188	7,424
2007	1,152	2,911	4,273	5,349	6,151	6,843	7,464	7,939	8,281	8,565
2008	1,399	3,276	4,822	6,083	7,112	7,966	8,601	9,058	9,411	
2009	1,528	3,579	5,354	6,882	8,139	9,084	9,743	10,229		
2010	1,550	3,698	5,643	7,384	8,654	9,564	10,249			
2011	1,561	3,881	6,034	7,740	8,969	9,911				
2012	1,631	3,986	6,054	7,677	8,806					
2013	1,706	3,946	5,958	7,474						
2014	1,657	3,863	5,805							
2015	1,690	3,878								
2016	1,714									

Accident	Annual Change									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
1999										17.5%
2000									14.4%	13.7%
2001								20.2%	19.0%	19.7%
2002							7.5%	6.8%	7.1%	6.2%
2003						-3.0%	-3.8%	-3.2%	-3.0%	-2.5%
2004					-20.0%	-19.5%	-18.2%	-17.8%	-16.9%	-16.0%
2005				-6.2%	-5.6%	-5.2%	-4.9%	-4.9%	-3.5%	-4.1%
2006			9.8%	10.0%	10.0%	10.3%	10.7%	11.2%	9.3%	8.2%
2007		14.1%	14.1%	14.8%	14.6%	15.3%	16.1%	16.0%	15.2%	15.4%
2008	21.5%	12.6%	12.9%	13.7%	15.6%	16.4%	15.2%	14.1%	13.6%	
2009	9.2%	9.2%	11.0%	13.1%	14.4%	14.0%	13.3%	12.9%		
2010	1.5%	3.3%	5.4%	7.3%	6.3%	5.3%	5.2%			
2011	0.7%	4.9%	6.9%	4.8%	3.6%	3.6%				
2012	4.4%	2.7%	0.3%	-0.8%	-1.8%					
2013	4.6%	-1.0%	-1.6%	-2.6%						
2014	-2.9%	-2.1%	-2.6%							
2015	2.0%	0.4%								
2016	1.4%									

Annual Trend**										
All-Yr	3.5%	4.4%	6.6%	7.8%	6.8%	5.3%	3.8%	3.0%	2.8%	3.5%
R ²	0.725	0.740	0.836	0.895	0.735	0.525	0.360	0.307	0.312	0.363

Note: 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 67% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* All entries reflect the paid cost of medical cost containment programs.

** Trend is based on an exponential distribution

Source: WCIRB quarterly calls for experience

Average Paid Indemnity Loss per Closed Indemnity Claim*

Accident	Evaluated as of (in months):									
Year	9	21	33	45	57	69	81	93	105	117
1998										16,851
1999									17,956	18,570
2000								17,607	18,491	19,186
2001							17,854	19,119	19,992	20,604
2002						16,100	17,637	18,613	19,341	19,884
2003					14,294	16,415	17,621	18,471	19,156	19,793
2004				8,963	11,522	12,912	13,912	14,701	15,494	16,415
2005			4,690	7,813	9,921	11,168	12,152	13,023	14,090	14,850
2006		2,609	5,494	8,268	10,292	11,734	12,967	14,255	15,174	15,901
2007	1,091	2,778	6,074	9,032	11,334	13,056	14,710	16,040	17,016	17,952
2008	1,229	3,222	6,572	9,970	12,653	15,010	16,722	18,017	19,042	
2009	1,497	3,372	6,992	10,516	13,586	15,926	17,708	19,151		
2010	1,286	3,389	7,158	11,025	14,028	16,284	18,005			
2011	1,357	3,716	7,621	11,457	14,331	16,517				
2012	1,508	4,015	8,135	11,853	14,542					
2013	1,694	4,485	8,479	12,167						
2014	1,752	4,623	9,053							
2015	1,768	5,053								
2016	1,889									

Accident	Annual Change									
Year	9	21	33	45	57	69	81	93	105	117
1999										10.2%
2000									3.0%	3.3%
2001								8.6%	8.1%	7.4%
2002							-1.2%	-2.6%	-3.3%	-3.5%
2003						2.0%	-0.1%	-0.8%	-1.0%	-0.5%
2004					-19.4%	-21.3%	-21.0%	-20.4%	-19.1%	-17.1%
2005				-12.8%	-13.9%	-13.5%	-12.6%	-11.4%	-9.1%	-9.5%
2006			17.1%	5.8%	3.7%	5.1%	6.7%	9.5%	7.7%	7.1%
2007		6.5%	10.6%	9.2%	10.1%	11.3%	13.4%	12.5%	12.1%	12.9%
2008	12.6%	16.0%	8.2%	10.4%	11.6%	15.0%	13.7%	12.3%	11.9%	
2009	21.8%	4.7%	6.4%	5.5%	7.4%	6.1%	5.9%	6.3%		
2010	-14.1%	0.5%	2.4%	4.8%	3.3%	2.2%	1.7%			
2011	5.5%	9.7%	6.5%	3.9%	2.2%	1.4%				
2012	11.1%	8.0%	6.7%	3.5%	1.5%					
2013	12.3%	11.7%	4.2%	2.7%						
2014	3.4%	3.1%	6.8%							
2015	1.0%	9.3%								
2016	6.8%									

Annual Trend**										
All-Yr	5.7%	7.4%	6.8%	4.9%	2.7%	1.4%	0.0%	-0.8%	-1.6%	-1.5%
R ²	0.876	0.983	0.959	0.881	0.307	0.073	0.000	0.030	0.157	0.174

Note: 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 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* Paid indemnity losses used in the severity calculations above represent paid indemnity losses on closed claims only.

** Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Average Medical Paid per Closed Indemnity Claim*

Accident	Evaluated as of (in months):									
<u>Year</u>	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
2000										15,599
2001									17,501	18,330
2002								17,215	18,180	18,952
2003							15,765	16,808	17,696	18,570
2004						12,197	13,438	14,485	15,605	16,982
2005					10,579	12,156	13,446	14,688	16,337	17,700
2006				9,373	11,566	13,422	15,075	16,892	18,366	19,632
2007			7,357	10,353	12,894	15,006	17,337	19,481	21,161	22,797
2008		4,579	7,976	11,422	14,481	17,748	20,267	22,187	23,896	
2009	3,001	4,682	8,300	12,289	16,162	19,370	22,037	24,162		
2010*	2,777	4,668	8,633	13,170	16,988	20,077	22,696			
2011*	1,788	4,204	8,479	12,867	16,481	19,612				
2012*	1,835	4,508	8,873	12,995	16,287					
2013	1,978	4,796	8,872	12,733						
2014	1,951	4,817	8,993							
2015	1,986	5,125								
2016	2,131									

Accident	Annual Change									
<u>Year</u>	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
2001										17.5%
2002									3.9%	3.4%
2003								-2.4%	-2.7%	-2.0%
2004							-14.8%	-13.8%	-11.8%	-8.5%
2005						-0.3%	0.1%	1.4%	4.7%	4.2%
2006					9.3%	10.4%	12.1%	15.0%	12.4%	10.9%
2007				10.5%	11.5%	11.8%	15.0%	15.3%	15.2%	16.1%
2008			8.4%	10.3%	12.3%	18.3%	16.9%	13.9%	12.9%	
2009		2.3%	4.1%	7.6%	11.6%	9.1%	8.7%	8.9%		
2010*	-7.5%	-0.3%	4.0%	7.2%	5.1%	3.6%	3.0%			
2011*	-35.6%	-9.9%	-1.8%	-2.3%	-3.0%	-2.3%				
2012*	2.6%	7.2%	4.6%	1.0%	-1.2%					
2013	7.8%	6.4%	0.0%	-2.0%						
2014	-1.3%	0.4%	1.4%							
2015	1.8%	6.4%								
2016	7.3%									

Annual Trend**										
All-Yr	-4.3%	1.3%	2.6%	4.5%	7.1%	8.8%	7.9%	5.9%	3.8%	3.3%
R ²	0.321	0.304	0.840	0.761	0.856	0.927	0.781	0.579	0.428	0.505

Note: 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 67% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* Entries for accident years 2010 and 2011 only reflect the paid cost of medical cost containment programs attributable to policies with effective dates prior to July 1, 2010. Entries for accident year 2012 and forward exclude the paid cost of medical cost containment programs only.

** Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Ratio of Incremental Paid Indemnity to Indemnity Claims Open During Period

Accident	Development									
Year	0-9	9-21	21-33	33-45	45-57	57-69	69-81	81-93	93-105	105-117
1999										6,352
2000									6,365	5,773
2001								6,034	5,896	5,412
2002							6,327	5,864	5,043	5,121
2003						6,661	6,042	5,583	5,873	6,623
2004					5,852	5,617	5,569	5,753	6,174	7,275
2005				6,151	5,849	5,660	5,553	6,105	7,287	6,710
2006			7,038	6,409	6,369	6,561	7,008	6,970	6,970	6,067
2007		5,583	7,685	7,293	7,191	7,269	7,230	7,564	6,811	8,105
2008	2,323	6,018	8,244	8,443	8,237	7,829	7,606	7,341	6,820	
2009	2,364	6,054	8,564	8,540	8,314	8,049	7,895	7,655		
2010	2,331	6,088	8,627	8,838	8,477	8,269	8,193			
2011	2,373	6,215	8,806	8,571	8,369	8,377				
2012	2,455	6,297	8,729	8,776	8,416					
2013	2,451	6,282	8,740	9,097						
2014	2,450	6,400	9,613							
2015	2,477	6,761								
2016	2,616									

Accident	Annual Change									
Year	0-9	9-21	21-33	33-45	45-57	57-69	69-81	81-93	93-105	105-117
2000										-9.1%
2001									-7.4%	-6.3%
2002								-2.8%	-14.5%	-5.4%
2003							-4.5%	-4.8%	16.5%	29.3%
2004						-15.7%	-7.8%	3.0%	5.1%	9.8%
2005					-0.1%	0.8%	-0.3%	6.1%	18.0%	-7.8%
2006				4.2%	8.9%	15.9%	26.2%	14.2%	-4.3%	-9.6%
2007			9.2%	13.8%	12.9%	10.8%	3.2%	8.5%	-2.3%	33.6%
2008		7.8%	7.3%	15.8%	14.6%	7.7%	5.2%	-3.0%	0.1%	
2009	1.7%	0.6%	3.9%	1.2%	0.9%	2.8%	3.8%	4.3%		
2010	-1.4%	0.6%	0.7%	3.5%	2.0%	2.7%	3.8%			
2011	1.8%	2.1%	2.1%	-3.0%	-1.3%	1.3%				
2012	3.5%	1.3%	-0.9%	2.4%	0.6%					
2013	-0.1%	-0.2%	0.1%	3.7%						
2014	0.0%	1.9%	10.0%							
2015	1.1%	5.6%								
2016	5.6%									

Annual Trend*										
All-Yr	1.3%	1.8%	3.0%	4.9%	5.6%	5.1%	4.6%	4.1%	2.7%	3.2%
R ²	0.839	0.863	0.820	0.796	0.841	0.756	0.711	0.769	0.400	0.365

Note: 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 76% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

*Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Ratio of Incremental Paid Medical to Indemnity Claims Open During Period*

Accident Year	Development									
	0-9	9-21	21-33	33-45	45-57	57-69	69-81	81-93	93-105	105-117
2001										10,948
2002									9,272	9,235
2003								8,920	9,467	10,553
2004							8,556	9,034	10,802	12,363
2005						8,564	9,299	9,595	14,206	12,577
2006					9,035	9,684	10,704	11,657	12,495	11,705
2007				9,062	9,449	10,885	12,373	12,984	12,401	12,995
2008			9,004	9,900	10,989	12,224	12,558	12,281	12,318	
2009		8,114	9,371	10,599	11,997	12,442	11,950	11,933		
2010*	3,611	8,017	9,645	11,622	11,997	12,079	12,584			
2011*	3,193	7,704	9,811	10,719	11,104	11,985				
2012*	3,095	7,622	9,247	10,261	10,537					
2013*	3,265	7,103	8,714	9,639						
2014*	3,052	7,008	8,720							
2015*	3,164	7,042								
2016*	3,234									

Accident Year	Annual Change									
	0-9	9-21	21-33	33-45	45-57	57-69	69-81	81-93	93-105	105-117
2002										-15.6%
2003									2.1%	14.3%
2004								1.3%	14.1%	17.2%
2005							8.7%	6.2%	31.5%	1.7%
2006						13.1%	15.1%	21.5%	-12.0%	-6.9%
2007					4.6%	12.4%	15.6%	11.4%	-0.8%	11.0%
2008				9.2%	16.3%	12.3%	1.5%	-5.4%	-0.7%	
2009			4.1%	7.1%	9.2%	1.8%	-4.8%	-2.8%		
2010*		-1.2%	2.9%	9.7%	0.0%	-2.9%	5.3%			
2011*	-11.6%	-3.9%	1.7%	-7.8%	-7.4%	-0.8%				
2012*	-3.1%	-1.1%	-5.8%	-4.3%	-5.1%					
2013*	5.5%	-6.8%	-5.8%	-6.1%						
2014*	-6.5%	-1.3%	0.1%							
2015*	3.7%	0.5%								
2016*	2.2%									

Annual Trend**										
All-Yr	-1.3%	-2.7%	-1.0%	1.0%	3.2%	5.8%	6.7%	6.6%	5.6%	4.2%
R ²	0.260	0.927	0.221	0.066	0.374	0.738	0.796	0.769	0.563	0.562

Note: 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 67% to 100% of the total California workers' compensation insured market measured using 2015 earned premium levels).

* Entries for accident years 2010 and 2011 only reflect the paid cost of medical cost containment programs attributable to policies with effective dates prior to July 1, 2010. Entries for accident year 2012 and forward exclude the paid cost of medical cost containment programs.

** Trend is based on an exponential distribution.

Source: WCIRB quarterly calls for experience

Estimated Ultimate Indemnity Severities by Injury Type

I. Indemnity Severity

Accident Year	Permanent Partial	Temporary
2001	44,148	3,955
2002	41,893	3,932
2003	41,104	4,169
2004	35,162	4,109
2005	33,730	3,838
2006	36,483	3,866
2007	39,195	4,156
2008	41,497	4,604
2009	41,879	5,288
2010	40,585	6,226
2011	39,377	6,764
2012	38,909	7,247
2013	38,102	7,830
2014	40,163	8,096
2015*	41,180	8,635

Accident Year	Annual Change	
2001	---	---
2002	-5.1%	-0.6%
2003	-1.9%	6.0%
2004	-14.5%	-1.4%
2005	-4.1%	-6.6%
2006	8.2%	0.7%
2007	7.4%	7.5%
2008	5.9%	10.8%
2009	0.9%	14.9%
2010	-3.1%	17.7%
2011	-3.0%	8.6%
2012	-1.2%	7.1%
2013	-2.1%	8.0%
2014	5.4%	3.4%
2015*	2.5%	6.7%

II. Indemnity Severity Adjusted to PY 2017 Benefit Level

Accident Year	Permanent Partial	Temporary
2001	42,783	5,422
2002	41,995	5,417
2003	43,460	5,308
2004	46,247	5,108
2005	52,989	4,687
2006	52,778	4,600
2007	54,427	4,839
2008	52,070	5,254
2009	52,278	5,993
2010	49,984	6,951
2011	47,732	7,432
2012	46,070	7,773
2013	45,085	8,706
2014	43,341	8,841
2015*	43,461	9,196

Accident Year	Annual Change	
2001	---	---
2002	-1.8%	-0.1%
2003	3.5%	-2.0%
2004	6.4%	-3.8%
2005	14.6%	-8.2%
2006	-0.4%	-1.8%
2007	3.1%	5.2%
2008	-4.3%	8.6%
2009	0.4%	14.1%
2010	-4.4%	16.0%
2011	-4.5%	6.9%
2012	-3.5%	4.6%
2013	-2.1%	12.0%
2014	-3.9%	1.5%
2015*	0.3%	4.0%

* Accident year 2015 experience is partial in that it only reflects experience from policy year 2014.

Source: WCIRB unit statistical data

Estimated Ultimate Medical Severities by Injury Type *

I. Medical Severity

Accident Year	Permanent Partial	Temporary	Medical Only
2001	50,042	4,915	759
2002	50,018	5,403	852
2003	48,244	5,653	924
2004	48,423	5,391	848
2005	53,051	5,392	863
2006	58,333	5,603	876
2007	64,452	6,377	959
2008	68,011	6,922	1,043
2009	69,378	8,044	1,146
2010	68,552	9,135	1,170
2011	64,139	9,143	1,121
2012	61,169	9,240	1,121
2013	59,748	9,400	1,133
2014	59,469	9,479	1,209
2015**	59,851	10,334	1,284

II. Medical Severity Adjusted to PY 2017 Benefit Level

Accident Year	Permanent Partial	Temporary	Medical Only
2001	31,621	3,106	480
2002	32,846	3,548	560
2003	33,294	3,901	637
2004	44,285	4,930	776
2005	48,618	4,941	791
2006	53,340	5,124	801
2007	58,002	5,738	863
2008	61,149	6,224	938
2009	62,404	7,236	1,031
2010	61,832	8,240	1,055
2011	58,120	8,285	1,016
2012	57,025	8,614	1,045
2013	57,223	9,003	1,085
2014	60,540	9,650	1,231
2015**	60,794	10,497	1,304

Accident Year	Annual Change		
2001	---	---	---
2002	0.0%	9.9%	12.3%
2003	-3.5%	4.6%	8.4%
2004	0.4%	-4.6%	-8.2%
2005	9.6%	0.0%	1.8%
2006	10.0%	3.9%	1.5%
2007	10.5%	13.8%	9.5%
2008	5.5%	8.6%	8.8%
2009	2.0%	16.2%	9.8%
2010	-1.2%	13.6%	2.1%
2011	-6.4%	0.1%	-4.2%
2012	-4.6%	1.1%	-0.1%
2013	-2.3%	1.7%	1.1%
2014	-0.5%	0.8%	6.7%
2015**	0.6%	9.0%	6.2%

Accident Year	Annual Change		
2001	---	---	---
2002	3.9%	14.2%	16.7%
2003	1.4%	9.9%	13.9%
2004	33.0%	26.4%	21.7%
2005	9.8%	0.2%	2.0%
2006	9.7%	3.7%	1.3%
2007	8.7%	12.0%	7.8%
2008	5.4%	8.5%	8.7%
2009	2.1%	16.3%	9.9%
2010	-0.9%	13.9%	2.4%
2011	-6.0%	0.6%	-3.7%
2012	-1.9%	4.0%	2.8%
2013	0.3%	4.5%	3.9%
2014	5.8%	7.2%	13.4%
2015**	0.4%	8.8%	6.0%

* Entries for accident years 2010 and 2011 only reflect the paid cost of medical cost containment programs attributable to policies with effective dates prior to July 1, 2010. Entries for accident year 2012 and forward exclude the paid cost of medical cost containment programs.

** Accident year 2015 experience is partial in that it only reflects experience from policy year 2014.

Source: WCIRB unit statistical data

Temporary Disability Benefits Paid and TD Duration at 12 and 24 Months
Based on CWCII Transactional Level Data Adjusted to a Common Statutory Benefit Level

<u>Accident Year</u>	<u>Average Adjusted TD Paid at 12 Months</u>	<u>Year-to-Year Change</u>	<u>Average Adjusted TD Paid at 24 Months</u>	<u>Year-to-Year Change</u>
2002	6,422	---	8,803	---
2003	5,986	-6.8%	8,559	-2.8%
2004 (pre-SB 899)	6,496	8.5%	8,801	2.8%
2004 (post-SB 899)	5,778	-11.1%	7,806	-11.3%
2005	5,772	-0.1%	8,262	5.8%
2006	6,285	8.9%	8,807	6.6%
2007	6,302	0.3%	8,940	1.5%
2008	6,587	4.5%	9,704	8.5%
2009	6,882	4.5%	10,757	10.9%
2010	7,223	5.0%	10,736	-0.2%
2011	6,870	-4.9%	10,626	-1.0%
2012	7,136	3.9%	11,010	3.6%
2013	7,578	6.2%	11,323	2.8%
2014	7,865	3.8%		

<u>Accident Year</u>	<u>Average TD Duration at 12 Months</u>	<u>Year-to-Year Change</u>	<u>Average TD Duration at 24 Months</u>	<u>Year-to-Year Change</u>
2002	85.1	---	114.8	---
2003	82.0	-3.6%	116.0	1.0%
2004 (pre-SB 899)	87.0	6.1%	116.3	0.3%
2004 (post-SB 899)	79.9	-8.2%	107.9	-7.2%
2005	75.2	-5.9%	107.2	-0.6%
2006	78.8	4.8%	111.0	3.5%
2007	77.8	-1.3%	110.5	-0.5%
2008	79.6	2.3%	115.8	4.8%
2009	82.1	3.1%	127.0	9.7%
2010	89.9	9.5%	130.1	2.4%
2011	83.3	-7.3%	122.9	-5.5%
2012	85.6	2.8%	128.1	4.2%
2013	88.6	3.5%	125.7	-1.9%
2014	89.0	0.5%		

* Factors used to adjust average TD benefits to the AY 2014 level were: 2002 – 1.175; 2003 – 1.091; 2004 – 1.069; 2005 – 1.054; 2006 – 1.043; 2007 – 1.037; 2008 – 1.030; 2009 – 1.025; 2010 – 1.020; 2011 – 1.020; 2012 – 1.015; 2013 – 1.004; 2014 – 1.003.

Source: CWCII

Changes in the Number of Weeks of Temporary Disability Benefits

First Survey Level

<u>Accident Year</u>	<u>Average TD Duration</u>	<u>Change</u>	<u>Median TD Duration</u>	<u>Change</u>
2004	38.5	-----	24.1	-----
2005	42.4	10.3%	28.6	18.5%
2006	44.2	4.2%	30.5	6.8%
2007	47.2	6.9%	34.6	13.3%
2008	50.4	6.8%	39.0	12.8%
2009	48.5	-3.8%	36.0	-7.7%
2010	46.2	-4.7%	33.8	-6.1%
2011	44.6	-3.6%	30.0	-11.2%
2012	43.8	-1.7%	29.8	-0.5%
2013	42.6	-2.9%	29.3	-1.8%
2014	42.0	-1.4%	29.3	0.0%

Second Survey Level

<u>Accident Year</u>	<u>Average TD Duration</u>	<u>Change</u>	<u>Median TD Duration</u>	<u>Change</u>
2003	40.2	-----	25.3	-----
2004	38.3	-4.7%	24.4	-3.5%
2005	42.1	9.9%	29.4	20.8%
2006	43.2	2.6%	29.9	1.4%
2007	47.2	9.2%	34.1	14.1%
2008	51.1	8.2%	39.0	14.4%
2009	48.9	-4.3%	36.1	-7.3%
2010	44.9	-8.2%	32.7	-9.5%
2011	46.0	2.5%	30.8	-5.7%
2012	41.4	-10.0%	27.8	-9.8%
2013	42.6	2.9%	30.3	9.1%

Source: WCIRB Permanent Disability Claim Survey
 AY 2014-1 and AY 2013-2 are preliminary data.

Claim Counts and Losses on Claims in Excess of \$250,000

Number of Claims in Excess of \$250,000								
PY/RL	1	2	3	4	5	6	7	8
2002	602	1,282	2,109	2,990	3,838	4,500	4,866	5,232
2003	540	928	1,550	2,323	3,104	3,589	4,071	4,395
2004	472	719	1,163	1,741	2,296	2,874	3,273	3,547
2005	496	783	1,292	1,921	2,657	3,169	3,504	3,782
2006	667	1,036	1,673	2,401	3,108	3,603	3,984	4,211
2007	666	1,189	2,092	3,015	3,755	4,319	4,641	4,845
2008	653	1,260	2,099	3,077	3,878	4,389	4,680	
2009	604	1,219	2,111	3,083	3,784	4,217		
2010	588	1,167	1,951	2,806	3,377			
2011	653	1,205	1,919	2,649				
2012	668	1,127	1,723					
2013	709	1,117						
2014	698							

% of Claims in Excess of \$250,000								
PY/RL	1	2	3	4	5	6	7	8
2002	0.112%	0.227%	0.372%	0.525%	0.672%	0.790%	0.857%	0.925%
2003	0.107%	0.177%	0.295%	0.441%	0.588%	0.681%	0.775%	0.839%
2004	0.098%	0.146%	0.235%	0.351%	0.463%	0.581%	0.663%	0.718%
2005	0.109%	0.168%	0.276%	0.409%	0.567%	0.676%	0.747%	0.805%
2006	0.153%	0.233%	0.374%	0.536%	0.692%	0.801%	0.885%	0.935%
2007	0.161%	0.282%	0.494%	0.707%	0.880%	1.010%	1.085%	1.131%
2008	0.182%	0.342%	0.566%	0.826%	1.038%	1.173%	1.249%	
2009	0.182%	0.359%	0.616%	0.896%	1.097%	1.221%		
2010	0.175%	0.339%	0.562%	0.804%	0.966%			
2011	0.194%	0.348%	0.549%	0.755%				
2012	0.194%	0.319%	0.483%					
2013	0.200%	0.308%						
2014	0.195%							

% of Indemnity Incurred on Claims in Excess of \$250,000								
PY/RL	1	2	3	4	5	6	7	8
2002	4.35%	6.36%	9.13%	12.64%	16.07%	18.67%	20.07%	21.84%
2003	5.80%	7.10%	9.89%	13.19%	16.47%	18.55%	21.16%	22.92%
2004	6.58%	7.79%	9.70%	13.11%	15.78%	19.69%	22.24%	24.01%
2005	7.95%	8.27%	11.00%	15.00%	19.77%	23.04%	25.51%	27.31%
2006	11.02%	11.47%	14.89%	18.94%	22.71%	25.75%	28.08%	29.89%
2007	10.15%	11.62%	16.22%	20.89%	24.90%	27.50%	29.41%	30.61%
2008	9.37%	11.20%	15.22%	20.28%	24.26%	27.11%	28.72%	
2009	9.06%	10.45%	15.09%	19.60%	23.44%	25.78%		
2010	9.14%	10.82%	13.89%	18.16%	21.12%			
2011	9.46%	10.54%	13.48%	17.16%				
2012	9.02%	9.77%	12.45%					
2013	7.59%	8.84%						
2014	8.68%							

% of Medical Incurred on Claims in Excess of \$250,000								
PY/RL	1	2	3	4	5	6	7	8
2002	10.02%	12.42%	15.41%	18.77%	22.93%	26.16%	28.53%	30.77%
2003	11.23%	12.96%	15.75%	19.79%	23.77%	26.34%	30.08%	32.17%
2004	11.21%	12.93%	16.17%	19.88%	23.28%	28.00%	31.31%	33.79%
2005	12.87%	15.04%	17.09%	20.69%	26.00%	30.09%	32.71%	35.48%
2006	14.59%	16.50%	19.82%	23.83%	28.06%	31.56%	34.40%	36.03%
2007	13.37%	15.89%	20.71%	26.16%	30.13%	33.64%	35.80%	37.30%
2008	12.95%	15.33%	19.43%	24.70%	29.07%	32.32%	34.30%	
2009	12.52%	15.39%	19.88%	24.82%	28.64%	30.97%		
2010	13.20%	15.70%	19.02%	23.15%	26.44%			
2011	13.48%	15.29%	18.56%	22.16%				
2012	14.07%	15.09%	17.79%					
2013	11.75%	12.36%						
2014	13.98%							

Average Severity on Claims in Excess of \$250,000								
PY/RL	1	2	3	4	5	6	7	8
2002	717,062	592,893	508,878	481,072	488,305	498,121	511,322	529,239
2003	830,287	697,511	579,912	531,520	513,563	511,184	536,729	548,977
2004	751,890	695,515	597,861	550,994	520,593	538,976	553,349	569,398
2005	739,367	668,592	545,833	501,441	498,380	513,170	526,835	543,666
2006	685,716	633,586	554,027	517,029	504,508	515,982	527,649	538,512
2007	656,706	573,916	507,392	494,503	494,898	501,434	512,282	520,403
2008	617,586	515,370	466,652	456,502	457,438	469,921	477,841	
2009	649,166	525,815	479,951	458,056	463,534	466,455		
2010	711,521	584,687	502,343	474,264	476,631			
2011	687,390	560,645	499,168	475,901				
2012	704,191	587,234	523,801					
2013	579,816	508,198						
2014	703,325							

Median Severity on Claims in Excess of \$250,000								
PY/RL	1	2	3	4	5	6	7	8
2002	353,274	323,567	319,385	330,745	342,220	352,489	362,640	377,161
2003	379,413	344,966	331,543	327,919	336,352	350,688	365,700	374,592
2004	384,864	353,041	327,682	333,000	341,796	356,039	366,212	376,147
2005	380,882	341,967	326,677	331,078	341,764	348,959	361,279	365,877
2006	350,752	340,665	334,409	334,408	342,606	352,011	363,123	364,251
2007	354,608	327,574	328,110	332,740	343,611	355,134	362,922	365,774
2008	360,069	325,004	323,876	328,550	337,081	346,627	351,630	
2009	358,189	325,000	320,631	328,483	337,178	341,485		
2010	348,145	322,140	320,430	320,987	330,255			
2011	348,789	315,896	313,946	320,378				
2012	348,892	326,282	317,680					
2013	337,549	325,366						
2014	360,935							

Notes: Incurred Amounts and Severities are first dollar.
Numbers in *Italics* are from the Preliminary set.

Source: WCIRB unit statistical data

Claim Counts and Losses on Claims in Excess of \$500,000

Number of Claims in Excess of \$500,000								
PY/RL	1	2	3	4	5	6	7	8
2002	171	245	324	481	696	960	1,214	1,449
2003	174	218	300	431	584	800	1,065	1,275
2004	159	198	243	342	453	680	874	1,010
2005	160	184	238	349	532	704	880	1,003
2006	186	257	347	505	679	851	1,038	1,149
2007	187	260	368	528	741	964	1,139	1,254
2008	178	233	340	526	726	940	1,081	
2009	173	234	335	504	705	838		
2010	161	222	317	422	573			
2011	179	232	308	440				
2012	187	237	295					
2013	178	210						
2014	210							

% of Claims in Excess of \$500,000								
PY/RL	1	2	3	4	5	6	7	8
2002	0.032%	0.043%	0.057%	0.085%	0.122%	0.169%	0.214%	0.256%
2003	0.034%	0.042%	0.057%	0.082%	0.111%	0.152%	0.203%	0.243%
2004	0.033%	0.040%	0.049%	0.069%	0.091%	0.137%	0.177%	0.204%
2005	0.035%	0.040%	0.051%	0.074%	0.113%	0.150%	0.188%	0.214%
2006	0.043%	0.058%	0.078%	0.113%	0.151%	0.189%	0.231%	0.255%
2007	0.045%	0.062%	0.087%	0.124%	0.174%	0.225%	0.266%	0.293%
2008	0.050%	0.063%	0.092%	0.141%	0.194%	0.251%	0.288%	
2009	0.052%	0.069%	0.098%	0.146%	0.204%	0.243%		
2010	0.048%	0.065%	0.091%	0.121%	0.164%			
2011	0.053%	0.067%	0.088%	0.125%				
2012	0.054%	0.067%	0.083%					
2013	0.050%	0.058%						
2014	0.059%							

% of Indemnity Incurred on Claims in Excess of \$500,000								
PY/RL	1	2	3	4	5	6	7	8
2002	2.13%	2.53%	3.05%	4.21%	5.73%	7.37%	8.79%	10.46%
2003	3.77%	3.91%	4.68%	5.55%	6.57%	7.94%	10.04%	11.78%
2004	3.89%	4.47%	4.52%	5.96%	6.76%	9.41%	11.48%	13.00%
2005	4.18%	3.64%	4.10%	5.79%	7.94%	9.92%	12.04%	13.53%
2006	5.03%	5.21%	6.38%	8.00%	9.55%	11.68%	13.56%	15.24%
2007	4.80%	5.10%	6.17%	7.74%	10.09%	11.61%	13.34%	14.53%
2008	4.10%	4.26%	5.18%	7.24%	9.06%	11.12%	12.28%	
2009	4.70%	3.88%	5.23%	6.47%	8.49%	9.77%		
2010	4.82%	4.54%	4.95%	6.23%	7.55%			
2011	4.91%	4.41%	4.72%	5.92%				
2012	4.46%	4.18%	4.75%					
2013	2.84%	3.11%						
2014	4.39%							

% of Medical Incurred on Claims in Excess of \$500,000								
PY/RL	1	2	3	4	5	6	7	8
2002	7.40%	7.93%	8.24%	9.14%	11.40%	13.48%	15.57%	17.49%
2003	8.53%	8.91%	9.31%	10.81%	12.38%	13.91%	17.11%	18.91%
2004	8.47%	9.09%	10.06%	11.10%	11.97%	15.26%	17.84%	19.82%
2005	9.77%	10.47%	9.92%	10.55%	13.10%	15.72%	17.78%	20.10%
2006	10.86%	11.37%	11.63%	12.88%	14.71%	16.83%	18.98%	20.32%
2007	9.57%	9.85%	10.75%	12.92%	14.72%	17.07%	18.83%	20.10%
2008	8.84%	8.38%	8.94%	10.75%	12.65%	14.95%	16.55%	
2009	8.61%	8.67%	9.58%	10.93%	12.87%	14.13%		
2010	9.54%	9.71%	9.85%	10.73%	12.42%			
2011	9.66%	9.20%	9.72%	10.83%				
2012	10.28%	9.58%	9.84%					
2013	7.83%	6.95%						
2014	10.36%							

Average Severity on Claims in Excess of \$500,000								
PY/RL	1	2	3	4	5	6	7	8
2002	1,696,788	1,741,153	1,532,015	1,276,041	1,188,599	1,092,089	1,032,729	1,020,705
2003	1,870,525	1,903,826	1,638,500	1,426,187	1,292,676	1,122,403	1,093,521	1,059,376
2004	1,572,672	1,667,615	1,635,033	1,466,714	1,278,692	1,188,341	1,142,355	1,142,140
2005	1,587,235	1,778,172	1,525,931	1,290,030	1,165,364	1,133,478	1,088,311	1,111,789
2006	1,602,470	1,566,036	1,422,051	1,225,576	1,125,012	1,103,038	1,068,071	1,075,001
2007	1,493,459	1,469,841	1,356,962	1,271,855	1,150,320	1,072,957	1,045,187	1,038,426
2008	1,377,062	1,369,040	1,203,209	1,085,961	1,008,698	973,190	957,037	
2009	1,443,063	1,379,530	1,318,329	1,126,985	1,041,463	1,006,442		
2010	1,729,192	1,708,498	1,436,361	1,329,843	1,208,399			
2011	1,644,554	1,578,653	1,443,159	1,252,285				
2012	1,668,685	1,590,226	1,512,484					
2013	1,336,704	1,319,047						
2014	1,570,131							

Median Severity on Claims in Excess of \$500,000								
PY/RL	1	2	3	4	5	6	7	8
2002	885,388	776,001	749,290	689,322	686,961	685,631	686,474	714,772
2003	866,728	914,390	821,735	742,737	729,204	707,027	700,913	711,672
2004	827,255	875,244	772,132	760,725	715,829	712,192	713,607	720,782
2005	825,368	814,506	710,326	704,717	711,051	700,997	686,837	697,792
2006	810,488	782,910	739,379	713,205	711,000	701,420	691,932	695,728
2007	805,589	744,439	712,814	696,427	684,367	677,511	683,218	687,049
2008	844,408	776,176	722,571	683,487	665,759	670,404	685,970	
2009	829,140	747,484	713,222	676,704	657,838	661,390		
2010	893,022	784,927	702,366	689,490	702,588			
2011	893,546	775,642	735,663	687,736				
2012	889,984	791,723	769,428					
2013	760,344	763,671						
2014	869,303							

Notes: Incurred Amounts and Severities are first dollar.
Numbers in *Italics* are from the Preliminary set.

Source: WCIRB unit statistical data

Claim Counts and Losses on Claims in Excess of \$1,000,000

Number of Claims in Excess of \$1,000,000								
PY/RL	1	2	3	4	5	6	7	8
2002	71	96	119	135	173	221	265	336
2003	73	95	114	135	161	194	248	315
2004	57	85	96	109	109	165	216	252
2005	58	72	74	95	132	173	208	245
2006	66	87	110	145	173	216	258	287
2007	66	81	109	133	158	200	234	266
2008	69	82	102	125	167	213	242	
2009	65	81	98	121	150	170		
2010	70	84	100	122	146			
2011	72	85	94	107				
2012	82	86	99					
2013	63	70						
2014	90							

% of Claims in Excess of \$1,000,000								
PY/RL	1	2	3	4	5	6	7	8
2002	0.013%	0.017%	0.021%	0.024%	0.030%	0.039%	0.047%	0.059%
2003	0.014%	0.018%	0.022%	0.026%	0.030%	0.037%	0.047%	0.060%
2004	0.012%	0.017%	0.019%	0.022%	0.022%	0.033%	0.044%	0.051%
2005	0.013%	0.015%	0.016%	0.020%	0.028%	0.037%	0.044%	0.052%
2006	0.015%	0.020%	0.025%	0.032%	0.039%	0.048%	0.057%	0.064%
2007	0.016%	0.019%	0.026%	0.031%	0.037%	0.047%	0.055%	0.062%
2008	0.019%	0.022%	0.027%	0.034%	0.045%	0.057%	0.065%	
2009	0.020%	0.024%	0.029%	0.035%	0.043%	0.049%		
2010	0.021%	0.024%	0.029%	0.035%	0.042%			
2011	0.021%	0.025%	0.027%	0.030%				
2012	0.024%	0.024%	0.028%					
2013	0.018%	0.019%						
2014	0.025%							

% of Indemnity Incurred on Claims in Excess of \$1,000,000								
PY/RL	1	2	3	4	5	6	7	8
2002	1.40%	1.62%	1.83%	2.19%	2.68%	3.25%	3.63%	4.33%
2003	2.87%	2.93%	3.27%	3.40%	3.65%	3.91%	4.82%	5.78%
2004	2.46%	3.21%	3.09%	3.74%	3.73%	5.04%	6.15%	7.04%
2005	2.49%	2.30%	2.31%	3.06%	4.09%	5.16%	6.15%	7.06%
2006	3.02%	3.08%	3.73%	4.26%	4.83%	5.86%	6.76%	7.89%
2007	2.94%	2.96%	3.42%	4.00%	4.97%	5.35%	6.11%	6.64%
2008	2.46%	2.53%	2.88%	3.72%	4.37%	5.28%	5.49%	
2009	2.80%	2.10%	2.84%	3.12%	3.74%	4.27%		
2010	3.63%	3.15%	2.97%	3.60%	3.75%			
2011	3.45%	2.98%	2.77%	2.95%				
2012	3.06%	2.58%	2.77%					
2013	1.66%	1.80%						
2014	2.83%							

% of Medical Incurred on Claims in Excess of \$1,000,000								
PY/RL	1	2	3	4	5	6	7	8
2002	5.81%	6.41%	6.44%	6.28%	7.31%	7.88%	8.48%	9.36%
2003	6.84%	7.22%	7.12%	7.66%	8.13%	8.06%	9.50%	10.22%
2004	6.37%	7.20%	7.89%	7.93%	7.48%	9.04%	10.13%	11.26%
2005	7.42%	8.49%	7.44%	7.05%	7.77%	9.07%	9.75%	11.27%
2006	8.25%	8.56%	8.27%	8.40%	8.65%	9.71%	10.53%	11.15%
2007	7.04%	7.11%	7.55%	8.38%	8.43%	9.19%	9.67%	10.36%
2008	6.40%	5.95%	5.75%	5.95%	6.57%	7.26%	7.88%	
2009	6.38%	6.28%	6.59%	6.50%	6.92%	7.10%		
2010	7.47%	7.59%	7.13%	7.32%	7.87%			
2011	7.38%	6.90%	6.90%	6.94%				
2012	8.17%	7.29%	7.38%					
2013	5.50%	4.80%						
2014	8.17%							

Average Severity on Claims in Excess of \$1,000,000								
PY/RL	1	2	3	4	5	6	7	8
2002	3,105,446	3,422,845	3,060,518	2,891,297	2,799,369	2,544,865	2,367,659	2,171,072
2003	3,523,470	3,460,312	3,204,876	3,081,799	2,922,506	2,543,782	2,487,580	2,242,340
2004	3,161,316	2,995,729	3,135,046	3,169,113	3,201,987	2,812,364	2,576,725	2,561,543
2005	3,171,764	3,525,423	3,473,114	2,982,927	2,674,595	2,581,158	2,468,930	2,496,814
2006	3,268,599	3,304,753	3,033,739	2,630,292	2,484,351	2,402,523	2,306,095	2,316,982
2007	2,989,854	3,230,890	3,023,941	3,083,910	2,953,510	2,658,515	2,523,329	2,430,784
2008	2,474,424	2,646,652	2,479,616	2,470,854	2,224,164	2,070,407	1,994,268	
2009	2,709,780	2,719,407	2,923,444	2,642,982	2,485,767	2,391,441		
2010	3,086,031	3,438,423	3,153,270	3,001,492	2,817,012			
2011	3,062,899	3,150,573	3,207,977	3,091,548				
2012	2,934,667	3,186,651	3,183,730					
2013	2,566,288	2,620,574						
2014	2,773,089							

Median Severity on Claims in Excess of \$1,000,000								
PY/RL	1	2	3	4	5	6	7	8
2002	1,982,089	2,570,630	2,077,245	1,760,458	1,760,458	1,604,620	1,436,815	1,414,360
2003	2,346,394	2,313,505	2,282,077	2,173,422	1,756,000	1,668,325	1,533,770	1,489,999
2004	2,129,170	2,051,638	2,242,484	2,120,000	2,095,911	1,882,020	1,721,976	1,605,699
2005	1,990,755	2,160,065	2,089,211	1,864,346	1,739,305	1,666,100	1,645,929	1,664,019
2006	1,932,648	2,120,827	2,180,971	1,742,043	1,742,043	1,561,145	1,435,234	1,445,338
2007	1,953,016	2,265,514	1,732,523	1,838,481	1,933,372	1,587,337	1,616,302	1,580,403
2008	1,913,000	1,898,126	1,830,410	1,762,740	1,618,687	1,495,782	1,404,048	
2009	1,988,779	1,711,957	1,833,872	1,682,373	1,512,298	1,445,376		
2010	2,153,329	2,215,829	1,946,786	1,814,410	1,799,432			
2011	2,133,690	1,945,519	1,948,017	1,875,116				
2012	1,748,313	1,981,094	2,005,409					
2013	1,749,237	1,835,395						
2014	1,850,843							

Notes: Incurred Amounts and Severities are first dollar.
Numbers in *Italics* are from the Preliminary set.

Source: WCIRB unit statistical data

Average Paid ALAE^[1] Per Reported Indemnity Claim - Private Insurers
As of September 30, 2016

Accident	Evaluated as of (in months):									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
2000								4,492	4,662	4,858
2001							5,407	5,637	5,927	6,099
2002						5,569	5,859	6,201	6,400	6,578
2003					5,348	5,796	6,232	6,527	6,762	6,962
2004				4,134	4,911	5,461	5,864	6,157	6,387	6,578
2005			2,723	3,774	4,550	5,101	5,509	5,832	6,101	6,332
2006		1,480	2,831	3,909	4,703	5,314	5,774	6,099	6,407	6,635
2007	378	1,615	3,025	4,176	5,057	5,728	6,261	6,684	6,998	7,226
2008	415	1,734	3,272	4,606	5,604	6,361	6,948	7,391	7,708	
2009	464	1,944	3,727	5,196	6,301	7,156	7,803	8,249		
2010	510	2,101	3,929	5,362	6,484	7,322	7,873			
2011	509	2,137	3,875	5,317	6,410	7,150				
2012	522	2,128	3,955	5,413	6,448					
2013	526	2,274	4,118	5,514						
2014	593	2,454	4,327							
2015	653	2,595								
2016	670									

Accident	Annual Change									
Year	<u>9</u>	<u>21</u>	<u>33</u>	<u>45</u>	<u>57</u>	<u>69</u>	<u>81</u>	<u>93</u>	<u>105</u>	<u>117</u>
2001								25.5%	27.1%	25.5%
2002							8.3%	10.0%	8.0%	7.9%
2003						4.1%	6.4%	5.3%	5.6%	5.8%
2004					-8.2%	-5.8%	-5.9%	-5.7%	-5.5%	-5.5%
2005				-8.7%	-7.4%	-6.6%	-6.0%	-5.3%	-4.5%	-3.7%
2006			4.0%	3.6%	3.4%	4.2%	4.8%	4.6%	5.0%	4.8%
2007		9.1%	6.8%	6.8%	7.5%	7.8%	8.4%	9.6%	9.2%	8.9%
2008	9.7%	7.3%	8.2%	10.3%	10.8%	11.1%	11.0%	10.6%	10.1%	
2009	11.9%	12.1%	13.9%	12.8%	12.4%	12.5%	12.3%	11.6%		
2010	10.0%	8.1%	5.4%	3.2%	2.9%	2.3%	0.9%			
2011	-0.3%	1.7%	-1.4%	-0.8%	-1.1%	-2.4%				
2012	2.6%	-0.4%	2.1%	1.8%	0.6%					
2013	0.8%	6.8%	4.1%	1.9%						
2014	12.7%	7.9%	5.1%							
2015	10.1%	5.7%								
2016	2.5%									

Annual Trend^[2]

All-Year	6.0%	6.0%	5.4%	4.7%	3.9%	3.7%	3.8%	4.6%	4.1%	3.7%
R ²	0.946	0.956	0.927	0.854	0.685	0.663	0.702	0.716	0.633	0.531
5-Year	7.4%	5.4%	2.6%	1.3%	3.0%	6.0%	8.8%	9.3%	5.3%	0.8%
R ²	0.936	0.932	0.802	0.852	0.594	0.781	0.958	0.981	0.761	0.065

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

^[2] Trend is based on exponential distribution.

Source: WCIRB accident year experience calls.

Ratio of Paid ALAE to Loss^[1] - Private Insurers

Age	Accident Year																
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
3				5.5%	4.4%	3.5%	5.0%	3.2%	3.7%	5.9%	3.3%	3.2%	3.4%	3.9%	5.6%	3.7%	6.2%
6				6.8%	5.5%	4.8%	5.8%	4.8%	5.0%	5.6%	5.4%	5.1%	5.3%	5.7%	6.4%	6.6%	7.1%
9				7.3%	6.3%	6.2%	6.0%	6.0%	5.8%	6.2%	6.9%	6.8%	7.0%	7.2%	8.2%	8.8%	8.9%
12				7.8%	7.5%	6.8%	6.8%	7.0%	6.6%	7.2%	8.0%	8.3%	8.2%	8.6%	9.8%	10.5%	
15				8.5%	8.5%	7.7%	7.6%	7.7%	7.8%	8.4%	9.4%	9.4%	9.3%	10.3%	11.2%	12.0%	
18			9.4%	9.3%	9.7%	8.8%	8.6%	9.0%	9.1%	9.9%	10.7%	10.7%	10.7%	11.8%	12.7%	13.5%	
21			9.5%	9.8%	10.5%	9.8%	9.8%	9.9%	9.8%	10.9%	11.8%	11.8%	11.8%	12.9%	13.9%	14.4%	
24			9.9%	10.9%	11.3%	10.6%	10.6%	10.6%	10.4%	11.7%	12.6%	12.6%	12.5%	13.7%	14.6%		
27			10.4%	11.3%	11.9%	11.3%	11.2%	11.2%	11.0%	12.4%	13.2%	12.8%	13.2%	14.2%	15.1%		
30		10.5%	11.2%	11.8%	12.6%	11.9%	11.7%	11.7%	11.6%	12.9%	13.6%	13.3%	13.7%	14.6%	15.4%		
33		10.2%	10.9%	12.1%	13.1%	12.6%	12.1%	12.0%	12.0%	13.3%	14.0%	13.7%	14.1%	14.9%	15.7%		
36		10.4%	11.8%	12.3%	13.5%	13.0%	12.5%	12.3%	12.3%	13.7%	14.3%	13.9%	14.3%	15.2%			
39		10.5%	11.8%	12.6%	13.9%	13.3%	12.9%	12.7%	12.7%	14.0%	14.4%	14.2%	14.5%	15.4%			
42	10.2%	11.1%	12.0%	13.0%	14.2%	13.7%	13.2%	13.0%	13.1%	14.3%	14.6%	14.4%	14.8%	15.7%			
45	9.8%	10.6%	12.2%	13.2%	14.7%	13.9%	13.4%	13.2%	13.3%	14.5%	14.8%	14.6%	15.0%	15.8%			
48	10.2%	11.3%	12.4%	13.4%	14.9%	14.2%	13.6%	13.4%	13.5%	14.7%	15.0%	14.8%	15.2%				
51	9.8%	10.9%	12.5%	13.6%	15.0%	14.4%	13.8%	13.6%	13.7%	14.8%	15.1%	14.8%	15.4%				
54	10.5%	11.0%	12.7%	13.8%	15.2%	14.6%	13.9%	13.8%	13.8%	15.0%	15.3%	15.0%	15.5%				
57	9.8%	10.8%	12.9%	14.0%	15.3%	14.7%	14.0%	13.9%	14.0%	15.1%	15.4%	15.1%	15.7%				
60	10.6%	11.2%	13.0%	14.0%	15.4%	14.8%	14.2%	14.1%	14.1%	15.2%	15.5%	15.2%					
63	10.0%	11.4%	13.2%	14.1%	15.5%	14.9%	14.3%	14.2%	14.2%	15.3%	15.5%	15.3%					
66	10.0%	11.5%	13.3%	14.2%	15.6%	15.0%	14.4%	14.3%	14.3%	15.4%	15.6%	15.4%					
69	10.1%	11.6%	13.4%	14.3%	15.7%	15.1%	14.5%	14.4%	14.4%	15.5%	15.7%	15.5%					
72	10.2%	11.7%	13.4%	14.4%	15.7%	15.2%	14.6%	14.5%	14.5%	15.6%	15.8%						

^[1] Paid cost of medical cost containment programs are included with loss.

Source: WCIRB accident year experience calls.

Percentage of Represented and Unrepresented Permanent Disability Claims by Region
First and Second Report Level

First Survey Level

		Northern California					
		<u>AY2009</u>	<u>AY2010</u>	<u>AY2011</u>	<u>AY2012</u>	<u>AY2013</u>	<u>AY2014</u>
% Represented		61.4%	62.5%	63.3%	63.1%	70.3%	71.2%
% Unrepresented		<u>38.6%</u>	<u>37.5%</u>	<u>36.7%</u>	<u>36.9%</u>	<u>29.7%</u>	<u>28.8%</u>
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		Southern California					
		<u>AY2009</u>	<u>AY2010</u>	<u>AY2011</u>	<u>AY2012</u>	<u>AY2013</u>	<u>AY2014</u>
% Represented		77.3%	78.8%	76.8%	80.6%	82.7%	83.4%
% Unrepresented		<u>22.7%</u>	<u>21.2%</u>	<u>23.2%</u>	<u>19.4%</u>	<u>17.3%</u>	<u>16.6%</u>
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Second Survey Level

		Northern California					
		<u>AY2008</u>	<u>AY2009</u>	<u>AY2010</u>	<u>AY2011</u>	<u>AY2012</u>	<u>AY2013</u>
% Represented		61.6%	65.6%	64.1%	65.5%	68.3%	72.7%
% Unrepresented		<u>38.4%</u>	<u>34.4%</u>	<u>35.9%</u>	<u>34.5%</u>	<u>31.7%</u>	<u>27.3%</u>
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		Southern California					
		<u>AY2008</u>	<u>AY2009</u>	<u>AY2010</u>	<u>AY2011</u>	<u>AY2012</u>	<u>AY2013</u>
% Represented		79.1%	79.4%	79.4%	78.7%	81.7%	83.4%
% Unrepresented		<u>20.9%</u>	<u>20.6%</u>	<u>20.6%</u>	<u>21.3%</u>	<u>18.3%</u>	<u>16.6%</u>
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: Claims are assigned to Northern and Southern California regions based on the WCAB office code reported on the Permanent Disability Claim Survey forms. If the WCAB office code was not reported, the zip code of the claimant's residence was used.

Source: WCIRB Permanent Disability Claim Survey at first survey level for each accident year (AY)
AY 2014-1 and AY 2013-2 are preliminary data.

Changes in the Number and Cost of Medical-Legal Reports by Service Year

Service Year	Number of Med-Legal Reports per PD Claim ^[1] by Service Year							
	<u>Southern</u>	<u>Central</u>	<u>Northern</u>	<u>All</u>	<u>Southern</u>	<u>Central</u>	<u>Northern</u>	<u>All</u>
2013	0.45	0.50	0.60	0.49	---	---	---	---
2014	0.45	0.53	0.58	0.49	0.3%	5.4%	-4.7%	-0.4%
2015	0.38	0.47	0.52	0.42	-14.5%	-10.4%	-10.2%	-13.1%

Service Year	Med-Legal Payment per report by Service Year on PD Claims ^[2]							
	<u>Southern</u>	<u>Central</u>	<u>Northern</u>	<u>All</u>	<u>Southern</u>	<u>Central</u>	<u>Northern</u>	<u>All</u>
2013	\$1,709	\$1,043	\$1,321	\$1,502	---	---	---	---
2014	\$1,908	\$1,204	\$1,406	\$1,675	11.7%	15.4%	6.4%	11.5%
2015	\$1,877	\$1,273	\$1,388	\$1,664	-1.6%	5.7%	-1.3%	-0.7%

^[1] Includes claims with any medical transaction for the service year.

^[2] Includes services on PD claims on the 10 most recent accident years for the service year and where payment for the service was made within the same service year.

Source: WCIRB Unit Statistical Report (USR) and Medical Data Call (MDC).

Item AC17-03-02
12/31/2016 Experience – Review of Methodologies

A preliminary analysis of statewide experience through December 31, 2016 will be distributed at the meeting.

Updated March 16, 2017:

The preliminary analysis of statewide experience through December 31, 2016 is now appended to the end of this Agenda as Exhibits 1 through 12.

**California Workers' Compensation
Accident Year Experience as of December 31, 2016**

<u>Year</u>	<u>Earned Premium</u>	<u>Paid Indemnity</u>	<u>Indemnity Reserves</u>	<u>Paid Medical**</u>	<u>Medical Reserves</u>	<u>IBNR*</u>	<u>Total Incurred**</u>	<u>Loss Ratio*</u>
1985	2,872,481,605	1,277,809,225	4,557,061	983,225,335	23,743,953	18,371,853	2,307,707,427	0.803
1986	3,506,609,097	1,381,137,204	5,953,194	1,131,217,772	34,274,253	60,395,575	2,612,977,998	0.745
1987	4,374,085,383	1,503,431,342	7,304,927	1,323,769,101	47,145,774	31,932,936	2,913,584,080	0.666
1988	5,173,049,472	1,700,183,614	8,197,837	1,527,230,702	48,798,066	44,518,303	3,328,928,522	0.644
1989	5,675,013,098	1,935,864,230	10,219,633	1,781,133,588	67,399,594	47,183,183	3,841,800,228	0.677
1990	5,704,037,602	2,256,032,203	9,242,856	2,028,207,075	65,817,081	67,105,509	4,426,404,724	0.776
1991	5,871,950,130	2,474,254,818	18,713,482	2,181,233,323	77,398,652	70,076,857	4,821,677,132	0.821
1992	5,692,594,158	1,973,661,999	16,435,847	1,739,718,845	76,322,830	61,642,195	3,867,781,716	0.679
1993	5,941,977,926	1,690,527,774	16,601,679	1,488,339,162	96,657,167	54,119,004	3,346,244,786	0.563
1994	5,034,917,099	1,621,733,235	24,787,911	1,445,025,216	110,918,422	58,259,006	3,260,723,790	0.648
1995	3,789,870,146	1,755,088,052	35,176,514	1,580,225,092	152,530,375	56,619,849	3,579,639,882	0.945
1996	3,748,266,525	1,940,972,288	41,053,584	1,678,771,408	144,047,226	79,578,603	3,884,423,109	1.036
1997	3,928,295,572	2,302,114,803	53,836,507	1,974,351,110	173,854,437	128,753,686	4,632,910,543	1.179
1998	4,333,560,338	2,751,672,300	65,831,834	2,577,508,497	283,949,378	214,608,670	5,893,570,679	1.360
1999	4,551,546,853	3,031,545,506	69,063,680	2,957,718,107	265,934,289	307,975,051	6,632,236,633	1.457
2000	5,923,031,823	3,391,222,929	91,142,753	3,478,347,165	316,539,789	458,468,364	7,735,721,000	1.306
2001	10,111,219,078	4,765,223,427	148,990,462	5,195,195,589	534,161,649	693,871,112	11,337,442,239	1.121
2002	13,429,699,563	4,697,460,263	135,034,475	5,318,978,833	473,668,471	999,945,956	11,625,087,998	0.866
2003	19,473,079,692	4,448,589,486	203,071,541	4,875,899,499	492,526,884	1,379,015,970	11,399,103,380	0.585
2004	23,094,828,798	3,126,377,226	177,305,238	3,892,710,673	452,230,434	1,459,244,129	9,107,867,700	0.394
2005	21,208,746,218	2,428,961,019	151,989,301	3,454,260,903	435,363,755	1,192,418,429	7,662,993,407	0.361
2006	16,833,830,600	2,471,502,840	177,385,149	3,500,029,477	443,356,130	862,640,870	7,454,914,466	0.443
2007	13,122,036,080	2,602,086,325	207,470,338	3,759,352,392	507,796,020	911,830,094	7,988,535,169	0.609
2008	10,761,713,691	2,652,180,285	230,331,871	3,768,846,556	544,168,956	746,486,896	7,942,014,564	0.738
2009	8,904,048,278	2,489,861,512	239,717,190	3,540,011,745	545,209,909	757,234,228	7,572,034,584	0.850
2010	9,528,998,979	2,507,411,296	261,527,645	3,609,512,460	555,424,478	904,658,537	7,838,534,416	0.823
2011	10,291,847,081	2,392,237,221	323,755,552	3,168,823,475	665,117,909	1,136,561,849	7,686,496,006	0.747
2012	11,908,566,825	2,315,425,236	398,716,457	2,937,734,729	729,931,792	2,177,136,035	8,558,944,249	0.719
2013	14,331,411,625	2,166,955,202	494,511,569	2,588,513,030	860,191,422	2,763,844,013	8,874,015,236	0.619
2014	16,080,190,302	1,843,923,537	699,312,277	2,121,536,386	1,037,139,666	4,022,446,576	9,724,358,442	0.605
2015	17,036,595,435	1,214,743,368	929,345,590	1,516,273,221	1,335,924,534	5,323,377,559	10,319,664,272	0.606
2016*	17,918,628,690	391,070,347	731,406,268	637,696,458	1,315,533,856	7,211,028,817	10,286,735,746	0.574

* 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.

Incurred Indemnity Loss Development Factors

Accident Year	Age-to-Age (in months)															
	<u>24/12</u>	<u>36/24</u>	<u>48/36</u>	<u>60/48</u>	<u>72/60</u>	<u>84/72</u>	<u>96/84</u>	<u>108/96</u>	<u>120/108</u>	<u>132/120</u>	<u>144/132</u>	<u>156/144</u>	<u>168/156</u>	<u>180/168</u>	<u>192/180</u>	<u>204/192</u>
1991																1.000
1992															1.001	0.999
1993														1.001	0.998	0.999
1994													1.002	0.997	1.000	1.000
1995												1.003	1.000	1.002	1.002	1.000
1996											1.004	1.000	1.000	1.000	1.001	1.002
1997										1.005	1.002	1.002	1.003	1.002	1.001	1.001
1998									1.004	1.004	1.002	1.003	1.004	1.001	1.002	1.001
1999								1.006	1.007	1.004	1.002	1.003	1.003	1.002	1.002	1.001
2000							1.011	1.008	1.004	1.004	1.005	1.003	1.001	1.004	1.002	1.000
2001						1.021	1.014	1.009	1.006	1.007	1.006	1.005	1.003	1.002	1.001	
2002					1.033	1.018	1.011	1.010	1.010	1.007	1.005	1.003	1.002	1.002		
2003				1.056	1.033	1.021	1.018	1.015	1.015	1.009	1.006	1.004	1.003			
2004			1.083	1.042	1.041	1.026	1.028	1.018	1.014	1.007	1.007	1.003				
2005		1.218	1.098	1.068	1.053	1.040	1.028	1.016	1.012	1.006	1.004					
2006	1.690	1.247	1.111	1.080	1.053	1.035	1.023	1.015	1.009	1.007						
2007	1.784	1.273	1.120	1.070	1.049	1.037	1.022	1.012	1.011							
2008	1.858	1.302	1.136	1.074	1.045	1.030	1.019	1.012								
2009	1.983	1.293	1.142	1.076	1.048	1.024	1.019									
2010	1.994	1.315	1.131	1.069	1.045	1.026										
2011	1.997	1.277	1.133	1.062	1.038											
2012	1.992	1.279	1.114	1.064												
2013	1.931	1.260	1.112													
2014	1.961	1.279														
2015	1.969															
Selected (a)	1.969	1.279	1.112	1.064	1.038	1.026	1.019	1.012	1.011	1.007	1.006	1.003	1.003	1.003	1.002	1.001
Cumulative	3.409	1.731	1.354	1.217	1.144	1.102	1.074	1.054	1.042	1.031	1.024	1.018	1.015	1.012	1.009	1.008

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

Incurred Indemnity Loss Development Factors (Continued)

Accident Year	Age-to-Age (in months)															
	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	ULT/384Inc (b)
1981										1.001	1.002	0.999	1.001			
1982									1.000	1.002	1.000	1.001	1.001			
1983								1.001	1.000	1.000	1.001	1.001	1.001	1.001	1.001	
1984							1.000	1.000	1.001	1.001	1.000	1.001	1.001	1.000	0.999	
1985						1.001	1.000	1.001	1.000	1.001	1.001	1.001	1.001	1.000	1.000	
1986					1.000	1.001	1.001	1.000	1.001	1.002	1.001	1.000	0.999	1.000		
1987				1.000	0.999	1.000	1.000	1.001	1.002	1.000	1.001	1.001	1.001			
1988			1.000	1.001	1.000	1.001	1.002	1.001	1.000	1.000	1.000	1.000				
1989		1.000	1.000	1.001	1.000	1.001	1.000	1.000	1.000	1.001	1.000					
1990	1.000	1.001	1.000	0.999	1.001	1.000	1.000	1.000	1.000	1.000						
1991	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000							
1992	0.998	1.001	1.001	1.000	1.001	1.001	1.000	1.000								
1993	0.999	1.001	1.001	1.001	1.001	1.000	1.000									
1994	1.001	1.001	1.002	1.000	1.001	1.001										
1995	1.003	1.001	0.998	1.001	1.000											
1996	1.003	1.000	1.000	1.000												
1997	1.000	1.000	1.000													
1998	1.003	1.001														
1999	1.001															
Selected (a)	1.001	1.000	0.999	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Cumulative	1.007	1.006	1.005	1.006	1.006	1.005	1.004	1.004	1.004	1.004	1.004	1.004	1.003	1.003	1.003	1.003

(b) The ULT/384Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 336-to-348 factors and extrapolated to 80 development years.

Incurred Medical Loss Development Factors

Accident Year	Age-to-Age (in months) (b)															
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192
1991																1.004
1992															1.010	1.011
1993														1.013	1.018	1.007
1994													1.008	1.009	1.021	1.011
1995												1.023	1.028	1.016	1.005	1.009
1996											1.014	1.024	1.018	1.013	1.014	1.005
1997										1.023	1.030	1.012	1.015	1.012	1.003	1.007
1998									1.038	1.023	1.020	1.017	1.004	1.014	1.008	1.012
1999								1.038	1.030	1.019	1.018	1.013	1.011	1.013	1.005	0.999
2000							1.044	1.028	1.017	1.024	1.018	1.018	1.012	1.006	0.999	0.995
2001						1.045	1.040	1.034	1.035	1.022	1.017	1.015	1.013	1.001	0.997	
2002					1.056	1.040	1.036	1.029	1.028	1.022	1.014	1.010	0.999	0.997		
2003				1.059	1.060	1.042	1.042	1.037	1.029	1.018	1.011	1.003	0.998			
2004			1.113	1.081	1.060	1.061	1.043	1.032	1.026	1.012	1.006	1.001				
2005		1.172	1.087	1.074	1.084	1.055	1.045	1.032	1.020	1.006	1.007					
2006	1.460	1.196	1.103	1.081	1.066	1.048	1.040	1.022	1.012	1.000						
2007	1.518	1.204	1.124	1.081	1.070	1.050	1.032	1.018	1.004							
2008	1.527	1.212	1.129	1.092	1.061	1.041	1.026	1.010								
2009	1.604	1.227	1.140	1.087	1.061	1.030	1.016									
2010	1.620	1.245	1.134	1.077	1.045	1.026										
2011	1.667	1.222	1.125	1.069	1.034											
2012	1.592	1.188	1.093	1.055												
2013	1.559	1.151	1.086													
2014	1.524	1.159														
2015	1.512															
Selected (a)	1.512	1.159	1.086	1.055	1.034	1.026	1.016	1.010	1.012	1.006	1.008	1.005	1.003	1.001	1.000	1.002
Cumulative	2.334	1.544	1.332	1.226	1.162	1.124	1.096	1.079	1.068	1.055	1.049	1.041	1.036	1.032	1.031	1.031

- (a) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors.
(b) Incurred medical loss development factors include the paid cost of medical cost containment programs for accident years 2011 and prior.

Incurred Medical Loss Development Factors (Continued)

Accident Year	Age-to-Age (in months)															ULT/384Inc (c)
	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	
1981										1.001	1.003	1.002	1.001			
1982									1.014	1.006	1.004	1.003	1.009			
1983								1.001	1.006	1.004	1.002	1.006	1.003	1.004	1.003	
1984							1.002	1.003	1.003	1.002	1.003	1.001	1.003	1.001	0.997	
1985						1.000	1.001	1.003	1.003	1.003	1.005	1.002	1.003	0.998	0.999	
1986					1.005	1.003	1.006	1.005	1.006	1.004	1.005	1.000	1.002	0.998		
1987				1.000	1.003	1.011	0.999	1.007	1.003	1.004	1.005	1.001	0.997			
1988			1.002	1.006	1.005	1.005	1.002	1.005	1.003	1.003	1.002	0.998				
1989		1.007	1.006	1.005	1.005	1.008	1.006	1.000	1.003	0.999	0.999					
1990	1.003	1.007	1.007	1.005	1.003	1.003	1.003	0.997	1.002	1.000						
1991	1.008	1.005	1.006	1.002	1.003	1.002	1.003	1.001	1.000							
1992	1.005	1.004	1.002	1.005	1.003	1.005	1.000	0.999								
1993	1.007	1.011	1.014	1.004	0.999	1.000	0.996									
1994	1.011	1.004	1.007	1.006	1.001	0.996										
1995	1.015	0.996	1.006	0.999	1.006											
1996	1.008	1.005	1.001	0.998												
1997	1.001	0.994	0.998													
1998	1.001	1.001														
1999	0.999															
Selected (a)	1.000	1.000	1.002	1.001	1.002	1.000	1.000	0.999	1.002	1.001	1.002	1.000	1.001	0.999	1.000	
Cumulative	1.029	1.028	1.028	1.026	1.025	1.023	1.023	1.023	1.024	1.023	1.022	1.020	1.020	1.020	1.021	1.021

(c) The ULT/384Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 336-to-348 factors and extrapolated to 80 development years.

Paid Indemnity Loss Development Factors

Accident Year	Age-to-Age (in months)															
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192
1991																1.003
1992															1.003	1.003
1993														1.004	1.004	1.003
1994													1.007	1.006	1.003	1.003
1995												1.008	1.007	1.005	1.005	1.003
1996											1.012	1.009	1.006	1.006	1.004	1.004
1997										1.016	1.012	1.008	1.007	1.006	1.006	1.005
1998									1.021	1.015	1.012	1.009	1.009	1.007	1.006	1.006
1999								1.025	1.018	1.015	1.011	1.009	1.008	1.007	1.006	1.004
2000							1.035	1.025	1.016	1.013	1.010	1.009	1.008	1.007	1.005	1.004
2001						1.051	1.034	1.024	1.017	1.014	1.012	1.011	1.008	1.007	1.006	
2002					1.075	1.046	1.031	1.020	1.018	1.015	1.014	1.008	1.008	1.006		
2003				1.128	1.072	1.043	1.030	1.026	1.023	1.021	1.015	1.012	1.009			
2004			1.236	1.116	1.073	1.049	1.041	1.035	1.030	1.020	1.015	1.011				
2005		1.512	1.235	1.121	1.079	1.060	1.047	1.042	1.028	1.020	1.015					
2006	2.866	1.539	1.229	1.135	1.090	1.068	1.050	1.035	1.026	1.018						
2007	2.905	1.547	1.246	1.140	1.092	1.066	1.046	1.033	1.027							
2008	2.927	1.577	1.271	1.150	1.092	1.060	1.041	1.028								
2009	3.069	1.616	1.280	1.156	1.092	1.061	1.044									
2010	3.157	1.628	1.281	1.147	1.091	1.060										
2011	3.208	1.613	1.266	1.145	1.087											
2012	3.137	1.597	1.264	1.137												
2013	3.169	1.608	1.260													
2014	3.232	1.633														
2015	3.271															
Selected (a)	3.271	1.633	1.260	1.137	1.087	1.060	1.044	1.028	1.027	1.019	1.015	1.010	1.008	1.007	1.006	1.005
Cumulative Unadjusted for Impact of SB 863	10.768	3.292	2.016	1.600	1.407	1.294	1.221	1.170	1.138	1.108	1.087	1.071	1.060	1.051	1.044	1.038
Cumulative Adjusted for Impact of SB 863 (b)	11.254	3.440	2.107	1.605	1.400	1.288	---	---	---	---	---	---	---	---	---	---

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

(b) The 36-to-ultimate factor for accident year 2014, the 48-to-ultimate factor for accident year 2013, the 60-to-ultimate factor for accident year 2012, and the 72-to-ultimate factor for accident year 2011 have been adjusted by 4.5%, 0.3%, -0.5%, and -0.5% respectively, for the impacts of SB 863 on indemnity loss on indemnity loss development. (See *Impact of Senate Bill No. 863 on Loss Development Patterns*, WCIRB, August 13, 2013.)

Paid Indemnity Loss Development Factors (Continued)

Accident Year	Age-to-Age (in months)																
	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	384Inc/384Pd (c)	ULT/384Inc (d)
1981										1.002	1.003	1.000	1.001			1.006	
1982									1.002	1.003	1.000	1.001	1.002			1.005	
1983								1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.005	
1984							1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.006	
1985						1.001	1.001	1.001	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.003	
1986					1.001	1.001	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	1.001	1.001	1.002	1.001	1.001	1.001	1.001				
1988			1.002	1.001	1.001	1.001	1.002	1.001	1.001	1.001	1.001	1.001					
1989		1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001						
1990	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000						
1991	1.002	1.002	1.001	1.001	1.002	1.001	1.001	1.001	1.001								
1992	1.002	1.002	1.002	1.002	1.002	1.001	1.001	1.001									
1993	1.002	1.003	1.003	1.002	1.002	1.001	1.001										
1994	1.004	1.003	1.003	1.003	1.002	1.002											
1995	1.005	1.005	1.003	1.003	1.002												
1996	1.005	1.004	1.003	1.003													
1997	1.004	1.003	1.003														
1998	1.006	1.004															
1999	1.004																
Selected (a)	1.005	1.004	1.003	1.003	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.004	
Cumulative	1.034	1.029	1.025	1.022	1.019	1.017	1.015	1.014	1.013	1.012	1.012	1.011	1.010	1.009	1.008		1.003

(c) Three-year averages of the 384Inc/384Pd factors are selected.

(d) The ULT/384Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 336-to-348 factors and extrapolated to 80 development years.

Paid Medical Loss Development Factors

Unadjusted (a)	Age-to-Age (in months)															
Accident Year	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192
1991																1.007
1992															1.010	1.017
1993														1.014	1.013	1.011
1994													1.014	1.017	1.013	1.012
1995												1.021	1.019	1.018	1.018	1.015
1996										1.027	1.023	1.023	1.020	1.018	1.016	1.013
1997										1.028	1.026	1.022	1.019	1.016	1.014	1.014
1998									1.033	1.032	1.030	1.021	1.019	1.019	1.015	1.017
1999								1.035	1.032	1.032	1.025	1.025	1.016	1.016	1.018	1.015
2000							1.042	1.038	1.031	1.027	1.023	1.020	1.020	1.017	1.013	1.010
2001						1.057	1.045	1.038	1.034	1.030	1.022	1.022	1.022	1.017	1.012	
2002					1.072	1.054	1.046	1.034	1.032	1.024	1.023	1.018	1.016	1.012		
2003				1.112	1.074	1.057	1.048	1.041	1.030	1.030	1.026	1.019	1.017			
2004			1.189	1.123	1.092	1.070	1.055	1.040	1.036	1.034	1.024	1.018				
2005		1.345	1.209	1.138	1.095	1.073	1.054	1.049	1.038	1.031	1.021					
2006	2.340	1.399	1.220	1.140	1.099	1.068	1.056	1.042	1.034	1.025						
2007	2.416	1.413	1.230	1.142	1.097	1.075	1.057	1.041	1.031							
2008	2.325	1.421	1.241	1.148	1.103	1.072	1.051	1.035								
2009	2.408	1.447	1.251	1.160	1.104	1.067	1.046									
2010	2.479	1.468	1.265	1.152	1.096	1.067										
2011	2.580	1.470	1.248	1.146	1.095											
2012	2.561	1.468	1.249	1.143												
2013	2.492	1.466	1.238													
2014	2.521	1.460														
2015	2.531															
Adjusted (b)	Age-to-Age (in months)															
Accident Year	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192
1998																1.018
1999															1.019	1.016
2000														1.018	1.014	1.011
2001													1.024	1.018	1.013	
2002												1.019	1.018	1.013		
2003											1.027	1.020	1.018			
2004										1.036	1.026	1.019				
2005									1.041	1.033	1.023					
2006								1.045	1.036	1.026						
2007							1.060	1.044	1.033							
2008						1.077	1.054	1.037								
2009					1.110	1.071	1.049									
2010				1.160	1.102	1.069										
2011			1.260	1.153	1.098											
2012		1.485	1.257	1.145												
2013	2.519	1.474	1.239													
2014	2.534	1.458														
2015	2.519															
Selected (c)	2.519	1.458	1.239	1.145	1.098	1.069	1.049	1.037	1.037	1.032	1.025	1.019	1.020	1.016	1.015	1.015
Cumulative	9.290	3.688	2.529	2.041	1.783	1.624	1.519	1.448	1.396	1.347	1.306	1.273	1.249	1.225	1.205	1.187

- (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 following impacts: (i) reduction of historical outstanding medical losses paid prior to January 1, 2013 by the estimated 4.4% cost savings due to applicable SB 863 provisions; (ii) adjustment to historical outstanding medical losses paid prior to January 1, 2014 by an estimated 1.8% decrease in costs, losses paid prior to January 1, 2015 by an estimated 0.9% decrease in costs, and losses paid prior to January 1, 2016 by an estimated 0.8% increase in costs due to RBRVS.
- (c) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors.

Paid Medical Loss Development Factors (Continued)

Unadjusted (a)	Age-to-Age (in months)																
Accident Year	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	384Inc/384Pd (d)	ULT/384Inc (e)
1981										1.005	1.006	1.005	1.004			1.055	
1982									1.006	1.007	1.009	1.006	1.006			1.033	
1983								1.005	1.003	1.005	1.004	1.004	1.003	1.004	1.003	1.036	
1984							1.004	1.003	1.004	1.003	1.004	1.004	1.003	1.003	1.002	1.039	
1985						1.006	1.004	1.004	1.003	1.004	1.004	1.004	1.003	1.002	1.003	1.022	
1986					1.005	1.004	1.005	1.005	1.005	1.005	1.005	1.005	1.004	1.006		1.023	
1987				1.007	1.006	1.005	1.005	1.005	1.005	1.005	1.005	1.003	1.003				
1988			1.007	1.006	1.005	1.005	1.006	1.005	1.005	1.004	1.003	1.003					
1989		1.006	1.007	1.005	1.006	1.008	1.006	1.007	1.006	1.003	1.003						
1990	1.006	1.005	1.005	1.005	1.005	1.006	1.004	1.004	1.003	1.002							
1991	1.007	1.006	1.006	1.005	1.006	1.005	1.006	1.003	1.003								
1992	1.008	1.007	1.002	1.006	1.008	1.006	1.005	1.005									
1993	1.011	1.011	1.010	1.013	1.011	1.007	1.006										
1994	1.013	1.009	1.010	1.010	1.009	1.008											
1995	1.011	1.016	1.013	1.012	1.009												
1996	1.014	1.013	1.011	1.009													
1997	1.014		1.006														
1998	1.013	1.010															
1999	1.012																
Adjusted (b)	Age-to-Age (in months)																
Accident Year	216/204	228/216	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	384Inc/384Pd (d)	ULT/384Inc (e)
1981																1.055	
1982																1.033	
1983															1.004	1.036	
1984														1.003	1.003	1.039	
1985													1.003	1.002	1.003	1.022	
1986												1.006	1.005	1.006		1.023	
1987											1.005	1.004	1.003				
1988										1.005	1.003	1.003					
1989									1.006	1.004	1.003						
1990								1.004	1.003	1.002							
1991							1.007	1.004	1.003								
1992						1.007	1.005	1.005									
1993					1.011	1.008	1.007										
1994				1.011	1.009	1.009											
1995			1.013	1.013	1.009												
1996		1.014	1.012	1.009													
1997	1.014	1.012	1.007														
1998	1.014	1.010															
1999	1.013																
Selected (c)	1.014	1.012	1.011	1.011	1.010	1.008	1.006	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.003	1.035	
Cumulative	1.169	1.154	1.140	1.128	1.116	1.105	1.096	1.089	1.085	1.080	1.076	1.072	1.068	1.064	1.060		1.021

(d) Six-year averages of the 384Inc/384Pd factors are selected.

(e) The ULT/384Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 336-to-348 factors and extrapolated to 80 development years.

Selected Indemnity Development Factors - Paid to Age 228, Incurred from Age 228 to Ultimate

Accident Year	Age-to-Age (in months)																		228Inc/228Pd (c)
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192	216/204	228/216	
1991															1.003	1.003	1.002	1.002	1.015
1992															1.003	1.003	1.002	1.002	1.015
1993														1.004	1.004	1.003	1.002	1.003	1.017
1994													1.007	1.006	1.003	1.003	1.004	1.003	1.021
1995												1.008	1.007	1.005	1.005	1.003	1.005	1.005	1.029
1996											1.012	1.009	1.006	1.006	1.004	1.004	1.005	1.004	1.028
1997										1.016	1.012	1.008	1.007	1.006	1.006	1.005	1.004	1.003	1.026
1998									1.021	1.015	1.012	1.009	1.009	1.007	1.006	1.006	1.006	1.004	1.024
1999								1.025	1.018	1.015	1.011	1.009	1.008	1.007	1.006	1.004	1.004		
2000							1.035	1.025	1.016	1.013	1.010	1.009	1.008	1.007	1.005	1.004			
2001						1.051	1.034	1.024	1.017	1.014	1.012	1.011	1.008	1.007	1.006				
2002					1.075	1.046	1.031	1.020	1.018	1.015	1.014	1.008	1.008	1.006					
2003				1.128	1.072	1.043	1.030	1.026	1.023	1.021	1.015	1.012	1.009						
2004			1.236	1.116	1.073	1.049	1.041	1.035	1.030	1.020	1.015	1.011							
2005		1.512	1.235	1.121	1.079	1.060	1.047	1.042	1.028	1.020	1.015								
2006	2.866	1.539	1.229	1.135	1.090	1.068	1.050	1.035	1.026	1.018									
2007	2.905	1.547	1.246	1.140	1.092	1.066	1.046	1.033	1.027										
2008	2.927	1.577	1.271	1.150	1.092	1.060	1.041	1.028											
2009	3.069	1.616	1.280	1.156	1.092	1.061	1.044												
2010	3.157	1.628	1.281	1.147	1.091	1.060													
2011	3.208	1.613	1.266	1.145	1.087														
2012	3.137	1.597	1.264	1.137															
2013	3.169	1.608	1.260																
2014	3.232	1.633																	
2015	3.271																		
Selected (a)	3.264(d)	1.623(d)	1.250(d)	1.126(d)	1.077(d)	1.053(d)	1.044	1.028	1.027	1.019	1.015	1.010	1.008	1.007	1.006	1.005	1.005	1.004	1.026
Cumulative Unadjusted for Impact of SB 863	10.407	3.189	1.964	1.571	1.395	1.295	1.229	1.177	1.145	1.115	1.094	1.078	1.067	1.058	1.051	1.045	1.040	1.035	
Cumulative Adjusted for Impact of SB 863 (b)	10.877	3.332	2.053	1.576	1.388	1.288	---	---	---	---	---	---	---	---	---	---			

- (a) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors. Paid development factors are selected to age 228, where an incurred-to-paid ratio is chosen, and subsequently, incurred loss development factors are selected until ultimate.
- (b) The 36-to-ultimate factor for accident year 2014, the 48-to-ultimate factor for accident year 2013, the 60-to-ultimate factor for accident year 2012, and the 72-to-ultimate factor for accident year 2011 have been adjusted by 4.5%, 0.3%, -0.5%, and -0.5% respectively, for the impacts of SB 863 on indemnity loss development.
- (c) A three-year average of the 228Inc/228Pd factor is selected.
- (d) 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 228, Incurred from Age 228 to Ultimate (Continued)

Accident Year	<u>240/228</u>	<u>252/240</u>	<u>264/252</u>	<u>276/264</u>	<u>288/276</u>	<u>300/288</u>	<u>312/300</u>	<u>324/312</u>	<u>336/324</u>	<u>348/336</u>	<u>360/348</u>	<u>372/360</u>	<u>384/372</u>	<u>ULT/384Inc (e)</u>
1981								1.001	1.002	0.999	1.001			
1982							1.000	1.002	1.000	1.001	1.001			
1983						1.001	1.000	1.000	1.001	1.001	1.001	1.001	1.001	
1984					1.000	1.000	1.001	1.001	1.000	1.001	1.001	1.000	0.999	
1985				1.001	1.000	1.001	1.000	1.001	1.001	1.001	1.001	1.000	1.000	
1986			1.000	1.001	1.001	1.000	1.001	1.002	1.001	1.000	0.999	1.000		
1987		1.000	0.999	1.000	1.000	1.001	1.002	1.000	1.001	1.001	1.001			
1988	1.000	1.001	1.000	1.001	1.002	1.001	1.000	1.000	1.000	1.000				
1989	1.000	1.001	1.000	1.001	1.000	1.000	1.000	1.001	1.000					
1990	1.000	0.999	1.001	1.000	1.000	1.000	1.000	1.000						
1991	1.001	1.000	1.000	1.000	1.000	1.000	1.000							
1992	1.001	1.000	1.001	1.001	1.000	1.000								
1993	1.001	1.001	1.001	1.000	1.000									
1994	1.002	1.000	1.001	1.001										
1995	0.998	1.001	1.000											
1996	1.000	1.000												
1997	1.000													
Selected (a)	0.999	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Cumulative	1.005	1.006	1.006	1.005	1.004	1.004	1.004	1.004	1.004	1.004	1.003	1.003	1.003	1.003

(e) The ULT/384Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 336-to-348 factors 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 Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2007							122,545
2008						118,967	119,175
2009					111,919	112,310	112,533
2010				114,904	115,632	116,036	116,298
2011			114,429	115,981	116,873	117,197	
2012		117,954	122,075	123,807	124,615		
2013	101,098	125,506	129,640	131,177			
2014	105,114	130,640	134,849				
2015	109,053	135,847					
2016	110,382						

B. Development of Total Reported Indemnity Claim Counts

Accident Year	Age-to-Age Development (in months):						
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-Ultimate</u>
2008						1.002	
2009					1.003	1.002	
2010				1.006	1.003	1.002	
2011			1.014	1.008	1.003		
2012		1.035	1.014	1.007			
2013	1.241	1.033	1.012				
2014	1.243	1.032					
2015	1.246						
Latest Year	1.246	1.032	1.012	1.007	1.003	1.002	
Cumulative	1.322	1.062	1.028	1.016	1.010	1.007	1.005

Acc. Year	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Ult. Claim Counts	145,960	144,203	138,675	133,319	125,828	118,011	116,842

C. Closed Indemnity Claim Counts

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2007							108,790
2008						101,190	105,859
2009					88,537	94,982	99,640
2010				83,402	93,152	99,698	104,752
2011			71,143	85,306	95,366	101,990	
2012		56,882	77,521	93,005	103,472		
2013	27,328	60,916	83,878	100,752			
2014	28,351	65,124	89,465				
2015	29,937	69,499					
2016	31,906						

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)						
	12	24	36	48	60	72	84
2007							88.5%
2008						84.6%	88.5%
2009					78.3%	84.0%	88.1%
2010				71.4%	79.7%	85.3%	89.7%
2011			60.3%	72.3%	80.8%	86.4%	
2012		45.2%	61.6%	73.9%	82.2%		
2013	20.5%	45.7%	62.9%	75.6%			
2014	20.4%	47.0%	64.5%				
2015	20.8%	48.2%					
2016	21.9%						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							110,162
2008						103,412	107,275
2009					92,972	97,711	101,361
2010				88,300	96,082	100,980	104,752
2011			76,134	89,184	97,044	101,990	
2012		60,643	81,177	95,091	103,472		
2013	29,143	64,253	86,009	100,752			
2014	30,314	66,835	89,465				
2015	31,522	69,499					
2016	31,906						

F. Average Paid Indemnity per Closed Claim

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							15,124
2008						15,571	17,048
2009					14,272	16,352	18,082
2010				11,790	14,595	16,668	18,366
2011			8,575	12,144	14,923	16,894	
2012		4,975	9,062	12,579	15,139		
2013	2,098	5,326	9,526	12,952			
2014	2,165	5,650	10,171				
2015	2,355	6,198					
2016	2,502						

- (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)						
	12	24	36	48	60	72	84
2007							15,613
2008						16,257	17,575
2009					15,673	17,345	18,686
2010				13,125	15,489	17,083	18,366
2011			9,694	13,148	15,400	16,894	
2012		5,549	9,792	13,053	15,139		
2013	2,206	5,796	9,903	12,952			
2014	2,278	5,888	10,171				
2015	2,448	6,198					
2016	2,502						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							1,719,960
2008						1,681,218	1,885,372
2009					1,457,138	1,694,741	1,893,998
2010				1,158,936	1,488,250	1,725,058	1,923,902
2011			738,037	1,172,601	1,494,453	1,722,997	
2012		336,539	794,843	1,241,189	1,566,467		
2013	64,297	372,422	851,741	1,304,980			
2014	69,066	393,554	909,934				
2015	77,173	430,736					
2016	79,836						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							591,582
2008						704,131	613,142
2009					777,265	676,954	565,334
2010				842,271	734,462	625,123	499,518
2011			834,679	794,600	674,381	556,875	
2012		683,947	840,335	780,559	651,105		
2013	267,710	703,145	853,609	777,069			
2014	278,173	729,679	883,197				
2015	293,600	760,502					
2016	304,491						

- (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)						
	12	24	36	48	60	72	84
2007							43,008
2008						39,609	46,046
2009					33,242	39,067	43,848
2010				26,737	32,672	38,262	44,639
2011			19,283	25,904	31,356	37,628	
2012		11,199	18,861	25,341	31,676		
2013	3,629	10,886	18,653	24,871			
2014	3,624	11,137	16,706				
2015	3,711	7,422					
2016	3,880						

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)						
	12	24	36	48	60	72	84
2007							-59,008
2008						-88,011	-65,200
2009					-147,428	-106,614	-75,463
2010				-130,958	-95,728	-49,052	
2011			-96,241	-100,455	-52,616		
2012		-42,120	-68,956	-52,862			
2013	-6,587	-36,328	-39,750				
2014	-7,114	-19,056					
2015	-5,882						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							532,574
2008						616,119	547,941
2009					629,837	570,340	489,872
2010				711,313	638,734	576,071	499,518
2011			738,438	694,145	621,765	556,875	
2012		641,828	771,379	727,697	651,105		
2013	261,123	666,818	813,859	777,069			
2014	271,060	710,623	883,197				
2015	287,718	760,502					
2016	304,491						

- (e) Each amount is equal to the product of [the average monthly indemnity payment per open indemnity claim] and [the number of months for the current evaluation]. For evaluations indicating claim settlement rate decreases, the average monthly indemnity payment per open indemnity claim at the prior evaluation is used. For evaluations indicating claim settlement rate increases, the average monthly indemnity payment per open indemnity claim at the same evaluation is used.
- (f) Each amount is equal to [the difference between unadjusted and adjusted closed indemnity claim counts (Items C and E)] multiplied by the corresponding [average paid indemnity per open claim for indemnity claims in transition (Item J)].
- (g) Each amount is the sum of [paid indemnity on open claims (Item I)] and the corresponding [incremental changes in paid indemnity on open claims resulting from the impact of changes in claim settlement rates (Item K)].

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

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

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

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2007							2,252,534
2008						2,297,338	2,433,313
2009					2,086,975	2,265,081	2,383,869
2010				1,870,249	2,126,983	2,301,130	2,423,420
2011			1,476,475	1,866,746	2,116,218	2,279,872	
2012		978,366	1,566,221	1,968,886	2,217,572		
2013	325,420	1,039,240	1,665,600	2,082,049			
2014	340,126	1,104,176	1,793,130				
2015	364,892	1,191,238					
2016	384,327						

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2007						
2008						1.059
2009					1.085	1.052
2010				1.137	1.082	1.053
2011			1.264	1.134	1.077	
2012		1.601	1.257	1.126		
2013	3.194	1.603	1.250			
2014	3.246	1.624				
2015	3.265					
Latest Year	3.265	1.624	1.250	1.126	1.077	1.053
3-Year Average	3.235	1.609	1.257	1.132	1.082	1.055

O. Paid Indemnity Loss Development Factors (i)

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2008						1.061
2009					1.093	1.061
2010				1.147	1.092	1.060
2011			1.267	1.146	1.087	
2012		1.596	1.264	1.137		
2013	3.161	1.608	1.260			
2014	3.233	1.634				
2015	3.272					

- (h) Each amount is the sum of the adjusted paid indemnity on closed claims (Item H) and the adjusted paid indemnity on open claims (Item L).
- (i) Development factors are based on paid indemnity losses from the same insurer mix as that used in the adjustment for changes in claim settlement rates and applied in the calculation of the development factors in Item N.

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

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

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2008						-0.13%
2009					-0.68%	-0.84%
2010				-0.85%	-0.93%	-0.62%
2011			-0.21%	-1.07%	-0.88%	
2012		0.33%	-0.57%	-0.93%		
2013	1.01%	-0.34%	-0.78%			
2014	0.42%	-0.59%				
2015	-0.22%					

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2008						1.059
2009					1.085	1.052
2010				1.137	1.081	1.053
2011			1.263	1.133	1.077	
2012		1.602	1.257	1.126		
2013	3.201	1.602	1.250			
2014	3.246	1.623				
2015	3.264					
Latest Year	3.264	1.623	1.250	1.126	1.077	1.053
3-Year Average	3.237	1.609	1.257	1.132	1.081	1.055

(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 228, Incurred from Age 228 to Ultimate

Unadjusted (a) Accident Year	Age-to-Age (in months)																	228Inc/228Pd (d)
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192	216/204	
1991																1.007	1.007	1.055
1992															1.010	1.017	1.008	1.063
1993														1.014	1.013	1.011	1.011	1.101
1994													1.014	1.017	1.013	1.012	1.013	1.110
1995												1.021	1.019	1.018	1.018	1.015	1.011	1.121
1996											1.027	1.023	1.020	1.018	1.016	1.013	1.014	1.108
1997										1.028	1.026	1.022	1.019	1.016	1.014	1.014	1.014	1.098
1998									1.033	1.032	1.030	1.021	1.019	1.019	1.015	1.017	1.013	1.108
1999								1.035	1.032	1.032	1.025	1.025	1.016	1.018	1.015	1.015	1.012	
2000							1.042	1.038	1.031	1.027	1.023	1.020	1.020	1.017	1.013	1.010		
2001						1.057	1.045	1.038	1.034	1.030	1.022	1.022	1.022	1.017	1.012			
2002					1.072	1.054	1.046	1.034	1.032	1.024	1.023	1.018	1.016	1.012				
2003				1.112	1.074	1.057	1.048	1.041	1.030	1.030	1.026	1.019	1.017					
2004			1.189	1.123	1.092	1.070	1.055	1.040	1.036	1.034	1.024	1.018						
2005		1.345	1.209	1.138	1.095	1.073	1.054	1.049	1.038	1.031	1.021							
2006	2.340	1.399	1.220	1.140	1.099	1.068	1.056	1.042	1.034	1.025								
2007	2.416	1.413	1.230	1.142	1.097	1.075	1.057	1.041	1.031									
2008	2.325	1.421	1.241	1.148	1.103	1.072	1.051	1.035										
2009	2.408	1.447	1.251	1.160	1.104	1.067	1.046											
2010	2.479	1.468	1.265	1.152	1.096	1.067												
2011	2.580	1.470	1.248	1.146	1.095													
2012	2.561	1.468	1.249	1.143														
2013	2.492	1.466	1.238															
2014	2.521	1.460																
2015	2.531																	
Adjusted (b) Accident Year	Age-to-Age (in months)																	228Inc/228Pd (d)
	24/12	36/24	48/36	60/48	72/60	84/72	96/84	108/96	120/108	132/120	144/132	156/144	168/156	180/168	192/180	204/192	216/204	
1996																	1.014	1.108
1997																	1.014	1.098
1998																1.018	1.014	1.108
1999															1.019	1.016	1.013	
2000														1.018	1.014	1.011		
2001													1.024	1.018	1.013			
2002												1.019	1.018	1.013				
2003										1.027	1.020	1.018						
2004										1.036	1.026	1.019						
2005									1.041	1.033	1.023							
2006								1.045	1.036	1.026								
2007							1.060	1.044	1.033									
2008						1.077	1.054	1.037										
2009					1.110	1.071	1.049											
2010				1.160	1.102	1.069												
2011			1.260	1.153	1.098													
2012		1.485	1.257	1.145														
2013	2.519	1.474	1.239															
2014	2.534	1.458																
2015	2.519																	
Selected (c)	2.520(e)	1.454(e)	1.233(e)	1.136(e)	1.088(e)	1.063(e)	1.049	1.037	1.037	1.032	1.025	1.019	1.020	1.016	1.015	1.015	1.014	1.105
Cumulative	8.979	3.563	2.451	1.989	1.751	1.609	1.514	1.443	1.391	1.342	1.301	1.269	1.245	1.220	1.201	1.183	1.165	1.149

- (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 following impacts: (i) reduction of historical outstanding medical losses paid prior to January 1, 2013 by the estimated 4.4% cost savings due to applicable SB 863 provisions; (ii) adjustment to historical outstanding medical losses paid prior to January 1, 2014 by an estimated 1.8% decrease in costs, losses paid prior to January 1, 2015 by an estimated 0.9% decrease in costs, and losses paid prior to January 1, 2016 by an estimated 0.8% increase in costs due to RBRVS.
- (c) Selections are latest year for the 12-to-24 month through 96-to-108 month factors and three-year average for the subsequent age-to-age factors. Paid development factors are selected to age 228, where an incurred-to-paid ratio is chosen, and subsequently, incurred loss development factors are selected until ultimate.
- (d) A three-year average of the 228Inc/228Pd factor is selected.
- (e) Based on calculations shown on Exhibits 2.6.3 to 2.6.8. Each of these selections is calculated as the latest year paid medical age-to-age factor multiplied by an adjustment for changes in claim settlement rates.

Selected Medical Development Factors - Paid to Age 228, Incurred from Age 228 to Ultimate (Continued)

Accident Year	Age-to-Age (in months)													ULT/384Inc (f)
	240/228	252/240	264/252	276/264	288/276	300/288	312/300	324/312	336/324	348/336	360/348	372/360	384/372	
1983													1.003	
1984												1.001	0.997	
1985											1.003	0.998	0.999	
1986										1.000	1.002	0.998		
1987									1.005	1.001	0.997			
1988								1.003	1.002	0.998				
1989							1.003	0.999	0.999					
1990						0.997	1.002	1.000						
1991					1.003	1.001	1.000							
1992				1.005	1.000	0.999								
1993			0.999	1.000	0.996									
1994		1.006	1.001	0.996										
1995	1.006	0.999	1.006											
1996	1.001	0.998												
1997	0.998													
Selected (c)	1.002	1.001	1.002	1.000	1.000	0.999	1.002	1.001	1.002	1.000	1.001	0.999	1.000	
Cumulative	1.028	1.026	1.025	1.023	1.023	1.023	1.024	1.023	1.022	1.020	1.020	1.020	1.021	1.021

(f) The ULT/384Inc tail factor was calculated based on an inverse power curve fit to a six-year average of the 108-to-120 through 336-to-348 factors and extrapolated to 80 development years.

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

A. Total Reported Indemnity Claim Counts

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2007							119,501
2008						116,100	116,308
2009					109,306	109,681	109,907
2010				111,890	112,611	113,012	113,266
2011			112,720	114,239	115,120	115,436	
2012		116,972	121,059	122,762	123,562		
2013	100,412	124,635	128,698	130,222			
2014	105,094	130,618	134,826				
2015	109,053	135,847					
2016	110,382						

B. Development of Total Reported Indemnity Claim Counts

Accident Year	Age-to-Age Development (in months):						
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-Ultimate</u>
2008						1.002	
2009					1.003	1.002	
2010				1.006	1.004	1.002	
2011			1.013	1.008	1.003		
2012		1.035	1.014	1.007			
2013	1.241	1.033	1.012				
2014	1.243	1.032					
2015	1.246						
Latest Year	1.246	1.032	1.012	1.007	1.003	1.002	
Cumulative	1.322	1.061	1.028	1.016	1.010	1.007	1.005

Acc. Year	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Ult. Claim Counts	145,953	144,195	138,645	132,343	124,762	116,238	113,797

C. Closed Indemnity Claim Counts

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2007							105,950
2008						98,600	103,212
2009					86,302	92,636	97,230
2010				80,993	90,539	96,968	101,928
2011			69,997	83,956	93,885	100,406	
2012		56,396	76,866	92,219	102,604		
2013	27,118	60,491	83,270	100,017			
2014	28,345	65,106	89,447				
2015	29,937	69,499					
2016	31,906						

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

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

D. Ultimate Indemnity Claim Settlement Ratio (a)

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							88.4%
2008						84.4%	88.4%
2009					78.2%	83.9%	88.1%
2010				71.2%	79.6%	85.2%	89.6%
2011			60.2%	72.2%	80.8%	86.4%	
2012		45.2%	61.6%	73.9%	82.2%		
2013	20.5%	45.7%	62.9%	75.6%			
2014	20.4%	47.0%	64.5%				
2015	20.8%	48.2%					
2016	21.9%						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							107,313
2008						100,868	104,593
2009					90,811	95,383	98,905
2010				86,001	93,587	98,298	101,928
2011			74,991	87,845	95,594	100,406	
2012		60,133	80,490	94,287	102,604		
2013	28,931	63,787	85,382	100,017			
2014	30,309	66,824	89,447				
2015	31,522	69,499					
2016	31,906						

F. Average Paid Medical per Closed Indemnity Claim

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							18,061
2008						18,564	20,789
2009					17,162	20,063	22,613
2010				14,258	17,931	20,792	23,419
2011			9,668	13,887	17,329	20,302	
2012		5,594	9,988	13,892	17,141		
2013	2,389	5,739	10,032	13,626			
2014	2,390	5,840	10,072				
2015	2,525	6,303					
2016	2,750						

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

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

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

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							18,870
2008						19,628	21,585
2009					19,181	21,551	23,519
2010				16,080	19,235	21,466	23,419
2011			11,005	15,146	18,064	20,302	
2012		6,219	10,797	14,486	17,141		
2013	2,506	6,222	10,427	13,626			
2014	2,507	6,069	10,072				
2015	2,619	6,303					
2016	2,750						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							2,025,032
2008						1,979,801	2,257,666
2009					1,741,807	2,055,634	2,326,193
2010				1,382,915	1,800,102	2,110,078	2,387,049
2011			825,306	1,330,471	1,726,779	2,038,490	
2012		373,945	869,058	1,365,868	1,758,707		
2013	72,490	396,908	890,257	1,362,816			
2014	75,973	405,530	900,880				
2015	82,570	438,028					
2016	87,737						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							939,652
2008						1,020,428	927,683
2009					1,086,525	998,140	865,582
2010				1,120,315	1,029,384	911,038	747,490
2011			1,029,441	1,021,603	914,782	769,877	
2012		823,927	987,251	956,055	818,219		
2013	349,856	818,006	955,115	893,273			
2014	344,813	813,346	931,452				
2015	357,354	817,005					
2016	372,384						

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

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

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

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							69,342
2008						58,310	70,837
2009					47,232	58,559	68,280
2010				36,260	46,638	56,784	66,248
2011			24,096	33,735	43,079	51,695	
2012		13,602	22,340	31,302	39,127		
2013	4,773	12,753	21,025	28,033			
2014	4,493	12,415	18,623				
2015	4,517	9,034					
2016	4,745						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							-94,513
2008						-132,247	-97,826
2009					-212,969	-160,862	-114,369
2010				-181,588	-142,151	-75,522	
2011			-120,334	-131,196	-73,622		
2012		-50,829	-80,959	-64,732			
2013	-8,654	-42,033	-44,404				
2014	-8,824	-21,329					
2015	-7,159						

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

Accident Year	Evaluated as of (in months)						
	12	24	36	48	60	72	84
2007							845,139
2008						888,181	829,857
2009					873,556	837,278	751,213
2010				938,727	887,233	835,515	747,490
2011			909,107	890,406	841,160	769,877	
2012		773,098	906,293	891,323	818,219		
2013	341,202	775,974	910,710	893,273			
2014	335,990	792,017	931,452				
2015	350,195	817,005					
2016	372,384						

- (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)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2007							238,140
2008						235,954	237,893
2009					216,036	218,904	221,302
2010				212,273	215,817	218,063	221,381
2011			199,748	204,834	208,755	212,258	
2012		198,628	208,293	213,791	219,535		
2013	134,135	200,375	210,642	218,495			
2014	150,154	222,517	234,083				
2015	155,186	234,548					
2016	166,681						

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

Accident Year	Evaluated as of (in months)						
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>
2007							3,108,311
2008						3,103,936	3,325,416
2009					2,831,399	3,111,817	3,298,709
2010				2,568,920	2,941,931	3,205,801	3,399,812
2011			2,117,604	2,639,753	3,013,622	3,270,617	
2012		1,345,670	1,983,644	2,470,982	2,796,461		
2013	547,827	1,373,257	2,011,609	2,474,583			
2014	562,117	1,420,065	2,066,415				
2015	587,950	1,489,581					
2016	626,802						

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2008						1.071
2009					1.099	1.060
2010				1.145	1.090	1.061
2011			1.247	1.142	1.085	
2012		1.474	1.246	1.132		
2013	2.507	1.465	1.230			
2014	2.526	1.455				
2015	2.534					
Latest Year	2.534	1.455	1.230	1.132	1.085	1.061

(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)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2008						1.073
2009					1.105	1.068
2010				1.153	1.096	1.067
2011			1.247	1.146	1.095	
2012		1.467	1.248	1.141		
2013	2.488	1.465	1.237			
2014	2.516	1.459				
2015	2.533					

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2008						-0.13%
2009					-0.53%	-0.77%
2010				-0.64%	-0.60%	-0.57%
2011			-0.07%	-0.40%	-0.87%	
2012		0.47%	-0.22%	-0.81%		
2013	0.74%	-0.04%	-0.52%			
2014	0.39%	-0.28%				
2015	0.03%					

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

Accident Year	Evaluated as of (in months)					
	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>
2008						1.076
2009					1.104	1.063
2010				1.153	1.095	1.063
2011			1.259	1.148	1.088	
2012		1.492	1.254	1.136		
2013	2.538	1.473	1.233			
2014	2.544	1.454				
2015	2.520					
Latest Year	2.520	1.454	1.233	1.136	1.088	1.063
3-Year Average	2.534	1.473	1.249	1.146	1.096	1.067

- (i) Development factors are based on paid medical losses from the same insurer mix as that used in the adjustment for changes in claim settlement rates and applied in the calculation of the development factors in Item O.
- (j) Each factor represents the change in age-to-age development factors from Item P to those in Item O.
- (k) Each factor is the product of [1.0 + the impact of adjustment for changes in claim settlement rates (Item Q)] and [the adjusted paid medical age-to-age development factor from Exhibit 2.6.1].

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

**Developed Indemnity Loss Ratios Using Selected Loss Development Factors
Adjusted for Changes in Claim Settlement Rates
Based on Experience as of December 31, 2016**

Accident Year	(1) Paid or Incurred Loss <u>Ratio (a)</u>	Development Factors			(5) Projected Ultimate <u>Loss Ratio</u> (5) = (1) x (4)
		(2) <u>Annual (b)</u>	Cumulative		
			(3) Unadjusted for Impact of <u>SB 863 (b)</u>	(4) Adjusted for Impact of <u>SB 863 (b)</u>	
1985	0.446	1.000	1.003	1.003	0.448
1986	0.396	1.000	1.003	1.003	0.397
1987	0.345	1.000	1.003	1.003	0.346
1988	0.330	1.000	1.003	1.003	0.331
1989	0.343	1.000	1.004	1.004	0.344
1990	0.397	1.000	1.004	1.004	0.399
1991	0.425	1.000	1.004	1.004	0.426
1992	0.350	1.000	1.004	1.004	0.351
1993	0.287	1.000	1.004	1.004	0.289
1994	0.327	1.000	1.004	1.004	0.328
1995	0.472	1.001	1.005	1.005	0.475
1996	0.529	1.001	1.006	1.006	0.532
1997	0.600	1.000	1.006	1.006	0.603
1998	0.650	0.999	1.005	1.005	0.654
1999	0.666	1.004	1.035	1.035	0.690
2000	0.573	1.005	1.040	1.040	0.596
2001	0.471	1.005	1.045	1.045	0.492
2002	0.350	1.006	1.051	1.051	0.368
2003	0.228	1.007	1.058	1.058	0.242
2004	0.135	1.008	1.067	1.067	0.144
2005	0.115	1.010	1.078	1.078	0.123
2006	0.147	1.015	1.094	1.094	0.161
2007	0.198	1.019	1.115	1.115	0.221
2008	0.246	1.027	1.145	1.145	0.282
2009	0.280	1.028	1.177	1.177	0.329
2010	0.263	1.044	1.229	1.229	0.323
2011	0.232	1.053	1.295	1.288	0.299
2012	0.194	1.077	1.395	1.388	0.270
2013	0.151	1.126	1.571	1.576	0.238
2014	0.115	1.250	1.964	2.053	0.235
2015	0.071	1.623	3.189	3.332	0.238
2016	0.022	3.264	10.407	10.877	0.237

- (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 with Adjustment for SB 863
Based on Experience as of December 31, 2016**

	(1)	(2)	(3)	(4)	(5)	(6)
	Adjusted for SB 863					
Accident Year	Unadjusted Paid or Incurred Loss Ratio (a)	Adjusted Paid or Incurred Loss Ratio (b)	Development Factors		Adjusted Developed Loss Ratio (d)	Projected Ultimate Loss Ratio
			Annual (c)	Cumulative	(2) x (4)	(1) + ((5) - (2))
1985	0.351	0.351	0.999	1.021	0.358	0.358
1986	0.332	0.332	1.000	1.021	0.339	0.339
1987	0.313	0.313	0.999	1.020	0.320	0.320
1988	0.305	0.305	1.001	1.020	0.311	0.311
1989	0.326	0.326	1.000	1.020	0.332	0.332
1990	0.367	0.367	1.002	1.022	0.375	0.375
1991	0.385	0.385	1.001	1.023	0.393	0.393
1992	0.319	0.319	1.002	1.024	0.327	0.327
1993	0.267	0.267	0.999	1.023	0.273	0.273
1994	0.309	0.309	1.000	1.023	0.316	0.316
1995	0.457	0.457	1.000	1.023	0.468	0.468
1996	0.486	0.486	1.002	1.025	0.499	0.499
1997	0.547	0.547	1.001	1.026	0.561	0.561
1998	0.660	0.660	1.002	1.028	0.679	0.679
1999	0.650	0.612	1.012	1.149	0.703	0.741
2000	0.587	0.553	1.014	1.165	0.644	0.679
2001	0.514	0.484	1.015	1.183	0.572	0.602
2002	0.396	0.373	1.015	1.201	0.448	0.471
2003	0.250	0.236	1.016	1.220	0.288	0.302
2004	0.169	0.159	1.020	1.245	0.198	0.207
2005	0.163	0.154	1.019	1.269	0.195	0.204
2006	0.208	0.197	1.025	1.301	0.256	0.267
2007	0.286	0.272	1.032	1.342	0.365	0.379
2008	0.350	0.333	1.037	1.391	0.463	0.481
2009	0.398	0.380	1.037	1.443	0.548	0.566
2010	0.379	0.364	1.049	1.514	0.551	0.566
2011	0.308	0.299	1.063	1.609	0.481	0.490
2012	0.247	0.243	1.088	1.751	0.425	0.429
2013	0.181	0.180	1.136	1.989	0.358	0.359
2014	0.132	0.132	1.233	2.451	0.324	0.324
2015	0.089	0.089	1.454	3.563	0.318	0.318
2016	0.036	0.036	2.520	8.979	0.320	0.320

- (a) Based on Exhibit 1. Paid M CCP costs are excluded from accident years 2011 and subsequent. To reflect the selected loss development methodology, reported loss ratios displayed prior to 1999 are on an incurred basis. Subsequent reported loss ratios are on a paid basis.
- (b) Based on experience evaluated as of December 31, 2016. Reflects an adjustment for SB 863 of -4.4% applied to payments made before January 1, 2013, and adjustments for RBRVS of -1.8% applied to payments made before January 1, 2014, -0.9% applied to payments made before January 1, 2015, and 0.8% applied to payments made before January 1, 2016. No adjustments are applied to the incurred loss ratios.
- (c) Based on Exhibits 2.6.1 and 2.6.2. Reflects an adjustment for SB 863 of -4.4% applied to payments made before January 1, 2013, and adjustments for RBRVS of -1.8% applied to payments made before January 1, 2014, -0.9% applied to payments made before January 1, 2015, and 0.8% applied to payments made before January 1, 2016.
- (d) The developed medical loss ratios shown were derived based on an adjustment for SB 863 and RBRVS. They are only for purposes of projecting future medical loss ratios and do not reflect true estimates of ultimate loss ratios for those accident years.

Indemnity Benefit Level Factors					
Accident Year	(1) Annual Benefit Change Prior to Frequency Adjustments (a)	(2) Frequency Adjustments (a)	(3) Annual Impact on Indemnity Benefits Due to Wage Inflation (b)	(4) Annual Cost Impact on Indemnity (c)	(5) Composite Indemnity Adjustment Factor (d)
1985	0.0	0.0	2.0	2.0	1.459
1986	0.0	0.0	1.6	1.6	1.436
1987	0.0	0.0	1.9	1.9	1.409
1988	0.0	0.0	1.5	1.5	1.388
1989	0.0	0.0	1.5	1.5	1.368
1990	2.3	19.9	1.7	24.7	1.096
1991	4.9	14.8	0.8	21.4	0.903
1992	1.8	-8.3	1.6	-5.2	0.952
1993	0.2	-18.1	0.4	-17.6	1.156
1994	-5.1	0.2	0.6	-4.3	1.208
1995	6.3	0.6	1.0	8.0	1.119
1996	5.3	0.4	1.2	7.0	1.046
1997	9.7	0.2	1.6	11.7	0.936
1998	6.5	0.0	1.8	8.4	0.864
1999	5.7	0.0	2.1	7.9	0.800
2000	3.9	0.0	3.1	7.1	0.747
2001	-0.3	0.0	0.2	-0.1	0.748
2002	-0.7	0.0	0.2	-0.5	0.768 (e)
2003	7.3	0.0	1.1	8.5	0.767 (e)
2004	-6.0	-13.7	1.6	-17.6	1.057 (e)
2005	-31.6	-15.3	1.1	-41.5	1.435
2006	5.6	-5.7	1.6	1.2	1.418
2007	1.6	0.0	1.6	3.2	1.374
2008	4.8	0.6	0.7	6.2	1.294
2009	0.4	1.4	0.2	2.0	1.269
2010	0.4	0.0	1.0	1.4	1.251
2011	0.0	0.0	1.6	1.6	1.237 (f)
2012	0.3	0.0	2.1	2.4	1.208 (f)
2013	-0.6	-0.3	0.4	-0.5	1.209
2014	7.0	1.5	1.7	10.4	1.094
2015	0.3	0.0	2.3	2.6	1.067
2016	0.3	0.0	1.3	1.6	1.050
2017	0.5	0.0	2.3	2.8	
4/1/2018	0.3 (Annual 0.4)	0.0	1.9 (Annual 2.5)	2.2	

- (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, including SB 863 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 of injured workers and the legislatively scheduled benefits for that year.
- (c) $\{ [\text{Column (1)} / 100 + 1.0] \times [\text{Column (2)} / 100 + 1.0] \times [\text{Column (3)} / 100 + 1.0] - 1.0 \} \times 100$.
- (d) These factors represent the combined impact of the annual benefit changes on claim severity shown in Column (1), claim frequencies shown in Column (2) and wage inflation impact on benefits shown in Column (3), adjusted to the 4/1/2018 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.
- (f) On-level factors for accident years 2011 and 2012 adjust the portion of indemnity losses not impacted by the adjustments to outstanding indemnity claims for the impact of SB 863 (see Exhibit 2.5).

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)
1985	0.665	0.335	2.3%	6.5%	2.2%	4.5%
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	0.5%	4.2%	0.3%	0.8%
2015	0.934	0.066	0.1%	3.1%	0.2%	0.3%
2016	0.934	0.066	0.1%	5.4%	0.4%	0.5%
2017	0.934	0.066	0.1%	3.8%	0.3%	0.4%
4/1/2018	0.934	0.066	0.0% (Annual 0.0%)	2.8% (Annual 3.7%)	0.2%	0.2%

- (a) From a Special Carrier Study through 1990. Based on WCIRB's Aggregate Indemnity and Medical Costs Calls for years 1991 through 2012. Based on WCIRB medical transaction data from 2013 onwards. Accident years 2011 and subsequent do not include MCCP costs.
- (b) Based on the WCIRB's evaluation of the cost impact of changes in the medical fee schedules. Includes the 1/1/2014 changes to the physician fee schedule to a resource-based relative value scale (RBRVS) except for the proportion reflected in loss development (See Exhibit 2.4).
- (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)
1985	0.0%	0.0%	0.0%
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	0.0%	0.0%	0.0%
2012	-2.0%	0.0%	-2.0%
2013	-2.0%	-0.2%	-2.2%
2014	-6.0%	1.3%	-4.8%
2015	0.0%	0.0%	0.0%
2016	0.0%	0.0%	0.0%
2017	0.0%	0.0%	0.0%
4/1/2018	0.0%	0.0%	0.0%

(a) These annual cost impacts reflect the WCIRB's retrospective estimates of the cost impact of legislation based on WCIRB cost monitoring results. These factors do not include the estimated - 4.4% impact of 1/1/2013 medical provisions in SB 863, which was reflected in loss development projections.

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

(c) $[\text{Column (1)} + 1.0] \times [\text{Column (2)} + 1.0] - 1.0$

Total Medical Cost Level Factors

Accident Year	(1) Annual Non-Legislative Cost Impact on Medical (a)	(2) Annual Legislative Cost Impact on Medical(b)	(3) Total Annual Cost Impact on Medical(c)	(4) Composite Medical On-level Factor(d)
1985	4.5%	0.0%	4.5%	0.985
1986	3.0%	0.0%	3.0%	0.957
1987	3.8%	0.0%	3.8%	0.922
1988	3.8%	0.0%	3.8%	0.888
1989	3.0%	0.0%	3.0%	0.862
1990	3.7%	19.1%	23.5%	0.698
1991	3.6%	12.9%	16.9%	0.597
1992	3.0%	-7.9%	-5.2%	0.630
1993	2.7%	-18.7%	-16.5%	0.754
1994	-2.3%	-2.3%	-4.6%	0.790
1995	0.9%	0.5%	1.4%	0.779
1996	1.0%	0.4%	1.4%	0.768
1997	0.7%	0.2%	0.9%	0.761
1998	0.8%	12.6%	13.5%	0.671
1999	2.5%	12.6%	15.4%	0.581
2000	1.7%	7.0%	8.8%	0.534
2001	2.9%	6.6%	9.7%	0.487
2002	2.0%	-5.6%	-3.7%	0.506
2003	1.4%	-6.0%	-4.7%	0.530
2004	0.0%	-33.9%	-33.9%	0.802
2005	0.0%	-13.9%	-13.9%	0.931
2006	0.3%	-5.1%	-4.8%	0.979
2007	1.8%	0.1%	1.9%	0.960
2008	0.2%	0.5%	0.7%	0.954
2009	0.4%	1.0%	1.4%	0.940
2010	0.3%	0.0%	0.3%	0.938
2011	0.3%	0.0%	0.3%	0.935
2012	0.1%	-2.0%	-1.9%	0.953
2013	0.1%	-2.2%	-2.1%	0.973
2014	0.8%	-4.8%	-4.0%	1.019 (e)
2015	0.3%	0.0%	0.3%	1.017 (e)
2016	0.5%	0.0%	0.5%	1.013 (e)
2017	0.4%	0.0%	0.4%	
4/1/2018	0.2%	0.0%	0.2%	

(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 4/1/2018 level.

(e) The on-level factors for accident years 2014, 2015, and 2016 include the estimated impact of the January 1, 2014 physician fee schedule for the service year 2017.

Annual Wage Level Changes

<u>Year</u>	<u>Annual Wage Level Change</u>	<u>Factor to a 4/1/2018 Wage Level</u>
1985	5.7	3.183
1986	4.7	3.040
1987	5.6	2.879
1988	4.4	2.758
1989	4.3	2.644
1990	5.0	2.518
1991	2.3	2.461
1992	4.7	2.351
1993	1.2	2.323
1994	1.8	2.282
1995	2.9	2.218
1996	3.4	2.145
1997	4.7	2.048
1998	5.2	1.947
1999	6.2	1.834
2000	9.0	1.682
2001	0.6	1.672
2002	0.5	1.664
2003	3.3	1.611
2004	4.7	1.538
2005	3.1	1.492
2006	4.6	1.426
2007	4.5	1.365
2008	2.1	1.337
2009	0.5	1.330
2010	3.0	1.292
2011	3.1	1.253
2012	4.1	1.203
2013	0.7	1.195
2014	3.3	1.157
2015	4.4	1.108
2016	2.4	1.082
Projected:		
2017	4.4	
4/1/2018	3.7	(Annual = 4.9)

Source: California average annual wage level changes for 1985 to 2018 derived from information published by the UCLA Anderson School of Business as of December 2016.

Premium Adjustment Factors

	(1)	(2a)	(2b)	(2c)	(3)	(4)	(5)	(6)	(7)
Calendar Year	Factor to a 4/1/2018 Wage Level (a)	Ratio of Industry Average Charged Rates to Advisory Pure Premium Rates (b)	Factor to Industry Average Filed Pure Premium Rate Level as of July 1, 2016 (c)	Factor to Adjust Insurer Premium to an Industry Average Filed Pure Premium Rate Level as of July 1, 2016 (d)	Adjustment to Remove Surcharge Premium (e)	Average Experience Modification (f)	Off-Balance Correction in Advisory July 1, 2016 Pure Premium Rates	Factor to Adjust for Impact of Premium Resulting from Audits (g)	Composite Premium Adjustment Factor (h)
1985	3.183	---	---	1.047	0.991	0.984	1.028	---	3.265
1986	3.040	---	---	0.957	0.991	0.983	1.028	---	2.852
1987	2.879	---	---	0.841	0.992	0.983	1.028	---	2.377
1988	2.758	---	---	0.752	0.993	0.963	1.028	---	2.081
1989	2.644	---	---	0.740	0.993	0.945	1.028	---	2.001
1990	2.518	---	---	0.722	0.991	0.942	1.028	---	1.861
1991	2.461	---	---	0.668	0.987	0.939	1.028	---	1.682
1992	2.351	---	---	0.642	0.982	0.940	1.028	---	1.533
1993	2.323	---	---	0.633	0.981	0.949	1.028	---	1.479
1994	2.282	---	---	0.725	0.986	0.948	1.028	---	1.675
1995	2.218	---	---	0.982	0.995	0.958	1.028	---	2.200
1996	2.145	1.023	1.043	1.020	1.000	0.935	1.028	---	2.275
1997	2.048	0.989	1.041	1.053	1.000	0.949	1.028	---	2.210
1998	1.947	0.965	1.084	1.123	1.000	0.959	1.028	---	2.219
1999	1.834	0.972	1.096	1.128	1.000	0.954	1.028	---	2.108
2000	1.682	1.005	0.993	0.988	1.000	0.970	1.028	---	1.667
2001	1.672	1.030	0.875	0.850	1.000	0.969	1.028	---	1.426
2002	1.664	1.157	0.783	0.677	1.000	0.991	1.028	---	1.105
2003	1.611	1.266	0.641	0.506	1.000	1.005	1.028	---	0.789
2004	1.538	1.397	0.652	0.467	1.000	0.981	1.028	---	0.712
2005	1.492	1.470	0.784	0.533	1.000	0.982	1.028	---	0.788
2006	1.426	1.450	1.011	0.697	1.000	0.956	1.028	---	1.012
2007	1.365	1.494	1.379	0.923	1.000	0.931	1.028	0.985	1.297
2008	1.337	1.426	1.639	1.149	1.000	0.946	1.028	0.991	1.566
2009	1.330	1.365	1.615	1.183	1.000	0.937	1.028	1.034	1.690
2010	1.292	1.383	1.583	1.145	1.000	0.941	1.028	1.005	1.536
2011	1.253	1.402	1.582	1.128	1.000	0.982	1.028	---	1.400
2012	1.203	1.225	1.304	1.064	1.000	1.000	1.028	---	1.246
2013	1.195	1.139	1.050	0.922	1.000	0.983	1.028	---	1.090
2014	1.157	1.127	0.967	0.858	1.000	0.961	1.028	---	1.005
2015	1.108	1.108	0.940	0.848	1.000	0.952	1.028	---	0.961
2016	1.082	1.146	1.012	0.883	1.000	0.952	1.028	---	0.977

- (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, 2016 pure premium rate level and (2) an additional adjustment factor, which is the ratio of the average advisory July 1, 2016 pure premium rate (\$2.32) to the industry average filed pure premium rate as of July 1, 2016 (\$2.54).
- (d) $(2b) \div (2a)$. This column adjusts premiums at the industry average charged rate level to the industry average filed pure premium rate level as of July 1, 2016.
- (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) $(1) \times (2c) \times (3) \times (6) \div [(4) \times (5)]$ for calendar years 2007 to 2010. $(1) \times (2c) \times (3) \div [(4) \times (5)]$ for all other calendar years.

2016 Accident Year Indemnity Claim Frequency Model
As of PY 2014 Preliminary 1st Set & December 2016 UCLA

AY	Annual %	Annual Log Differences						
	Changes Intra-	Intra-Class Indemnity Frequency				AY+1		CalOSHA
	Class Ind Freq	per \$M Exposure at PY 2015 Level				Indemnity	Economic	
	Total	Total	Cumulative	Non-cum.	Benefit Level	Cumulative Injury Index	Variables (1st Prin. Comp.)	Dummy Variable
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	-0.079	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	-6.9%	-0.072	-0.017	-0.076	-0.007	0.059	-0.100	0.000
2002	-2.8%	-0.029	0.001	-0.031	0.060	0.033	-0.197	0.000
2003	-3.2%	-0.032	-0.009	-0.035	-0.065	0.026	-0.022	0.000
2004	-16.8%	-0.185	-0.212	-0.182	-0.398	-0.030	0.098	0.000
2005	-13.6%	-0.147	-0.299	-0.134	0.051	-0.165	0.143	0.000
2006	-5.7%	-0.059	-0.050	-0.059	0.016	0.009	0.090	0.000
2007	-1.6%	-0.017	0.021	-0.019	0.049	0.040	-0.095	0.000
2008	-2.7%	-0.027	0.038	-0.033	0.006	0.071	-0.320	0.000
2009	-0.2%	-0.002	0.168	-0.018	0.066	0.186	-0.414	0.000
2010	8.9%	0.085	0.139	0.079	0.012	0.060	-0.077	0.000
2011	1.3%	0.013	0.033	0.010	0.003	0.022	0.048	0.000
2012	4.9%	0.048	0.117	0.040	-0.008	0.077	0.122	0.000
2013	0.9%	0.009	0.171	-0.013	0.071	0.185	0.154	0.000
2014	1.0%	0.010	0.100	-0.005	0.003	0.105	0.170	0.000
2015*	-1.2%	-0.012	0.063	-0.027	0.003	0.091	0.179	0.000
2016	-0.5%	-0.005	-0.005	-0.005	0.004	0.000	0.141	0.000
2017	-1.6%	-0.016	-0.016	-0.016	0.003	0.000	0.038	0.000
2018	-1.9%	-0.019	-0.019	-0.019	0.003	0.000	0.004	0.000
2019	-1.9%	-0.019	-0.019	-0.019	0.003	0.000	0.002	0.000

Y = Hazardousness-Adjusted Noncumulative Indemnity Claim Frequency

Constant	-0.020			
Std Err of Y Est	0.041			
R Squared	0.577			
No. of Observations	37			
Degrees of Freedom	32			
X Coefficient(s)	0.174	0.282	0.098	-0.135
Std Err of Coef.	0.075	0.063	0.046	0.079

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 2015; December 2016 UCLA Anderson Forecasts for 2016 on.

Regression is over AY 1979 through AY 2015. AY 2016 through AY 2019 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 2015 is preliminary and change is based on a comparison of 2015 accidents on 2014 policies to 2014 accidents on 2013 policies.

**Projection of Indemnity Severity Trends by Accident Year
Based on Experience as of December 31, 2016**

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	9,967	---	1.762	17,566	---
1991	10,906	9.4%	1.667	18,178	3.5%
1992	10,995	0.8%	1.611	17,719	-2.5%
1993	11,965	8.8%	1.602	19,167	8.2%
1994	12,932	8.1%	1.678	21,698	13.2%
1995	14,510	12.2%	1.563	22,677	4.5%
1996	16,248	12.0%	1.467	23,829	5.1%
1997	19,337	19.0%	1.316	25,445	6.8%
1998	21,126	9.2%	1.214	25,640	0.8%
1999	23,225	9.9%	1.125	26,119	1.9%
2000	24,633	6.1%	1.050	25,861	-1.0%
2001	27,054	9.8%	1.051	28,432	9.9%
2002	26,160	-3.3%	1.079	28,225	-0.7%
2003	25,711	-1.7%	1.078	27,717	-1.8%
2004	20,947	-18.5%	1.282	26,855	-3.1%
2005	18,944	-9.6%	1.474	27,925	4.0%
2006	20,753	9.5%	1.374	28,512	2.1%
2007	22,469	8.3%	1.331	29,905	4.9%
2008	24,666	9.8%	1.261	31,108	4.0%
2009	25,627	3.9%	1.254	32,128	3.3%
2010	25,417	-0.8%	1.236	31,422	-2.2%
2011	24,871	-2.1%	1.223	30,415	-3.2%
2012	24,417	-1.8%	1.194	29,159	-4.1%
2013	24,484	0.3%	1.191	29,154	0.0%
2014	26,341	7.6%	1.094	28,827	-1.1%
2015	27,346	3.8%	1.067	29,169	1.2%
2016	28,473	4.1%	1.050	29,901	2.5%
(6) Estimated Annual Exponential Trend Based on 2005 to 2016:					0.0%
(7) Estimated Annual Exponential Trend Based on 2011 to 2016:					-0.3%
Selected Indemnity Severity Trend:					0.0%

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

Source: WCIRB experience calls

**Projection of Medical Severity Trends by Accident Year
Based on Experience as of December 31, 2016**

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	8,743	---	1.030	9,006	---
1991	9,395	7.5%	1.011	9,497	5.5%
1992	9,468	0.8%	0.977	9,254	-2.6%
1993	10,476	10.6%	0.960	10,060	8.7%
1994	11,574	10.5%	1.010	11,688	16.2%
1995	13,350	15.3%	1.002	13,383	14.5%
1996	14,242	6.7%	0.992	14,129	5.6%
1997	16,975	19.2%	0.985	16,725	18.4%
1998	20,831	22.7%	0.869	18,110	8.3%
1999	23,740	14.0%	0.754	17,892	-1.2%
2000	26,770	12.8%	0.693	18,551	3.7%
2001	31,818	18.9%	0.633	20,134	8.5%
2002	32,254	1.4%	0.658	21,211	5.3%
2003	30,809	-4.5%	0.691	21,294	0.4%
2004	28,583	-7.2%	0.916	26,172	22.9%
2005	29,569	3.4%	0.918	27,133	3.7%
2006	32,578	10.2%	0.916	29,829	9.9%
2007	36,492	12.0%	0.901	32,888	10.3%
2008	39,864	9.2%	0.900	35,892	9.1%
2009	41,952	5.2%	0.901	37,787	5.3%
2010	42,455	1.2%	0.903	38,350	1.5%
2011	38,770 (c)	---	0.908	35,188 (c)	---
2012	36,932	-4.7%	0.934	34,491	-2.0%
2013	35,049	-5.1%	0.960	33,634	-2.5%
2014	34,316	-2.1%	1.020	35,012	4.1%
2015	34,621	0.9%	1.018	35,245	0.7%
2016	36,250	4.7%	1.013	36,727	4.2%

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 (6).

(b) These adjustment factors are based on Exhibit 4.4, excluding the impact of frequency, and including the impact of SB 863 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.

**Projection of Medical Severity Trends by Accident Year
Adjusted to Remove the Cost of Medical Cost Containment Programs (MCCP)
Based on Experience as of December 31, 2016**

MCCP Included					MCCP Removed Based on WCIRB Aggregate Calendar Year Data Calls (b)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Accident Year	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change	Estimated Ultimate Severity (a)	Annual % Change	Ultimate On-Level Severity (c)	Annual % Change
2005	29,569	---	27,133	---	27,989	---	25,683	---
2006	32,578	10.2%	29,829	9.9%	30,513	9.0%	27,938	8.8%
2007	36,492	12.0%	32,888	10.3%	34,033	11.5%	30,672	9.8%
2008	39,864	9.2%	35,892	9.1%	36,344	6.8%	32,722	6.7%
2009	41,952	5.2%	37,787	5.3%	38,415	5.7%	34,601	5.7%
2010	42,455	1.2%	38,350	1.5%	38,836	1.1%	35,081	1.4%
2011	42,540	0.2%	38,610	0.7%	38,770	-0.2%	35,188	0.3%
2012	40,550	-4.7%	37,870	-1.9%	36,932	-4.7%	34,491	-2.0%
2013	38,637	-4.7%	37,077	-2.1%	35,049	-5.1%	33,634	-2.5%
2014	37,953	-1.8%	38,723	4.4%	34,316	-2.1%	35,012	4.1%
2015	38,354	1.1%	39,045	0.8%	34,621	0.9%	35,245	0.7%
2016	39,875	4.0%	40,400	3.5%	36,250	4.7%	36,727	4.2%
Estimated Annual Exponential Trend Based on 2005 to 2016:				2.9%				
Trend Based on 2011 to 2016:				1.0%				
Selected Medical Severity Trend:								2.5%

- (a) Estimated ultimate severities for all accident years were derived by dividing ultimate medical losses on indemnity claims by ultimate indemnity claim counts.
- (b) Adjustments to accident years 2005 through 2010 based on WCIRB's Annual Calls for Direct California Workers' Compensation Aggregate Indemnity and Medical Costs.
- (c) Ultimate severities are on-leveled based on adjustment factors shown on Exhibit 4.4, excluding the impact of frequency.

Source: WCIRB experience calls

**Projected On-Level Accident Year
Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of December 31, 2016**

Accident Year	(1) Developed Indemnity Loss Ratio(a)	(2) Composite Indemnity Adjustment Factor(b)	(3) Composite Premium Adjustment Factor(c)	(4) On-Level Indemnity to Industry Average Filed Pure Premium Ratio (1)×(2)÷(3)
1985	0.448	1.459	3.265	0.200
1986	0.397	1.436	2.852	0.200
1987	0.346	1.409	2.377	0.205
1988	0.331	1.388	2.081	0.221
1989	0.344	1.368	2.001	0.235
1990	0.399	1.096	1.861	0.235
1991	0.426	0.903	1.682	0.229
1992	0.351	0.952	1.533	0.218
1993	0.289	1.156	1.479	0.225
1994	0.328	1.208	1.675	0.237
1995	0.475	1.119	2.200	0.241
1996	0.532	1.046	2.275	0.244
1997	0.603	0.936	2.210	0.256
1998	0.654	0.864	2.219	0.254
1999	0.690	0.800	2.108	0.262
2000	0.596	0.747	1.667	0.267
2001	0.492	0.748	1.426	0.258
2002	0.368	0.768	1.105	0.255
2003	0.242	0.767	0.789	0.235
2004	0.144	1.057	0.712	0.214
2005	0.123	1.435	0.788	0.225
2006	0.161	1.418	1.012	0.225
2007	0.221	1.374	1.297	0.234
2008	0.282	1.294	1.566	0.233
2009	0.329	1.269	1.690	0.247
2010	0.323	1.251	1.536	0.263
2011	0.299	1.237	1.400	0.265
2012	0.270	1.208	1.246	0.262
2013	0.238	1.209	1.090	0.264
2014	0.235	1.094	1.005	0.256
2015	0.238	1.067	0.961	0.264
2016	0.237	1.050	0.977	0.255
				Projections (d)
2017				0.254
4/1/2018				0.250

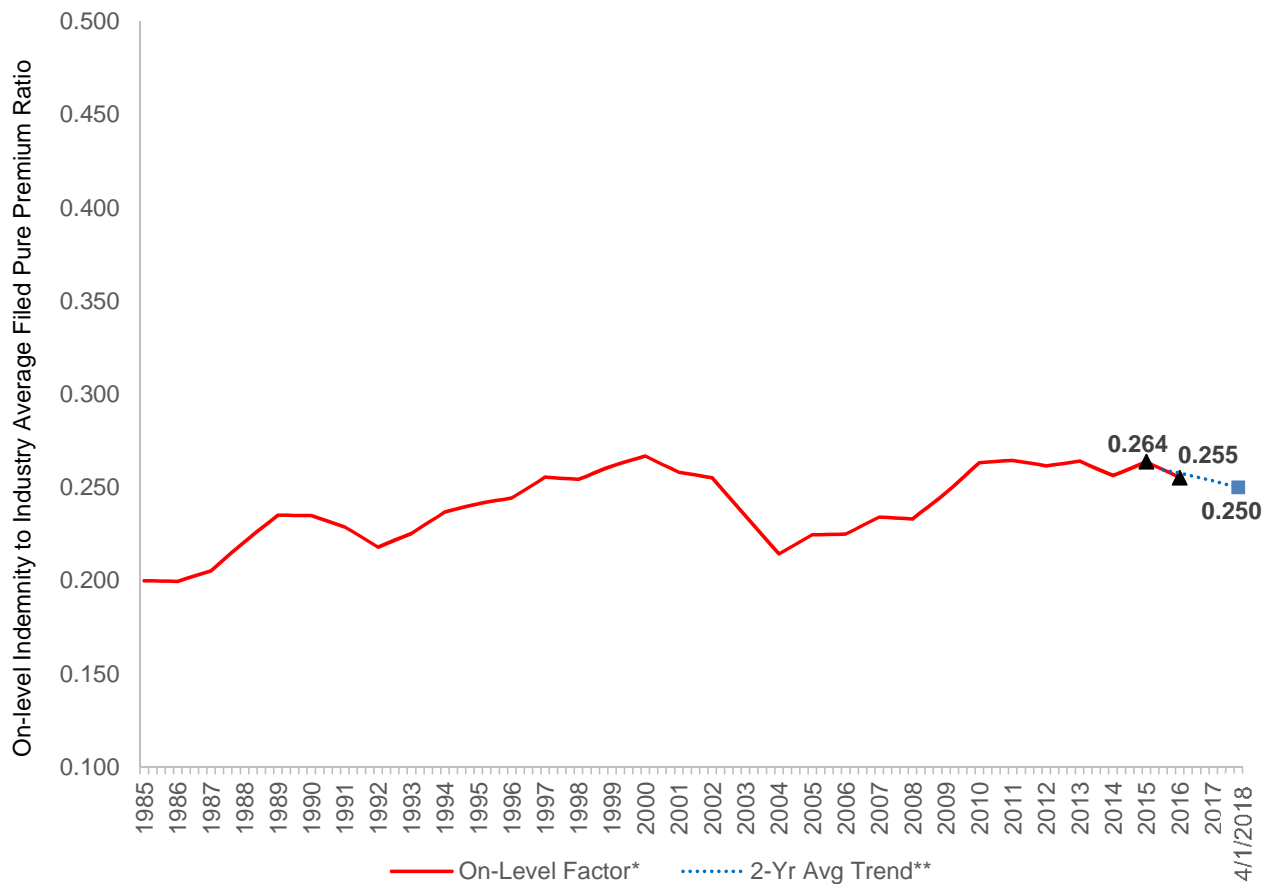
(a) See Exhibit 3.1.

(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 2016 from Exhibit 12, and projected frequency trends for accident years 2017 and 2018 from Exhibit 6.1; these trends were then separately applied to the 2015 and 2016 on-level ratios.

**On-Level Indemnity Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of December 31, 2016**



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

** The 4/1/2018 indemnity to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2015 and 2016 years.

**Projected On-Level Accident Year
Medical Loss to Industry Average Filed Pure Premium Ratios
Based on Experience as of December 31, 2016**

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)
1985	0.358	0.985	3.265	0.108
1986	0.339	0.957	2.852	0.114
1987	0.320	0.922	2.377	0.124
1988	0.311	0.888	2.081	0.133
1989	0.332	0.862	2.001	0.143
1990	0.375	0.698	1.861	0.141
1991	0.393	0.597	1.682	0.140
1992	0.327	0.630	1.533	0.134
1993	0.273	0.754	1.479	0.139
1994	0.316	0.790	1.675	0.149
1995	0.468	0.779	2.200	0.166
1996	0.499	0.768	2.275	0.168
1997	0.561	0.761	2.210	0.193
1998	0.679	0.671	2.219	0.205
1999	0.703	0.581	2.108	0.194
2000	0.644	0.534	1.667	0.206
2001	0.572	0.487	1.426	0.195
2002	0.448	0.506	1.105	0.205
2003	0.288	0.530	0.789	0.194
2004	0.198	0.802	0.712	0.223
2005	0.195	0.931	0.788	0.231
2006	0.256	0.979	1.012	0.247
2007	0.365	0.960	1.297	0.270
2008	0.463	0.954	1.566	0.282
2009	0.548	0.940	1.690	0.305
2010	0.551	0.938	1.536	0.336
2011	0.481	0.935	1.400	0.321
2012	0.425	0.953	1.246	0.325
2013	0.358	0.973	1.090	0.320
2014	0.324	1.019	1.005	0.329
2015	0.318	1.017	0.961	0.337
2016	0.320	1.013	0.977	0.332
				Projections (d)
2017				0.339
4/1/2018				0.341

(a) See Exhibit 3.2.

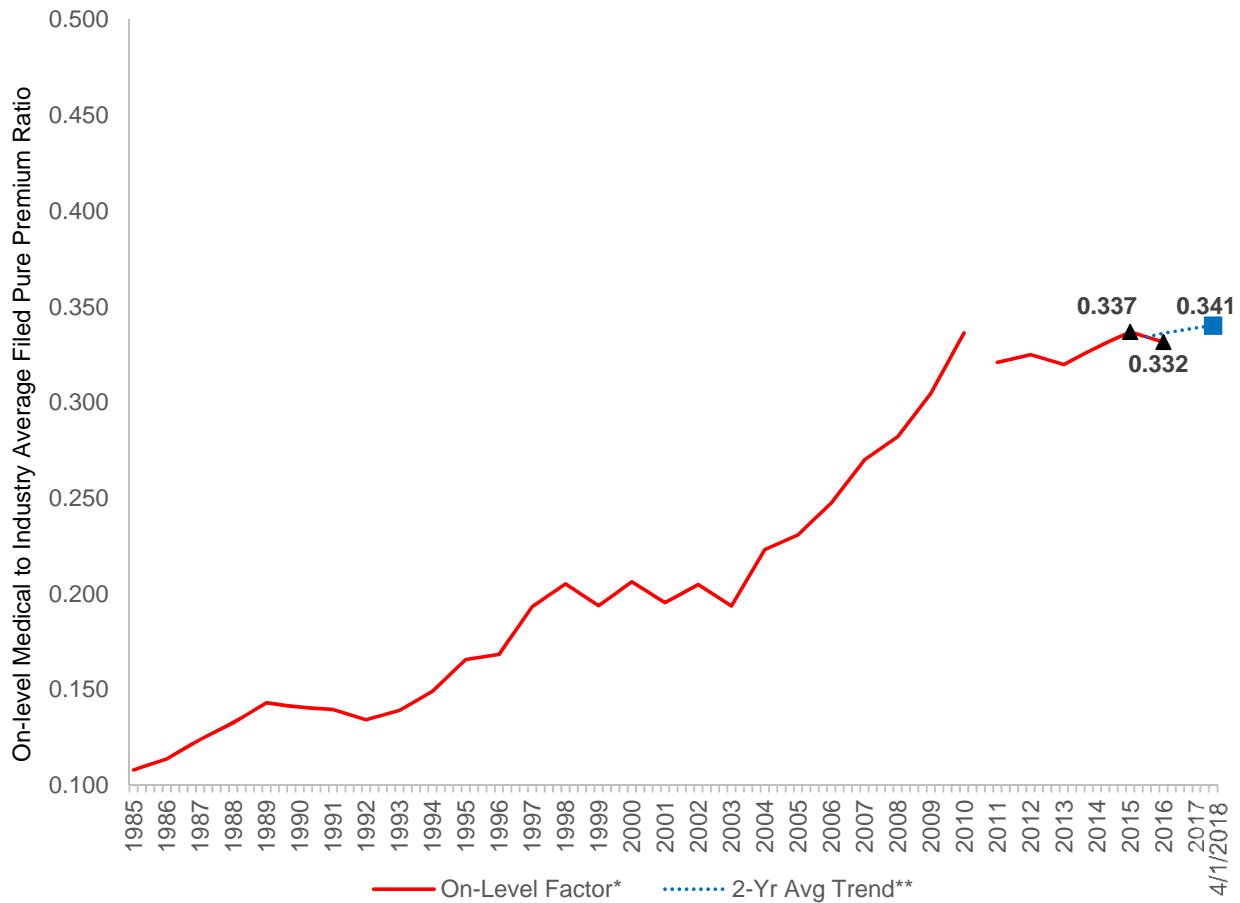
(b) See Exhibit 4.4.

(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 2016 from Exhibit 12, and projected frequency trends for accident years 2017 and 2018 from Exhibit 6.1; these trends were then separately applied to the 2015 and 2016 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 December 31, 2016**



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

** The 4/1/2018 medical to industry average filed pure premium ratio was calculated based on separate frequency and severity trends applied to the 2015 and 2016 years.

**Indicated Loss to Industry Average Filed Pure Premium Ratios
For Policies with Effective Dates between July 1, 2017 and December 31, 2017
Based on Experience as of December 31, 2016**

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Projected Loss to Industry Average Filed Pure Premium Ratio (See Exhibits 7.1 and 7.3)	0.250	0.341	0.591

Quarterly Incurred Indemnity Loss Development Factors
Through December 31, 2016

Age in Months	Accident Year																		
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
6/3									2.417	2.724	2.785	3.031	3.116	3.052	3.238	3.344	3.303	3.209	3.201
9/6									1.656	1.776	1.820	1.848	1.904	2.001	1.966	1.940	1.960	1.948	1.945
12/9									1.448	1.511	1.510	1.530	1.564	1.632	1.587	1.585	1.570	1.577	1.578
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	1.312	
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	
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	
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	1.112	
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		
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		
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		
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	1.043		
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			
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			
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			
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	1.023	1.021			
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				
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				
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				
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	1.013	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					
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					
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					
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					
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						
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						
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						
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	1.006						
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							
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							
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							
96/93	1.002	1.003	1.001	1.004	1.002	1.006	1.006	1.003	1.002	1.003	1.004	1.005							

Source: WCIRB accident year experience calls

Quarterly Incurred Medical Loss Development Factors *
Through December 31, 2016

Age in Months	Accident Year																		
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
6/3									2.584	2.662	2.782	2.892	2.992	2.757	2.853	2.843	2.921	2.863	3.019
9/6									1.650	1.744	1.717	1.807	1.800	1.827	1.833	1.819	1.840	1.884	1.755
12/9									1.453	1.443	1.466	1.454	1.488	1.521	1.484	1.500	1.482	1.451	1.488
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	
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	
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	
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	1.054	1.060	
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		
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		
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		
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		
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			
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			
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			
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	1.019	1.018			
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				
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				
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				
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	1.013	1.012				
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	1.010					
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	1.009					
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					
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	1.009	1.007					
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						
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						
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						
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						
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							
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							
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							
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							

Source: WCIRB accident 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 December 31, 2016

Age in Months	Accident Year																		
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
6/3									4.376	4.495	4.553	4.807	4.911	4.722	4.854	5.099	5.076	5.056	5.084
9/6									2.259	2.375	2.377	2.398	2.452	2.432	2.484	2.462	2.462	2.484	2.456
12/9									1.812	1.834	1.810	1.825	1.861	1.869	1.877	1.866	1.879	1.910	1.882
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	1.558	
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	
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	
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	1.215	1.211	
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		
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		
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		
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		
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	1.075			
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	1.063			
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			
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			
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				
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				
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				
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				
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					
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					
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					
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	1.018	1.018					
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						
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						
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						
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						
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							
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							
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							
96/93	1.008	1.009	1.006	1.007	1.007	1.007	1.008	1.011	1.011	1.008	1.009	1.010							

Source: WCIRB accident year experience calls

Quarterly Paid Medical Loss Development Factors *
Through December 31, 2016

Age in Months	Accident Year																			
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	2013	2014	2015	2016
6/3									5.308	5.615	6.579	6.101	6.048	5.854		5.989	6.284	5.604	5.720	5.897
9/6									2.348	2.381	2.348	2.375	2.361	2.327		2.398	2.498	2.428	2.287	2.326
12/9									1.716	1.765	1.731	1.723	1.756	1.746		1.763	1.736	1.750	1.707	1.753
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	
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	
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	
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	
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		
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		
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		
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		
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			
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			
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			
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			
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				
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				
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				
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				
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	1.026						
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	1.027						
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						
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						
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							
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							
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							
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							
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								
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								
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								
96/93	1.010	1.010	1.008	1.010	1.010	1.009	1.013	1.015	1.016	1.011	1.011	1.010								

Source: WCIRB accident 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															
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204
1992															1.000	1.000
1993														1.000	1.000	1.000
1994													1.000	1.000	1.000	1.000
1995												1.000	1.001	1.000	1.001	1.000
1996											1.001	1.001	1.000	1.000	1.000	1.000
1997										1.001	1.000	1.000	1.000	1.000	1.000	1.000
1998									1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999								1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000							1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001						1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002					1.000	0.999	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000		
2003				1.000	0.999	0.998	0.999	0.999	0.999	0.999	1.000	1.000	1.000			
2004			1.002	1.000	0.999	1.000	0.999	0.999	0.999	1.000	1.000	1.000				
2005		1.008	1.002	1.001	1.000	1.001	1.000	1.000	1.000	1.000	1.000					
2006	1.099	1.006	1.006	1.002	1.000	1.000	1.000	1.000	1.001	1.000						
2007	1.123	1.015	1.006	1.004	1.002	1.000	1.001	1.001	1.000							
2008	1.151	1.023	1.011	1.005	1.003	1.002	1.001	1.001								
2009	1.190	1.030	1.011	1.006	1.003	1.002	1.002									
2010	1.216	1.031	1.011	1.006	1.003	1.002										
2011	1.233	1.033	1.014	1.008	1.003											
2012	1.243	1.035	1.014	1.007												
2013	1.241	1.033	1.012													
2014	1.243	1.032														
2015	1.246															
Latest Year																
Age-to-Age																
1.246	1.032	1.012	1.007	1.003	1.002	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Age-to-Ultimate																
1.322	1.062	1.028	1.016	1.010	1.007	1.005	1.003	1.001	1.001	1.001	1.001	1.001	1.002	1.002	1.002	1.002

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 73% to 98% of the total California workers' compensation insured market measured using 2016 earned premium levels).

Quarterly Reported Indemnity Claim Count Development Factors

Accident Year	Development														
	<u>3-6</u>	<u>6-9</u>	<u>9-12</u>	<u>12-15</u>	<u>15-18</u>	<u>18-21</u>	<u>21-24</u>	<u>24-27</u>	<u>27-30</u>	<u>30-33</u>	<u>33-36</u>	<u>36-39</u>	<u>39-42</u>	<u>42-45</u>	<u>45-48</u>
2007	2.555	1.711	1.365	1.088	1.018	1.009	1.005	1.005	1.004	1.002	1.003	1.002	1.002	1.002	1.001
2008	2.539	1.651	1.340	1.095	1.025	1.015	1.010	1.009	1.007	1.004	1.003	1.003	1.002	1.003	1.002
2009	2.668	1.680	1.384	1.110	1.037	1.022	1.012	1.010	1.007	1.007	1.005	1.004	1.003	1.003	1.002
2010	2.674	1.712	1.404	1.126	1.039	1.023	1.016	1.011	1.008	1.006	1.005	1.003	1.004	1.003	1.001
2011	2.672	1.730	1.419	1.129	1.043	1.027	1.019	1.010	1.011	1.006	1.005	1.004	1.004	1.003	1.002
2012	2.718	1.744	1.418	1.125	1.053	1.030	1.020	1.013	1.010	1.007	1.004	1.005	1.004	1.003	1.003
2013	2.813	1.742	1.425	1.137	1.045	1.028	1.017	1.011	1.010	1.006	1.004	1.004	1.003	1.002	1.002
2014	2.752	1.731	1.429	1.135	1.048	1.026	1.018	1.012	1.010	1.005	1.004				
2015	2.828	1.740	1.419	1.139	1.048	1.026	1.017								
2016	2.756	1.705	1.421												

Reported Indemnity Claim Settlement Ratios

Accident Year	Evaluated as of (in months):																
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1991																99.2%	99.3%
1992															99.0%	99.1%	99.2%
1993														98.6%	98.8%	98.9%	99.0%
1994													98.1%	98.3%	98.6%	98.8%	98.9%
1995											97.5%	97.8%	98.1%	98.4%	98.5%	98.7%	
1996										96.8%	97.2%	97.6%	98.0%	98.2%	98.4%	98.6%	
1997									96.0%	96.6%	97.1%	97.5%	97.8%	98.0%	98.2%	98.4%	
1998								94.4%	95.3%	96.1%	96.7%	97.1%	97.5%	97.8%	98.0%	98.2%	
1999							89.5%	92.5%	94.0%	95.1%	95.9%	96.5%	96.9%	97.3%	97.7%	97.9%	98.1%
2000						84.0%	87.7%	90.3%	92.2%	93.4%	94.4%	95.2%	96.0%	96.5%	96.9%	97.3%	
2001					78.8%	84.3%	88.0%	90.6%	92.2%	93.6%	94.6%	95.7%	96.4%	96.8%	97.3%		
2002				70.4%	78.9%	84.4%	88.0%	90.3%	92.1%	93.5%	95.0%	95.8%	96.3%	97.0%			
2003			60.4%	72.4%	80.3%	84.9%	88.0%	90.3%	92.2%	94.2%	95.2%	96.0%	96.7%				
2004		48.9%	63.1%	74.5%	81.1%	85.3%	88.3%	90.6%	93.0%	94.4%	95.4%	96.3%					
2005	27.1%	50.3%	64.8%	74.8%	81.3%	85.5%	88.5%	91.4%	93.2%	94.4%	95.7%						
2006	27.3%	49.7%	63.6%	73.6%	80.2%	84.6%	88.8%	91.4%	93.1%	94.8%							
2007	27.6%	48.2%	61.8%	72.0%	79.1%	85.1%	88.8%	91.5%	93.7%								
2008	26.9%	46.4%	60.1%	70.8%	79.1%	84.6%	88.5%	91.7%									
2009	27.1%	46.9%	60.8%	72.6%	80.6%	85.9%	90.1%										
2010	27.7%	47.3%	62.2%	73.6%	81.6%	87.0%											
2011	27.8%	48.2%	63.5%	75.1%	83.0%												
2012	27.0%	48.5%	64.7%	76.8%													
2013	27.0%	49.8%	66.3%														
2014	27.5%	51.2%															
2015	28.9%																
2016																	

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 73% to 98% of the total California workers' compensation insured market measured using 2016 earned premium levels).

Estimated Ultimate Indemnity Claim Settlement Ratios

Accident Year	Evaluated as of (in months):																
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1991																99.0%	99.1%
1992															98.8%	99.0%	99.1%
1993														98.4%	98.6%	98.8%	98.9%
1994													97.8%	98.1%	98.4%	98.6%	98.7%
1995											97.0%	97.4%	97.8%	98.1%	98.3%	98.5%	
1996										96.4%	96.9%	97.4%	97.8%	98.0%	98.2%	98.4%	
1997									95.6%	96.3%	96.8%	97.3%	97.6%	97.8%	98.0%	98.3%	
1998								94.1%	95.1%	95.9%	96.5%	96.9%	97.3%	97.6%	97.9%	98.1%	
1999							89.3%	92.3%	93.8%	94.9%	95.7%	96.3%	96.7%	97.1%	97.5%	97.8%	98.0%
2000						83.9%	87.6%	90.2%	92.0%	93.2%	94.2%	95.0%	95.8%	96.3%	96.9%	97.3%	97.6%
2001					78.8%	84.4%	88.0%	90.6%	92.2%	93.5%	94.5%	95.6%	96.2%	96.7%	97.2%		
2002				70.7%	79.3%	84.7%	88.2%	90.4%	92.1%	93.4%	94.8%	95.6%	96.1%	96.8%			
2003			60.4%	72.6%	80.5%	85.1%	88.1%	90.3%	92.1%	94.0%	95.1%	95.8%	96.6%				
2004		48.3%	62.8%	74.2%	80.9%	85.1%	88.2%	90.5%	92.9%	94.3%	95.3%	96.2%					
2005	24.2%	49.5%	64.2%	74.5%	81.1%	85.3%	88.3%	91.3%	93.1%	94.4%	95.6%						
2006	23.6%	48.3%	62.6%	72.9%	79.8%	84.3%	88.5%	91.2%	93.0%	94.7%							
2007	22.9%	46.0%	60.3%	71.1%	78.4%	84.6%	88.5%	91.3%	93.5%								
2008	21.4%	43.9%	58.5%	69.7%	78.3%	84.0%	88.1%	91.5%									
2009	21.0%	44.3%	59.1%	71.4%	79.7%	85.3%	89.7%										
2010	21.1%	44.4%	60.3%	72.3%	80.8%	86.4%											
2011	21.0%	45.2%	61.6%	73.9%	82.2%												
2012	20.5%	45.7%	62.9%	75.6%													
2013	20.4%	47.0%	64.5%														
2014	20.8%	48.2%															
2015	21.9%																
2016																	

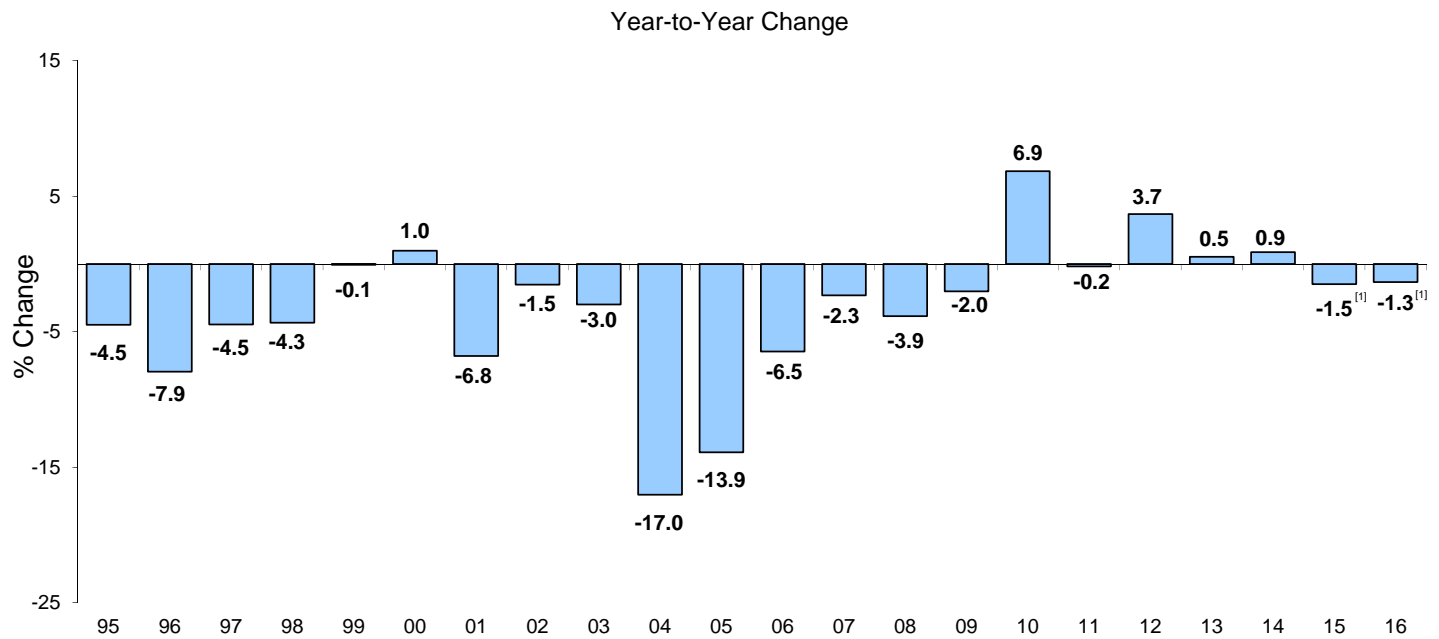
Notes All figures in each accident year contain information from the same combination of insurers, all of whom submitted complete data for all evaluations for that accident year. Therefore, each accident year may contain a different mix of insurers (ranging from 73% to 98% of the total California workers' compensation insured market measured using 2016 earned premium levels).

Quarterly Ultimate Settlement Ratios

Accident	Evaluated as of (in months):															
<u>Year</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>	<u>18</u>	<u>21</u>	<u>24</u>	<u>27</u>	<u>30</u>	<u>33</u>	<u>36</u>	<u>39</u>	<u>42</u>	<u>45</u>	<u>48</u>
2007	0.8%	5.3%	13.3%	23.6%	32.9%	39.4%	44.0%	48.3%	51.8%	55.7%	58.9%	62.6%	65.5%	68.1%	70.5%	72.9%
2008	0.8%	5.5%	13.3%	22.9%	31.5%	37.7%	42.1%	46.0%	49.6%	53.3%	56.8%	60.4%	63.3%	66.1%	68.7%	71.1%
2009	0.7%	4.8%	12.3%	21.4%	29.6%	35.5%	39.9%	44.0%	47.6%	51.3%	55.0%	58.6%	61.6%	64.6%	67.2%	69.7%
2010	0.7%	4.8%	11.9%	21.1%	29.7%	35.6%	40.0%	44.3%	48.1%	52.1%	55.7%	59.2%	62.3%	65.6%	68.6%	71.4%
2011	0.8%	5.2%	11.9%	21.1%	29.5%	35.5%	40.0%	44.4%	48.2%	52.5%	56.4%	60.3%	63.6%	66.6%	69.6%	72.3%
2012	0.8%	4.9%	12.0%	21.0%	29.1%	35.6%	40.4%	45.3%	49.4%	53.6%	57.8%	61.7%	65.1%	68.3%	71.2%	74.0%
2013	0.9%	5.0%	11.5%	20.5%	29.0%	35.5%	40.9%	45.8%	50.4%	54.9%	59.0%	63.0%	66.6%	69.9%	72.9%	75.6%
2014	0.7%	4.7%	11.5%	20.5%	29.4%	36.2%	41.9%	47.0%	51.8%	56.3%	60.6%	64.6%				
2015	0.8%	4.7%	11.9%	20.8%	29.9%	37.2%	43.0%	48.2%								
2016	0.8%	5.1%	12.3%	21.9%												

Accident	Quarterly Incremental Change														
<u>Year</u>	<u>3-6</u>	<u>6-9</u>	<u>9-12</u>	<u>12-15</u>	<u>15-18</u>	<u>18-21</u>	<u>21-24</u>	<u>24-27</u>	<u>27-30</u>	<u>30-33</u>	<u>33-36</u>	<u>36-39</u>	<u>39-42</u>	<u>42-45</u>	<u>45-48</u>
2007	4.5%	8.0%	10.3%	9.3%	6.5%	4.5%	4.3%	3.6%	3.8%	3.2%	3.8%	2.8%	2.6%	2.5%	2.4%
2008	4.6%	7.8%	9.7%	8.5%	6.2%	4.4%	3.9%	3.6%	3.7%	3.5%	3.5%	2.9%	2.8%	2.6%	2.4%
2009	4.0%	7.5%	9.1%	8.2%	6.0%	4.4%	4.0%	3.6%	3.7%	3.7%	3.5%	3.0%	3.0%	2.6%	2.5%
2010	4.1%	7.1%	9.2%	8.6%	6.0%	4.4%	4.3%	3.8%	3.9%	3.6%	3.5%	3.1%	3.3%	3.0%	2.8%
2011	4.3%	6.8%	9.2%	8.4%	6.0%	4.6%	4.4%	3.8%	4.3%	3.9%	4.0%	3.2%	3.0%	3.0%	2.7%
2012	4.1%	7.1%	9.0%	8.1%	6.5%	4.9%	4.8%	4.1%	4.2%	4.2%	3.8%	3.4%	3.2%	2.9%	2.8%
2013	4.1%	6.5%	9.0%	8.5%	6.5%	5.4%	4.9%	4.7%	4.5%	4.1%	4.0%	3.6%	3.3%	3.0%	2.7%
2014	3.9%	6.8%	8.9%	8.9%	6.8%	5.7%	5.1%	4.8%	4.5%	4.4%	3.9%				
2015	3.9%	7.2%	8.9%	9.1%	7.3%	5.7%	5.3%								
2016	4.3%	7.2%	9.6%												

**California Workers' Compensation
Estimated Indemnity Claim Frequency by Accident Year**



^[1] The 2014-2015 estimate is based on partial year unit statistical data. The 2015-2016 estimates are based on comparison of claim counts based on WCIRB accident year experience as of December 31, 2016 relative to the estimated change in statewide employment. Prior years are based on unit statistical data.

Item AC17-03-03

Study of Claim Settlement Rate Adjustments to Loss Development

The rate at which claims settle and close can significantly impact paid loss development patterns. For many years, the Committee has reviewed a paid loss development methodology that adjusts for changes in indemnity claim settlement rates during its review of alternative loss development methodologies. This methodology is based on the “Berquist-Sherman”¹ approach adapted for workers’ compensation claims and has included separate adjustments to closed claims and open claims. This methodology, which has been used in the determination of the WCIRB’s indicated advisory pure premium rate level in several instances when there was strong evidence of changing claim settlement patterns, was last reviewed in detail by the Committee in 2011 at which time several methodology refinements were adopted.² During that review, it was noted that the claim settlement rate adjustment generally improved the accuracy of the projection during the period of indemnity claim settlement rate decline following the implementation of the 2002 through 2004 reforms in 2005.

Recently, indemnity claim settlement rates have increased. At the August 3, 2016 meeting, the Committee discussed the recent claim settlement rate increases and whether an adjustment to loss development was appropriate. Although the Committee noted that the recent claim settlement rate increases may be impacting paid loss development patterns, it also noted that (a) the effectiveness of the claim settlement rate-adjusted methodology had not been studied in detail for several years, (b) there continues to be uncertainty surrounding the treatment of partial payments in the adjustment, and (c) recent claim closing rates have differed by injury type and the current methodology only adjusts loss development in aggregate over all indemnity injury types. As a result, the Committee recommended not reflecting the adjustment in the loss development methodology underlying the January 1, 2017 Pure Premium Rate Filing and directed that the methodology be further studied.³

Staff’s initial review of the claim settlement rate adjustment methodology is summarized below.

Overview of Current Claim Settlement Rate Adjustment Methodology

Exhibits 2.5.3 through 2.5.8 (for indemnity) and 2.6.3 through 2.6.8 (for medical) of Item AC17-03-02 of this Agenda show the computation of the current claim settlement rate adjustment methodology based on the “Berquist-Sherman” approach. The first steps of the methodology (Items A through E of the aforementioned exhibits) produce a triangle of closed indemnity claim counts for each accident year adjusted to a “current” claim settlement rate level. Ultimate indemnity claim counts are first projected based on the latest-year claim reporting pattern (Items A and B). Ultimate indemnity claim settlement ratios at each evaluation are then determined based on the reported closed indemnity claim counts and projected ultimate indemnity claim counts for that accident year (Items C and D). The most recent indemnity claim settlement ratio at each evaluation is selected to represent the “current” claim closing pattern and the number of closed indemnity claims for prior accident years at the evaluation is then restated based on that claim closing pattern and the estimated ultimate indemnity claim counts for that accident year (Item E).

The next steps of the methodology (Items F through H) represent the adjustments made to paid losses on *closed* claims to account for the changes in claim settlement pattern. First, the reported paid losses per closed indemnity claim is computed (Item F). This severity represents the *cumulative* paid losses per closed indemnity claim and includes partial payments as well as the final “closing” payment on these

¹ Berquist, J. and Sherman, R., *Loss Reserve Adequacy Testing: A Comprehensive, Systematic Approach*, PCAS LXIV, 123.

² See Item AC11-03-03 of the June 3, 2011 Agenda for more information.

³ At its August 10, 2016 meeting, the Governing Committee determined that the recent increases in claim settlement rates were significant enough to warrant the adjustment, which was subsequently reflected in the January 1, 2017 Pure Premium Rate Filing projection and in the California Department of Insurance’s Decision on that filing.

claims. Based on the original “Berquist-Sherman” approach, the paid losses per closed indemnity claim is adjusted to reflect the “current” claim settlement pattern and claims closed later are assumed to be larger than claims closed earlier. Specifically, the methodology assumes there is a log-linear relationship between the indemnity claim settlement rate and the average paid per closed indemnity claim. The adjusted average paid per closed indemnity claim is therefore based on a log-linear interpolation between indemnity claim settlement rates and closed claim severities at two maturities for that accident year and using the “current” indemnity claim settlement rate (Item G). The adjusted paid losses on closed indemnity claims is then multiplied by the adjusted closed indemnity claim counts to compute the adjusted total paid losses on closed indemnity claims (Item H).

The original “Berquist-Sherman” approach only explicitly adjusts for changes in paid losses on closed claims and does not address partial payments on open claims.⁴ However, if changes in claim settlement rates are impacting the number of and average cost of closed claims then there logically would be a converse effect on the partial payments made on open claims. As a result, the WCIRB’s application of the claim settlement rate adjustment methodology includes a separate adjustment to open indemnity claims (Items I through L). This adjustment assumes an open indemnity claim receives periodic payments throughout the year when it remains open. The amount of the “periodic payments” applied in the adjustment is based on the direction of the claim settlement rate change, the reported paid losses per open indemnity claim, and the evaluation in months. When the adjusted claim settlement rate for that evaluation is *lower* than the settlement rate reported for that accident year (i.e., indemnity claims are being adjusted from closed to open), the adjustment to open claims is based on extending the average paid per open claim from the prior evaluation to include another year of payments. When the adjusted claim settlement rate for that evaluation is *higher* than the settlement rate reported for that accident year (i.e., indemnity claims are being adjusted from open to closed), the adjustment to open claims is based on the average paid per open claim for that evaluation (Items I and J). This severity is then applied to the incremental changes in open indemnity claims resulting from the claim settlement rate adjustment and added to the unadjusted total paid on open indemnity claims to produce the adjusted total paid on open indemnity claims (Items K and L).

Once paid losses on closed claims and paid losses on open claims have been adjusted for the changes in indemnity claim settlement rates, they are recombined to produce an adjusted paid loss triangle. Adjusted paid loss development factors are then determined based on this triangle.⁵

Retrospective Assessment of Current Methodology

Staff performed retrospective tests of the accuracy of the current claim settlement rate-adjusted methodology compared to the unadjusted “latest-year” approach. For simplicity, no reform adjustments were applied to either methodology. The results of these tests are shown in Exhibit 1.1 for indemnity and 1.2 for medical for December 31 evaluations. For each accident year and evaluation, the paid age-to-age factor projected under each methodology was compared to the actual paid age-to-age factor that emerged for that accident year. The methodology that more accurately projected that accident year’s age-to-age factor at that evaluation is highlighted in green. A 0.1% improvement in the accuracy of the paid age-to-age factor was selected as the threshold for accuracy improvement to not count instances where the two methodologies produced only slightly different age-to-age factors.

If the claim settlement rate adjustment is working appropriately, it should improve the accuracy of the projection during periods of significant claim settlement rate changes. Staff compared the relative accuracy of the two methodologies during periods of claim settlement rate change of varying significance. The results of this comparison are shown in Exhibit 2. When claim settlement rates were changing in absolute value by 0.5% or more, the adjustment improved the accuracy of the projected age-to-age factor

⁴ This approach was developed using automobile liability claims which do not have the same volume of partial payments as do workers’ compensation claims.

⁵ The methodology includes one final adjustment to restate the age-to-age paid development factors at 100% market share.

in 51% of the observations, and was less accurate than the latest-year approach in 35% of the observations. When the claim settlement rates were changing in absolute value by 1.5% or more, although few observations of a claim settlement rate change of this magnitude were observed, the adjustment did improve the accuracy of the projected age-to-age factor in 80% of these observations. As a result, the claim settlement adjustment may only be appropriate during periods of significant claim settlement rate changes.

The current methodology only adjusts paid loss development for claim settlement rate changes through 84 months (7 years). Although changes in indemnity claim settlement rates at later maturities are typically more modest, when they are significant they may also impact paid loss development. The retrospective tests shown in Exhibits 1.1 and 1.2 include adjustments to loss development through 180 months. As shown in Exhibit 2, specifically during the 84 to 180 month period, the adjustment improved the accuracy of the projection during a 0.5% absolute change in indemnity claim settlement rates only 9% of the time and relatively few observations were observed with more significant changes in indemnity claim settlement rates at these maturities. As a result, staff does not recommend expanding the current claim settlement rate adjustment to include later periods.

One of the fundamental assumptions of the “Berquist-Sherman” approach is that the latest-year ultimate claim settlement pattern for historical years is appropriate to use to project future loss development on a more current year. Staff reviewed applying alternative claim settlement patterns in the adjustment to see if these refinements would improve the method’s accuracy, including selecting a two-year average of the ultimate indemnity claim settlement rates rather than the latest-year and selecting the latest incremental change in ultimate indemnity claim settlement rates rather than the latest cumulative indemnity claim settlement rate. These methods produced adjusted paid loss development factors that were consistently and significantly less accurate than those produced by the current claim settlement rate adjustment. As a result, staff does not recommend deviating from using the latest year claim settlement pattern in the current adjustment.

Another of the fundamental assumptions of the “Berquist-Sherman” approach is that there is an approximate log-linear relationship between the cumulative ultimate indemnity claim settlement ratio and the average paid losses per closed indemnity claim. Exhibit 3 plots the ultimate indemnity claim settlement rate against the log of the average paid indemnity or medical per closed indemnity claim for select accident years along with the approximate line fit through those data points.⁶ Although the relationship appears to be a bit more curvilinear at later maturities, inasmuch as the methodology is only interpolating between two data points and not the line fit to all data points, the assumption appears to be reasonable for the adjustment. Staff also analyzed the statistical relationship between the two measures and the results were statistically significant with R-squareds consistently above 0.98.

Treatment of Partial Payments

Open indemnity claim counts and paid losses on open indemnity claims are reported to the WCIRB on aggregate financial data calls. The analogous closed claim information is derived using total reported claim counts and paid losses. However, this information is only reported on a cumulative basis and for claims that are open as of the evaluation date of the data call. As a result, once a claim is closed, the cumulative payments on that claim—including the partial payments made while it was open and the final closing payment—are no longer reported in these fields unless the claim later reopens. This is problematic for the claim settlement rate-adjusted paid loss development methodology which requires some knowledge of the partial payments made on open claims to apply to the claims transitioning as a result of the adjustment. This information is approximated in the current approach based on average reported paid losses on open indemnity claims as described above.

⁶ Other years were also tested with similar results.

Unit statistical report (USR) data is reported to the WCIRB at the claim level and includes the (open or closed) status of the claim at each USR evaluation. This data can be used to “track” partial payments made on claims that are open from period to period as well as the final payments made on claims closed during the year, in addition to paid loss development on reopening claims and closed claims that remain closed. As a result, rather than approximating the paid losses on open and closed claims in transition as done in the WCIRB’s current claim settlement rate-adjusted loss development methodology, incremental payments on open and closing claims can be applied directly to the claims in transition based on whether these claims are estimated to be open or closed as a result of adjusting to a common claim settlement rate. Staff is in the process of developing alternative claim settlement rate-adjusted loss development projection methodologies using this data to determine if the current approach should be refined. Staff plans to present the results of this analysis to the Committee at the June 16, 2017 meeting.

A preliminary comparison of the estimated average paid per closed or open claim in transition applied in the current “Berquist-Sherman” adjustment is compared to actual payments on closing claims and open claims remaining open from “tracked” USR data in Exhibits 4.1 and 4.2 for indemnity and medical, respectively. In these exhibits, the top sections show the paid severity applied to closed claims or open claims in transition in the current approach. For closed claims, this represents the difference between the adjusted and unadjusted paid losses on closed indemnity claims divided by the difference in the adjusted and unadjusted closed indemnity claim counts, where the adjusted paid per closed indemnity claim is based on log-linear interpolation of the indemnity claim settlement rate across two maturities. For open claims, this represents the reported paid per open claim at the current evaluation or at the prior evaluation extended for another year of payments at the same rate. The middle sections of Exhibits 4.1 and 4.2 show the actual cumulative paid losses on claims closing at that report level or on claims that remained open across two report levels.

For payments on the closed claims in transition, the estimated severity from the “Berquist-Sherman” adjustment was compared to the actual closing claim severities across two report levels in the lower sections of Exhibits 4.1 and 4.2. The “Berquist-Sherman” approach assumes the severities on these claims should lie somewhere between the two maturities since that is the period during which the transition is occurring. The comparison was prepared in this manner since it is unknown at which point during the year these claims actually close and, as shown in the middle sections of Exhibits 4.1 and 4.2, differences in closing claim severities at different maturities are significant. In general, the estimated “Berquist-Sherman” closing claim severities are between the actual closing claim severities at the report level endpoints, though they are significantly closer to the later report level’s closing claim severity at later maturities. As a result, the current approach may be over-adjusting on closed claims at later maturities, which may understate the overall impact of the claim settlement rate change on paid loss development. However, inasmuch as the approximated closed claim severities are generally between the report level endpoints and the log-linear relationship assumed between closed claim severities and maturity level appears reasonable (see Exhibit 3), staff believes the current approach to approximate these severities is reasonable.

Although it is unclear at which point during the year a claim closes, open claims are assumed to be open throughout the year and are therefore assumed to receive a steady stream of payments in the current claim settlement rate adjustment methodology. The lower sections of Exhibits 4.1 and 4.2 also compare the estimated paid losses per open indemnity claim for the claims in transition from the current methodology to the actual paid on open claims that remained open across two unit statistical report levels.⁷ The open claim transition severity applied in the current approach is moderately but consistently lower than the actual payments on open claims. However, inasmuch as these claims are transitioning from open to closed or vice versa in the adjustment, it is reasonable to assume that they are smaller than

⁷ For example, the value shown for report level 2 represents the cumulative payments made on claims that were open at both report levels 1 and 2.

other claims that may remain open for longer periods. As a result, staff believes the current approach represents a reasonable approximation of the partial open payments on these claims.

Impact of Changes in Claim Settlement Rates by Injury Type

During the prior period of indemnity claim settlement rate decrease, claim settlement rates for both temporary-only claims and permanent disability claims were decreasing. However, recent increases in indemnity claim settlement rates have been much more concentrated in permanent disability claims as settlement rates of temporary disability claims have been relatively consistent.⁸ Inasmuch as the majority of paid loss development beyond an early maturity level occurs on permanent disability claims, a claim settlement rate adjustment to loss development that does not distinguish between injury types may understate the total impact on paid loss development.

Although aggregate financial data is reported to the WCIRB for all indemnity injury types combined, injury type information is available in USR data. Staff is in the process of developing alternative claim settlement rate-adjusted loss development methodologies by injury type to determine if the current approach should be refined. Staff plans to present the results of this analysis to the Committee at the June 16, 2017 meeting. However, a preliminary comparison of the current claim settlement rate adjustment methodology to a methodology that adjusts separately by injury type, as shown in Table 1, suggests that although the impact of the adjustment is more significant for permanent disability claims compared to temporary-only claims, the effect of separately adjusting by injury type is not having a significant impact on the overall adjustment based on these preliminary results.

Table 1 – Change in Age-to-Age Factor Resulting from Claim Settlement Rate Adjustment – Data as of Policy Year 2014 1st							
Component	Injury Type	1 st -2 nd	2 nd -3 rd	3 rd -4 th	4 th -5 th	5 th -6 th	1 st -6 th
Indemnity	All Indemnity (in Aggregate)	-0.6%	-0.2%	-0.9%	-0.6%	-0.5%	-2.8%
Indemnity	Permanent	-0.4%	-0.1%	-0.9%	-0.6%	-0.9%	-2.8%
Indemnity	Temporary	-1.2%	-0.5%	-0.6%	+0.1%	+1.9%	-0.4%
Indemnity	Perm. & Temp. Re-combined	-0.8%	-0.3%	-0.9%	-0.5%	-0.5%	-2.8%
Medical	All Indemnity (in Aggregate)	-0.2%	-0.1%	-0.7%	-0.4%	-0.4%	-1.8%
Medical	Permanent	-0.1%	-0.1%	-0.7%	-0.4%	-0.7%	-1.9%
Medical	Temporary	-1.0%	-0.4%	-0.4%	+0.1%	+1.2%	-0.5%
Medical	Perm. & Temp. Re-combined	-0.5%	-0.2%	-0.6%	-0.3%	-0.4%	-2.0%

⁸ See Exhibit C2.2 of Item AC17-03-01 of this Agenda.

**Retrospective Testing of Accuracy of Latest Year Paid Indemnity Development Compared to
Claim Settlement Rate-Adjusted Paid Indemnity Development**

Claim Settlement Rate-Adjusted Latest Year Paid Methodology														
Accident	% Difference from Actual Age-to-Age Paid Development													
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180
1998											0.1%	0.1%	-0.3%	-0.4%
1999										0.0%	0.1%	0.1%	0.1%	-0.1%
2000									0.2%	0.2%	0.2%	-0.2%	0.1%	0.1%
2001								-0.1%	0.1%	-0.1%	-0.3%	-0.6%	0.0%	0.2%
2002							0.3%	0.4%	-0.1%	0.0%	-0.1%	0.3%	0.0%	0.1%
2003						0.3%	0.1%	-0.6%	-0.5%	-0.6%	-0.2%	-0.4%	-0.1%	
2004					-0.5%	-0.6%	-1.1%	-0.9%	-0.7%	0.0%	0.0%	0.0%		
2005				-1.2%	-0.9%	-1.1%	-0.6%	-0.9%	-0.2%	-0.1%	-0.1%			
2006			0.1%	-1.4%	-1.1%	-0.8%	-0.4%	0.1%	0.1%	0.1%				
2007		-0.3%	-0.5%	0.3%	0.3%	0.6%	0.2%	0.3%	0.0%					
2008	-0.7%	-1.3%	-0.6%	-0.1%	0.4%	0.3%	0.4%	0.4%						
2009	-4.8%	-1.8%	0.6%	0.2%	0.0%	0.1%	-0.2%							
2010	-2.7%	-0.8%	-0.3%	0.0%	-0.6%	-0.7%								
2011	-1.5%	0.9%	0.7%	-0.3%	-0.2%									
2012	2.3%	0.8%	-0.3%	-0.1%										
2013	-1.1%	-0.8%	-0.2%											
2014	-2.0%	-2.0%												
2015	-1.2%													

Latest Year Paid Methodology														
Accident	% Difference from Actual Age-to-Age Paid Development													
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180
1998											0.0%	-0.1%	-0.2%	-0.1%
1999										0.0%	0.1%	0.0%	0.1%	0.0%
2000									0.2%	0.2%	0.1%	0.0%	0.0%	0.0%
2001								0.1%	-0.1%	-0.1%	-0.2%	-0.2%	0.0%	0.0%
2002							0.3%	0.4%	-0.1%	-0.1%	-0.2%	0.3%	0.0%	0.1%
2003						0.3%	0.1%	-0.6%	-0.5%	-0.6%	-0.1%	-0.4%	-0.1%	
2004					-0.1%	-0.6%	-1.1%	-0.9%	-0.7%	0.1%	0.0%	0.1%		
2005				-0.4%	-0.6%	-1.0%	-0.6%	-0.7%	0.2%	0.0%	0.0%			
2006			0.5%	-1.2%	-1.0%	-0.7%	-0.3%	0.7%	0.2%	0.2%				
2007		-0.5%	-1.4%	-0.4%	-0.2%	0.2%	0.4%	0.2%	-0.1%					
2008	-0.8%	-1.9%	-2.0%	-0.9%	0.0%	0.6%	0.5%	0.5%						
2009	-4.6%	-2.4%	-0.7%	-0.5%	0.0%	-0.1%	-0.3%							
2010	-2.8%	-0.7%	-0.1%	0.8%	0.1%	0.1%								
2011	-1.6%	0.9%	1.2%	0.2%	0.4%									
2012	2.3%	1.0%	0.2%	0.7%										
2013	-1.0%	-0.7%	0.3%											
2014	-2.0%	-1.5%												
2015	-1.2%													

Change in Ultimate Indemnity Claim Settlement Rates Projected at Time of LDF Projection ¹														
Accident	Age in Months													
Year	12	24	36	48	60	72	84	96	108	120	132	144	156	168
1998											-0.5%	-0.4%	-0.4%	-0.3%
1999										-0.2%	-0.1%	-0.2%	-0.2%	-0.2%
2000									-0.7%	-0.5%	-0.5%	-0.4%	-0.3%	-0.2%
2001								-1.3%	-1.1%	-1.1%	-0.9%	-0.9%	-0.5%	-0.5%
2002							0.4%	0.4%	0.1%	0.2%	0.2%	0.6%	0.4%	0.3%
2003						0.1%	0.0%	-0.3%	-0.1%	-0.1%	0.4%	0.0%	-0.1%	
2004					1.3%	0.4%	-0.2%	-0.1%	-0.1%	0.6%	0.1%	0.1%		
2005				2.1%	0.8%	0.4%	0.4%	0.3%	0.8%	0.2%	0.2%			
2006			1.7%	0.3%	0.2%	0.2%	0.2%	0.8%	0.2%	0.1%				
2007		-0.5%	-1.2%	-1.2%	-1.2%	-1.0%	0.3%	-0.1%	-0.1%					
2008	0.2%	-1.6%	-1.8%	-1.5%	-1.0%	0.6%	0.1%	0.2%						
2009	-0.7%	-1.7%	-1.6%	-1.3%	0.0%	-0.4%	-0.3%							
2010	0.1%	0.5%	0.7%	1.8%	1.4%	1.3%								
2011	0.5%	0.4%	1.4%	1.0%	1.0%									
2012	0.1%	0.9%	1.3%	1.4%										
2013	-0.6%	0.4%	1.2%											
2014	0.0%	1.2%												
2015	0.5%													

¹ For example, the value for 2014 at 12 months is equal to the difference between the ultimate indemnity claim settlement rate for 2014 at 12 months and the ultimate indemnity claim settlement rate for 2013 at 12 months estimated based on December 31, 2014 experience.

Green - Methodology was more accurate by more than 0.1% than the comparison methodology for that age-to-age factor.

Red - Arithmetic change in claim settlement rates by less than -0.5% (lighter color) or less than -1.0% (darker color).

Blue - Arithmetic change in claim settlement rates by more than 0.5% (lighter color) or more than 1.0% (darker color).

Source: WCIRB aggregate financial data for December 31 evaluations.

**Retrospective Testing of Accuracy of Latest Year Paid Medical Development Compared to
Claim Settlement Rate-Adjusted Paid Medical Development**

Claim Settlement Rate-Adjusted Latest Year Paid Methodology														
Accident Year	% Difference from Actual Age-to-Age Paid Development													
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180
1998														-0.4%
1999													0.7%	0.6%
2000												0.7%	0.4%	-0.3%
2001											0.2%	0.8%	0.1%	2.0%
2002										0.4%	-0.2%	-0.4%	-0.3%	-0.3%
2003									0.0%	-0.7%	-0.5%	0.0%	0.2%	
2004								0.1%	-0.6%	-0.7%	0.1%	-0.1%		
2005							-0.1%	-1.0%	-1.2%	0.1%	-0.1%			
2006						0.4%	-0.3%	-0.4%	0.0%	0.4%				
2007					0.8%	0.0%	-0.5%	0.2%	0.4%					
2008				0.2%	-0.1%	-0.3%	0.4%	0.2%						
2009			0.2%	-0.5%	-0.1%	0.9%	0.7%							
2010		-1.5%	-1.5%	-0.6%	-0.5%	-1.4%								
2011	-3.4%	-0.3%	0.4%	-0.4%	-1.1%									
2012	0.7%	-0.1%	-0.7%	-0.7%										
2013	2.5%	0.0%	0.3%											
2014	-1.1%	0.0%												
2015	-0.4%													

Latest Year Paid Methodology														
Accident	% Difference from Actual Age-to-Age Paid Development													
Year	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180
1998														-0.3%
1999													0.3%	0.3%
2000												0.5%	-0.4%	-0.1%
2001											0.1%	-0.2%	-0.2%	0.0%
2002										0.6%	-0.1%	0.4%	0.6%	0.5%
2003								0.2%	-0.6%	-0.6%	-0.3%	-0.1%	-0.1%	
2004								0.1%	-0.6%	-0.4%	0.2%	0.1%		
2005							0.1%	-0.9%	-0.2%	0.3%	0.3%			
2006						0.5%	-0.2%	0.7%	0.4%	0.6%				
2007					0.2%	-0.7%	-0.1%	0.1%	0.3%					
2008				-0.5%	-0.5%	0.3%	0.6%	0.6%						
2009			-0.8%	-1.0%	-0.1%	0.5%	0.5%							
2010		-1.4%	-1.1%	0.7%	0.7%	0.0%								
2011	-3.9%	-0.1%	1.4%	0.5%	0.1%									
2012	0.7%	0.1%	-0.1%	0.3%										
2013	2.8%	0.1%	0.9%											
2014	-1.2%	0.4%												
2015	-0.4%													

Change in Ultimate Indemnity Claim Settlement Rates Projected at Time of LDF Projection ¹														
Accident	Age in Months													
<u>Year</u>	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>	<u>108</u>	<u>120</u>	<u>132</u>	<u>144</u>	<u>156</u>	<u>168</u>
1998														-0.3%
1999													-0.2%	-0.2%
2000													-0.3%	-0.1%
2001											-0.9%	-0.9%	-0.5%	-0.6%
2002										0.2%	0.2%	0.6%	0.4%	0.4%
2003									0.0%	0.0%	0.4%	0.0%	-0.1%	
2004								-0.1%	-0.1%	0.6%	0.1%	0.1%		
2005							0.4%	0.3%	0.8%	0.2%	0.2%			
2006						0.2%	0.1%	0.8%	0.2%	0.1%				
2007					-1.2%	-0.9%	0.3%	-0.1%	-0.1%					
2008				-1.5%	-1.0%	0.6%	0.1%	0.2%						
2009			-1.6%	-1.2%	0.0%	-0.4%	-0.3%							
2010		0.5%	0.7%	1.8%	1.5%	1.3%								
2011	0.6%	0.5%	1.6%	1.2%	1.1%									
2012	0.1%	0.9%	1.3%	1.4%										
2013	-0.6%	0.4%	1.2%											
2014	0.0%	1.2%												
2015	0.5%													

¹ For example, the value for 2014 at 12 months is equal to the difference between the ultimate indemnity claim settlement rate for 2014 at 12 months and the ultimate indemnity claim settlement rate for 2013 at 12 months estimated based on December 31, 2014 experience.

Green - Methodology was more accurate by more than 0.1% than the comparison methodology for that age-to-age factor.

Red - Arithmetic change in claim settlement rates by less than -0.5% (lighter color) or less than -1.0% (darker color).

Blue - Arithmetic change in claim settlement rates by more than 0.5% (lighter color) or more than 1.0% (darker color).

Source: WCIRB aggregate financial data for December 31 evaluations.

Summary of Retrospective Tests of Claim Settlement Rate-Adjusted Paid Methodology

Periods where Settlement Rate Change > 0.5% in Absolute Value

<u>More Accurate Method¹</u>	Development	Paid Indemnity		Paid Medical		Total Observations	
	<u>Period</u>	<u># of Factors</u>	<u>% of Total</u>	<u># of Factors</u>	<u>% of Total</u>	<u># of Factors</u>	<u>% of Total</u>
Claim Settlement Adj.	12 to 84	16	48%	12	55%	28	51%
Latest Year Paid	12 to 84	13	39%	6	27%	19	35%
Neither Method	12 to 84	4	12%	4	18%	8	15%
Total Observations	12 to 84	33	100%	22	100%	55	100%
Claim Settlement Adj.	84 to 180	1	7%	1	13%	2	9%
Latest Year Paid	84 to 180	4	27%	5	63%	9	39%
Neither Method	84 to 180	10	67%	2	25%	12	52%
Total Observations	84 to 180	15	100%	8	100%	23	100%

Periods where Settlement Rate Change > 1.0% in Absolute Value

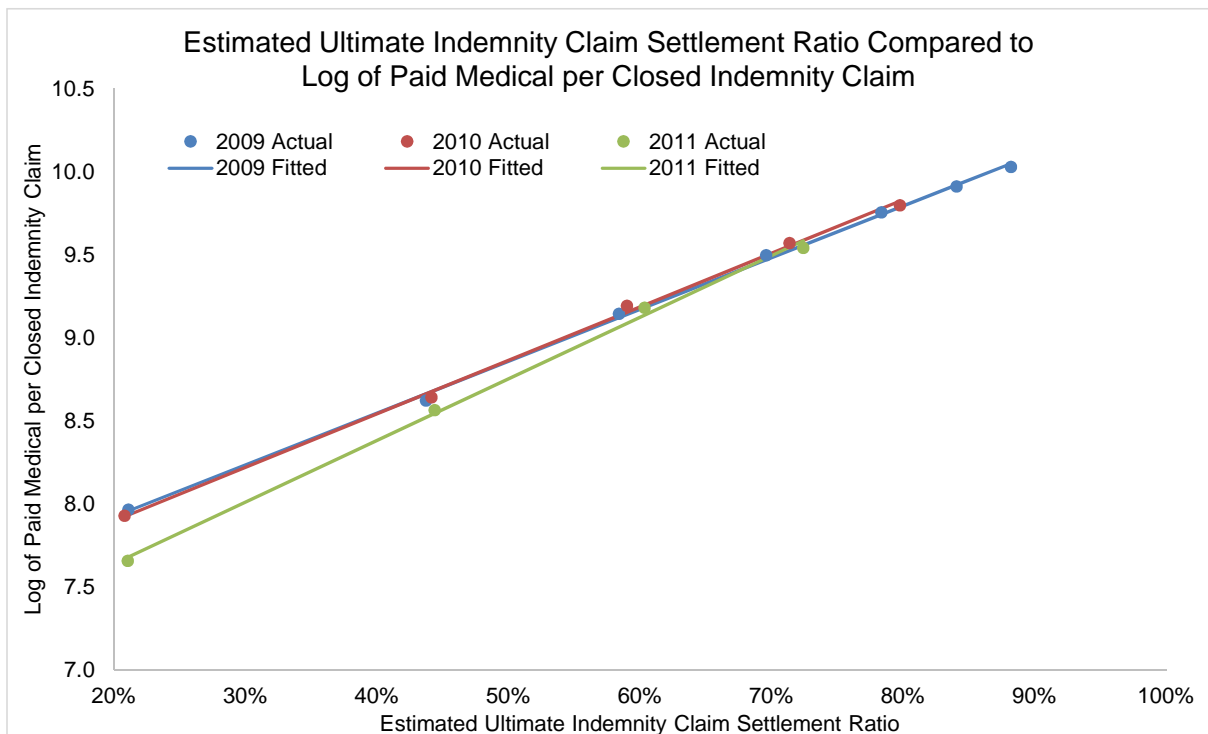
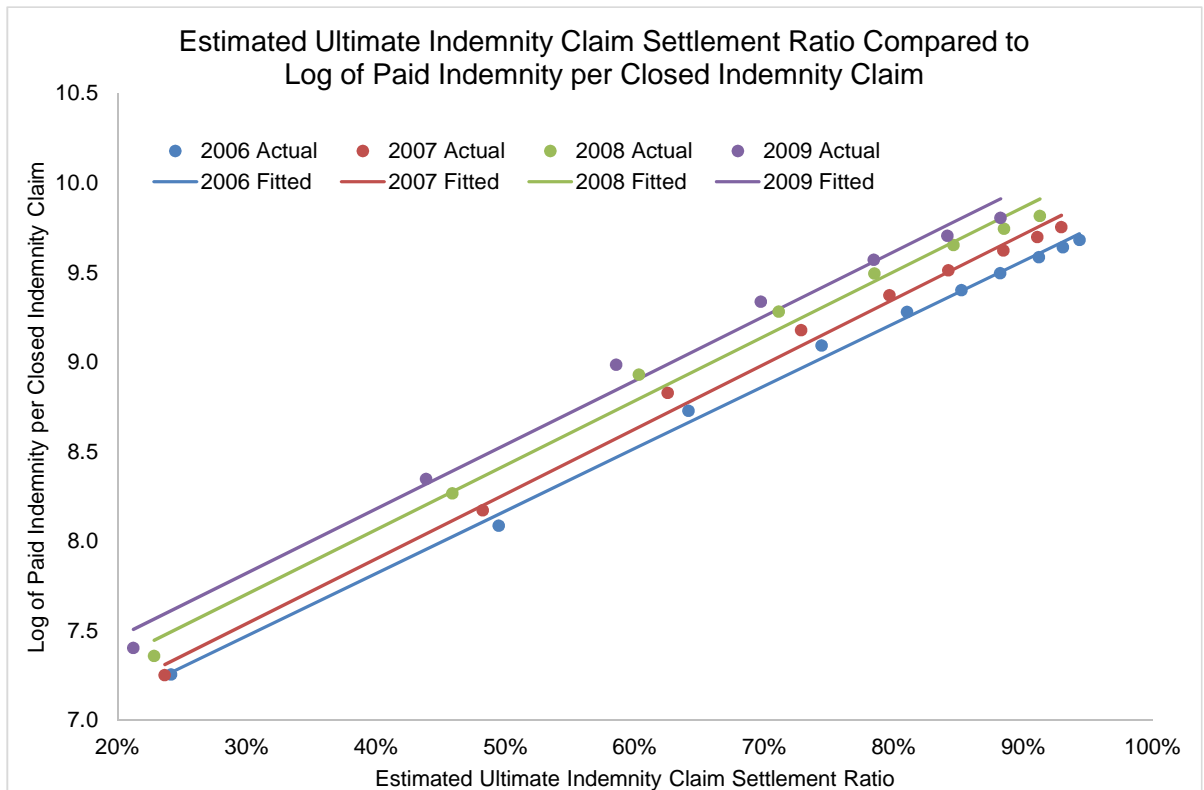
<u>More Accurate Method¹</u>	Development	Paid Indemnity		Paid Medical		Total Observations	
	<u>Period</u>	<u># of Factors</u>	<u>% of Total</u>	<u># of Factors</u>	<u>% of Total</u>	<u># of Factors</u>	<u>% of Total</u>
Claim Settlement Adj.	12 to 84	12	55%	8	57%	20	56%
Latest Year Paid	12 to 84	8	36%	5	36%	13	36%
Neither Method	12 to 84	2	9%	1	7%	3	8%
Total Observations	12 to 84	22	100%	14	100%	36	100%
Claim Settlement Adj.	84 to 180	0	0%	0	N/A	0	0%
Latest Year Paid	84 to 180	0	0%	0	N/A	0	0%
Neither Method	84 to 180	3	100%	0	N/A	3	100%
Total Observations	84 to 180	3	100%	0	N/A	3	100%

Periods where Settlement Rate Change > 1.5% in Absolute Value

<u>More Accurate Method¹</u>	Development	Paid Indemnity		Paid Medical		Total Observations	
	<u>Period</u>	<u># of Factors</u>	<u>% of Total</u>	<u># of Factors</u>	<u>% of Total</u>	<u># of Factors</u>	<u>% of Total</u>
Claim Settlement Adj.	12 to 84	5	71%	3	100%	8	80%
Latest Year Paid	12 to 84	1	14%	0	0%	1	10%
Neither Method	12 to 84	1	14%	0	0%	1	10%
Total Observations	12 to 84	7	100%	3	100%	10	100%
Claim Settlement Adj.	84 to 180	0	N/A	0	N/A	0	N/A
Latest Year Paid	84 to 180	0	N/A	0	N/A	0	N/A
Neither Method	84 to 180	0	N/A	0	N/A	0	N/A
Total Observations	84 to 180	0	N/A	0	N/A	0	N/A

¹ "More Accurate" defined as > 0.1% improvement in accuracy in projecting actual age-to-age factor compared to other method.

Source: WCIRB aggregate financial data. See also Exhibits 1.1 and 1.2.



Comparison of Paid Indemnity Severity on Claims in Transition

Current "Berquist-Sherman" Approach

Paid Indemnity Severity for Closed Claims in Transition							Paid Indemnity Severity for Open Claims in Transition						
Policy Year	Report Level						Policy Year	Report Level					
	1	2	3	4	5	6		1	2	3	4	5	6
2005	5,788	17,303	26,863	33,390	36,069	40,831	2005	6,903	13,806	21,008	26,836	31,210	36,596
2006	6,337	18,659	29,761	35,150	42,452	44,916	2006	7,277	14,553	22,302	28,519	33,145	38,347
2007	7,154	16,985	28,382	35,796	42,330	48,919	2007	7,639	15,464	22,843	29,380	35,780	41,373
2008	8,128	19,656	30,068	36,907	43,419	50,640	2008	7,916	16,030	23,666	30,476	36,643	42,706
2009	8,498	19,655	29,038	39,053	47,206		2009	7,603	15,865	23,600	30,483	36,303	43,564
2010	8,605	19,171	29,948	38,976			2010	7,615	15,696	22,957	29,023	36,278	
2011	8,915	19,684	30,214				2011	7,813	15,810	22,949	30,599		
2012	9,089	19,870					2012	7,580	15,325	22,987			
2013	9,679						2013	7,605	15,209				

Actual Payments on Closing and Open Claims Tracked by Claim Status Across Two Report Levels

Paid Indemnity Severity for Claims Closing at that Report Level							Paid Indemnity Severity for Claims Remaining Open at that Report Level						
Policy Year	Report Level						Policy Year	Report Level					
	1	2	3	4	5	6		1	2	3	4	5	6
2005	2,060	11,489	20,361	28,420	31,861	36,107	2005	6,903	15,686	21,603	26,493	32,448	38,334
2006	2,272	12,289	22,078	29,264	34,194	42,670	2006	7,277	16,760	22,991	29,385	35,387	41,015
2007	2,392	13,522	22,800	31,633	37,680	45,135	2007	7,639	17,381	24,953	31,580	38,465	44,117
2008	2,576	14,507	24,671	32,852	39,658	45,147	2008	7,916	18,435	26,004	33,082	39,401	45,432
2009	2,678	13,986	24,700	32,457	40,820	48,610	2009	7,603	18,249	25,842	32,831	38,565	43,107
2010	2,753	14,343	25,088	33,516	41,468		2010	7,615	18,264	25,234	31,298	36,085	
2011	3,086	15,006	25,539	34,173			2011	7,813	18,409	25,443	31,095		
2012	3,375	15,557	26,368				2012	7,580	18,050	24,112			
2013	3,851	16,194					2013	7,605	17,777				

Comparison of "Berquist-Sherman" Approach to Actual Payments

Percentile of "Berquist-Sherman" Closed Claim Transition Severity within Actual Closing Severity Endpoints ¹							Difference between "Berquist-Sherman" Estimated Paid per Open Transition Claim and Actual Open Claim Severity						
Policy Year	Report Level						Policy Year	Report Level					
	1	2	3	4	5	6		1	2	3	4	5	6
2005	40%	66%	81%	144%	99%	73%	2005	0%	-12%	-3%	1%	-4%	-5%
2006	41%	65%	107%	119%	97%	63%	2006	0%	-13%	-3%	-3%	-6%	-7%
2007	43%	37%	63%	69%	62%	72%	2007	0%	-11%	-8%	-7%	-7%	-6%
2008	47%	51%	66%	60%	69%	83%	2008	0%	-13%	-9%	-8%	-7%	-6%
2009	51%	53%	56%	79%	82%		2009	0%	-13%	-9%	-7%	-6%	1%
2010	50%	45%	58%	69%			2010	0%	-14%	-9%	-7%	1%	
2011	49%	44%	54%				2011	0%	-14%	-10%	-2%		
2012	47%	40%					2012	0%	-15%	-5%			
2013	47%						2013	0%	-14%				

¹ For example, for Report Level 1 this is equal to the estimated "Berquist-Sherman" paid per closed claim in transition for Report Level 1 as a percentile between the actual paid per closing claim severity for Report Levels 1 and 2.

Source: WCIRB unit statistical data

Comparison of Paid Medical Severity on Claims in Transition

Current "Berquist-Sherman" Approach

Paid Medical Severity for Closed Claims in Transition							Paid Medical Severity for Open Claims in Transition						
Policy Year	Report Level						Policy Year	Report Level					
	1	2	3	4	5	6		1	2	3	4	5	6
2005	6,185	16,232	26,438	36,468	42,962	54,667	2005	8,740	17,481	24,495	33,816	42,821	53,506
2006	6,890	18,619	30,568	41,578	51,717	60,401	2006	9,356	18,712	27,601	37,421	48,050	59,019
2007	8,099	18,294	32,450	44,304	55,802	73,005	2007	10,355	19,787	30,509	41,150	53,172	66,317
2008	9,333	21,511	35,386	46,269	60,017	70,286	2008	10,880	20,345	30,581	41,616	53,116	64,477
2009	10,073	22,540	34,713	51,329	66,033		2009	10,820	20,724	31,521	43,807	54,620	65,544
2010	9,959	21,902	36,224	50,225			2010	10,548	20,265	30,734	40,998	51,247	
2011	9,744	21,607	34,844				2011	9,885	18,855	28,415	37,887		
2012	9,588	21,068					2012	9,534	18,122	27,183			
2013	9,827						2013	8,937	17,873				

Actual Payments on Closing and Open Claims Tracked by Claim Status Across Two Report Levels

Paid Medical Severity for Claims Closing at that Report Level							Paid Medical Severity for Claims Remaining Open at that Report Level						
Policy Year	Report Level						Policy Year	Report Level					
	1	2	3	4	5	6		1	2	3	4	5	6
2005	2,403	11,141	19,780	30,200	36,378	46,215	2005	8,740	18,012	27,094	36,294	47,764	58,555
2006	2,619	12,320	22,582	33,362	40,365	50,978	2006	9,356	20,521	30,174	40,607	51,587	63,825
2007	2,854	14,392	23,889	35,700	46,422	59,653	2007	10,355	21,970	33,261	44,365	57,983	71,314
2008	3,219	15,564	26,399	37,929	50,481	62,169	2008	10,880	23,095	33,550	45,575	57,221	69,399
2009	3,420	15,743	27,941	39,070	53,303	67,205	2009	10,820	23,431	34,848	47,645	59,087	67,086
2010	3,411	15,785	28,394	39,729	53,078		2010	10,548	23,202	33,569	43,798	53,377	
2011	3,390	16,299	27,354	38,670			2011	9,885	21,798	30,985	39,996		
2012	3,707	15,952	27,609				2012	9,534	20,596	29,042			
2013	4,028	15,922					2013	8,937	19,057				

Comparison of "Berquist-Sherman" Approach to Actual Payments

Percentile of "Berquist-Sherman" Closed Claim Transition Severity within Actual Closing Severity Endpoints ¹							Difference between "Berquist-Sherman" Estimated Paid per Open Transition Claim and Actual Open Claim Severity						
Policy Year	Report Level						Policy Year	Report Level					
	1	2	3	4	5	6		1	2	3	4	5	6
2005	43%	59%	64%	101%	67%	68%	2005	0%	-3%	-10%	-7%	-10%	-9%
2006	44%	61%	74%	117%	107%	87%	2006	0%	-9%	-9%	-8%	-7%	-8%
2007	45%	41%	72%	80%	71%	97%	2007	0%	-10%	-8%	-7%	-8%	-7%
2008	50%	55%	78%	66%	82%	96%	2008	0%	-12%	-9%	-9%	-7%	-7%
2009	54%	56%	61%	86%	92%		2009	0%	-12%	-10%	-8%	-8%	-2%
2010	53%	49%	69%	79%			2010	0%	-13%	-8%	-6%	-4%	
2011	49%	48%	66%				2011	0%	-14%	-8%	-5%		
2012	48%	44%					2012	0%	-12%	-6%			
2013	49%						2013	0%	-6%				

¹ For example, for Report Level 1 this is equal to the estimated "Berquist-Sherman" paid per closed claim in transition for Report Level 1 as a percentile between the actual paid per closing claim severity for Report Levels 1 and 2.
Source: WCIRB unit statistical data

Item AC17-03-04

Experience Rating – Treatment of Small Medical Claims

At the June 17, 2016 meeting, the Committee discussed the recommendations of the Working Group on the Reporting of Small Medical Claims. Among the Working Group's recommendation was to consider eliminating the first \$250 of each claim from the experience rating computation.

In 2016, staff reviewed with the Actuarial Research Working Group experience rating plan options that excluded the first \$250, \$500 or \$1,000 of each claim as alternatives to reduce incentive not to report small claims for experience rating. The exclusion was for medical and indemnity combined as the additional complexity of excluding only medical was not found to be cost effective. The alternative excluding the first \$250 of each claim was found to result in only a small loss of predictive accuracy and the findings for four projection periods (policy years 2010-2013) were reviewed in 2016 by the Actuarial Committee and Classification and Rating Committee, which both agreed that a change to the experience rating plan to exclude the first \$250 dollars of each claim should be further studied with an updated year of experience.

Staff completed its review of a fifth year projection year (policy year 2014) to confirm that the findings for the most recent evaluable period were comparable to those found for the four prior years studied. The Actuarial Research Working Group reviewed staff's findings at its February 17, 2017 meeting. Exhibit 1 shows the changes in efficiencies when excluding the first \$250 of each claim relative to the baseline (reductions in squared error attributable to the experience modification) by expected loss cohort for each of the years tested and for the five-year average. Each cohort includes 5,000 employers with the 5,000 largest employers comprising cohort L01 and the smallest 5,000 employers comprising L20. Cohort L01 is further subdivided into groups (Q1 through Q5) of 1,000 employers and the largest 1,000 employers is further subdivided into groups of 200 employers (P1 through P5). Expected losses are not shown as these vary over the five years. The findings for the most recent evaluable period were comparable to those found for the four prior years studied.

Exhibit 2 provides the changes in efficiency averaged over the five years by expected loss cohort by major industrial sectors. Exhibit 3 provides the expected impact distributions by year for expected loss groups.

Staff will discuss the findings at the meeting. Pending approval by WCIRB committees, staff plans to file this 'Small Medical Exclusion' alternative this June as part of the WCIRB's 2018 Regulatory Filing to be effective with experience modifications for policies incepting January 1, 2019.

EXHIBIT 1: EFFICIENCIES & CHANGES FROM BASELINE

E[Loss] Cohort	Efficiency: Baseline Variable Split						Efficiency: \$250 First Aid Limit						Change in Efficiency from Baseline Variable Split					
	2010	2011	2012	2013	2014	5-Yr Avg.	2010	2011	2012	2013	2014	5-Yr Avg.	2010	2011	2012	2013	2014	5-Yr Avg.
L01 Q1 P1	0.4681	0.4583	0.5091	0.2741	0.4372	0.4294	0.4715	0.4672	0.5096	0.2750	0.4361	0.4319	0.7%	1.9%	0.1%	0.3%	-0.2%	0.6%
L01 Q1 P2	0.4736	0.4210	0.4152	0.4191	0.3904	0.4239	0.4693	0.4223	0.4197	0.4214	0.3890	0.4243	-0.9%	0.3%	1.1%	0.6%	-0.4%	0.1%
L01 Q1 P3	0.3207	0.2533	0.3724	0.2548	0.3470	0.3096	0.3183	0.2571	0.3741	0.2519	0.3448	0.3092	-0.7%	1.5%	0.5%	-1.2%	-0.7%	-0.1%
L01 Q1 P4	0.4569	0.3513	0.4816	0.4409	0.3010	0.4063	0.4489	0.3481	0.4791	0.4366	0.3008	0.4027	-1.7%	-0.9%	-0.5%	-1.0%	0.0%	-0.9%
L01 Q1 P5	0.4374	0.4485	0.1289	0.2933	0.2811	0.3179	0.4362	0.4483	0.1275	0.2958	0.2806	0.3177	-0.3%	0.0%	-1.1%	0.9%	-0.2%	-0.1%
L01 Q2	0.0946	0.1681	0.1732	0.1865	0.2365	0.1718	0.0937	0.1678	0.1711	0.1856	0.2350	0.1707	-0.9%	-0.2%	-1.2%	-0.5%	-0.7%	-0.7%
L01 Q3	0.1616	0.1727	0.1446	0.1768	0.1293	0.1570	0.1588	0.1697	0.1422	0.1745	0.1275	0.1546	-1.7%	-1.7%	-1.7%	-1.3%	-1.4%	-1.6%
L01 Q4	0.0826	0.0949	0.1362	0.1155	0.1495	0.1158	0.0816	0.0925	0.1347	0.1143	0.1480	0.1142	-1.2%	-2.5%	-1.1%	-1.1%	-1.0%	-1.3%
L01 Q5	0.0927	0.0702	0.1002	0.0935	0.0908	0.0895	0.0908	0.0692	0.0976	0.0930	0.0899	0.0881	-2.0%	-1.3%	-2.6%	-0.5%	-1.1%	-1.5%
L02	0.0445	0.0763	0.0879	0.1012	0.0831	0.0786	0.0432	0.0746	0.0869	0.0998	0.0822	0.0773	-3.0%	-2.3%	-1.1%	-1.5%	-1.1%	-1.6%
L03	0.0545	0.0398	0.0600	0.0732	0.0576	0.0570	0.0533	0.0386	0.0585	0.0722	0.0564	0.0558	-2.1%	-2.9%	-2.4%	-1.3%	-2.0%	-2.1%
L04	0.0227	0.0352	0.0470	0.0441	0.0601	0.0418	0.0224	0.0346	0.0461	0.0431	0.0593	0.0411	-1.3%	-1.7%	-2.0%	-2.1%	-1.4%	-1.7%
L05	0.0351	0.0443	0.0338	0.0298	0.0296	0.0345	0.0342	0.0432	0.0329	0.0290	0.0287	0.0336	-2.4%	-2.5%	-2.6%	-2.9%	-3.1%	-2.7%
L06	0.0213	0.0195	0.0161	0.0231	0.0311	0.0222	0.0205	0.0190	0.0156	0.0223	0.0302	0.0215	-3.7%	-2.2%	-3.2%	-3.7%	-2.9%	-3.1%
L07	0.0225	0.0125	0.0192	0.0224	0.0287	0.0211	0.0219	0.0121	0.0186	0.0219	0.0280	0.0205	-2.8%	-3.4%	-3.3%	-2.5%	-2.2%	-2.7%
L08	0.0079	0.0170	0.0271	0.0190	0.0280	0.0198	0.0070	0.0166	0.0266	0.0189	0.0279	0.0194	-11.0%	-2.5%	-1.8%	-0.3%	-0.5%	-2.0%
L09	0.0127	0.0180	0.0183	0.0183	0.0259	0.0186	0.0122	0.0175	0.0179	0.0174	0.0253	0.0181	-3.5%	-2.8%	-2.3%	-5.0%	-2.3%	-3.1%
L10	0.0098	0.0127	0.0134	0.0210	0.0108	0.0135	0.0091	0.0121	0.0126	0.0206	0.0100	0.0129	-7.1%	-4.5%	-6.1%	-1.6%	-7.9%	-4.8%
L11	0.0119	0.0139	0.0279	0.0125	0.0130	0.0158	0.0117	0.0135	0.0277	0.0117	0.0124	0.0154	-1.3%	-3.5%	-0.6%	-6.3%	-4.6%	-2.8%
L12	0.0050	0.0135	0.0102	0.0178	0.0116	0.0116	0.0042	0.0128	0.0097	0.0171	0.0112	0.0110	-14.3%	-4.9%	-5.4%	-3.7%	-3.1%	-5.1%
L13	0.0183	0.0133	0.0108	0.0215	0.0107	0.0149	0.0181	0.0126	0.0106	0.0211	0.0101	0.0145	-1.4%	-4.9%	-2.7%	-2.0%	-5.3%	-2.9%
L14	0.0100	0.0058	0.0152	0.0107	0.0153	0.0114	0.0100	0.0059	0.0148	0.0106	0.0147	0.0112	0.3%	0.9%	-2.9%	-1.6%	-3.8%	-1.9%
L15	0.0092	0.0155	0.0138	0.0153	0.0070	0.0122	0.0092	0.0152	0.0135	0.0150	0.0068	0.0119	-1.0%	-2.0%	-2.2%	-2.1%	-3.1%	-2.0%
L16	0.0100	0.0069	0.0049	0.0118	0.0086	0.0084	0.0099	0.0066	0.0046	0.0116	0.0085	0.0082	-1.4%	-3.8%	-6.4%	-1.5%	-0.2%	-2.2%
L17	0.0112	0.0113	0.0086	0.0069	0.0093	0.0095	0.0112	0.0111	0.0082	0.0068	0.0090	0.0093	0.0%	-1.1%	-4.6%	-1.7%	-4.0%	-2.2%
L18	0.0075	0.0096	0.0068	0.0055	0.0075	0.0074	0.0066	0.0094	0.0063	0.0053	0.0071	0.0069	-11.3%	-2.2%	-8.2%	-3.2%	-6.0%	-6.1%
L19	0.0067	0.0074	0.0040	0.0058	0.0068	0.0062	0.0062	0.0069	0.0035	0.0054	0.0065	0.0057	-8.3%	-6.9%	-12.7%	-7.0%	-4.4%	-7.4%
L20	0.0032	0.0036	0.0063	0.0037	0.0078	0.0049	0.0024	0.0032	0.0059	0.0031	0.0076	0.0045	-24.2%	-9.9%	-6.3%	-15.5%	-2.8%	-9.5%
E[Loss] - Weighted																		
L01 - L20	0.2056	0.2074	0.2264	0.1739	0.2090	0.2045	0.2049	0.2086	0.2259	0.1734	0.2078	0.2041	-0.4%	0.6%	-0.2%	-0.3%	-0.6%	-0.2%
L01 - L10	0.2233	0.2246	0.2448	0.1879	0.2260	0.2213	0.2225	0.2260	0.2443	0.1873	0.2248	0.2210	-0.4%	0.6%	-0.2%	-0.3%	-0.5%	-0.1%
L11 - L20	0.0098	0.0107	0.0123	0.0123	0.0103	0.0111	0.0094	0.0104	0.0119	0.0119	0.0099	0.0107	-3.3%	-3.5%	-3.1%	-3.4%	-3.9%	-3.4%
Risk - Weighted																		
L01 - L20	0.0248	0.0277	0.0309	0.0323	0.0322	0.0296	0.0242	0.0272	0.0303	0.0317	0.0316	0.0290	-2.5%	-2.0%	-2.0%	-1.8%	-1.9%	-2.0%
L01 - L10	0.0404	0.0454	0.0510	0.0534	0.0546	0.0490	0.0395	0.0446	0.0501	0.0526	0.0538	0.0481	-2.2%	-1.7%	-1.7%	-1.5%	-1.5%	-1.7%
L11 - L20	0.0093	0.0101	0.0109	0.0112	0.0098	0.0102	0.0090	0.0097	0.0105	0.0108	0.0094	0.0099	-3.8%	-3.5%	-3.6%	-3.4%	-3.8%	-3.6%

EXHIBIT 2: CHANGES FROM BASELINE EFFICIENCY BY INDUSTRY

E[Loss] Cohort	Change in Five-Year Average Efficiency: Baseline to \$250 First Aid Limit						
	<i>All Risks</i>	<i>Construction</i>	<i>Manufacturing</i>	<i>Restaurants</i>	<i>Clerical</i>	<i>Outside Sales</i>	<i>All Other</i>
L01 Q1 P1	0.6%	-0.4%	1.0%	-1.4%	0.5%	-0.4%	1.1%
L01 Q1 P2	0.1%	-0.2%	-0.1%	8.9%	-0.5%	0.0%	0.3%
L01 Q1 P3	-0.1%	-0.5%	-1.5%	-1.6%	-0.2%	0.0%	0.4%
L01 Q1 P4	-0.9%	-0.8%	-0.3%	-7.2%	-0.7%	-0.7%	-0.8%
L01 Q1 P5	-0.1%	0.0%	-0.9%	-0.1%	0.1%	3.3%	0.2%
L01 Q2	-0.7%	-0.4%	0.8%	-1.3%	-2.2%	-5.5%	-0.6%
L01 Q3	-1.6%	-1.8%	-2.5%	-6.7%	-1.0%	-0.1%	-1.5%
L01 Q4	-1.3%	-0.3%	-2.4%	-3.2%	-0.8%	-14.3%	-1.4%
L01 Q5	-1.5%	-1.5%	-0.7%	-2.0%	-1.4%	-0.8%	-1.8%
L02	-1.6%	-5.0%	-1.0%	0.3%	-1.5%	-1.7%	-1.7%
L03	-2.1%	-2.0%	-1.5%	-7.8%	-1.6%	-1.6%	-2.6%
L04	-1.7%	-9.6%	-1.0%	-195.7%	-0.7%	-0.8%	-1.9%
L05	-2.7%	-7.9%	-2.8%	-0.3%	-0.7%	-1.9%	-3.0%
L06	-3.1%	-17.0%	-4.9%	2.3%	-1.7%	-5.6%	-3.3%
L07	-2.7%	-7.4%	-1.8%	-2.8%	-2.9%	-0.9%	-2.9%
L08	-2.0%	-3.1%	-0.9%	-0.9%	-0.1%	-2.7%	-2.8%
L09	-3.1%	-10.3%	-1.5%	3.2%	-1.0%	-5.2%	-3.6%
L10	-4.8%	-4.9%	0.8%	-11.8%	-4.0%	9.3%	-5.4%
L11	-2.8%	-4.4%	-4.4%	21.9%	-1.1%	-2.5%	-3.4%
L12	-5.1%	-9.2%	-3.2%	-1.7%	-2.1%	-1.6%	-5.7%
L13	-2.9%	-5.2%	-5.8%	87.8%	0.3%	-6.4%	-3.9%
L14	-1.9%	-0.8%	-6.0%	5.7%	-1.2%	0.4%	-3.3%
L15	-2.0%	-3.1%	-6.3%	-3.2%	-1.9%	-4.2%	-1.5%
L16	-2.2%	9.3%	-6.8%	-90.2%	-0.2%	-4.7%	-1.3%
L17	-2.2%	-4.8%	1.4%	-2.3%	0.2%	6.0%	-3.8%
L18	-6.1%	-18.8%	-12.7%	-11.3%	-5.6%	-4.8%	-4.3%
L19	-7.4%	-48.2%	-2.9%	2.1%	-6.3%	-6.0%	-7.7%
L20	-9.5%	-40.0%	-11.6%	-7.1%	-19.0%	-14.6%	-6.1%
E[Loss] - Weighted							
L01 - L20	-0.2%	-0.6%	-0.4%	-1.5%	-0.2%	-0.1%	0.2%
L01 - L10	-0.1%	-0.6%	-0.4%	-1.5%	-0.2%	-0.1%	0.2%
L11 - L20	-3.4%	-5.9%	-4.9%	-2.1%	-1.5%	-2.5%	-3.8%
Risk - Weighted							
L01 - L20	-2.0%	-3.6%	-1.7%	-2.2%	-1.3%	-0.9%	-2.2%
L01 - L10	-1.7%	-3.1%	-1.3%	-2.0%	-1.2%	-0.4%	-1.8%
L11 - L20	-3.6%	-6.8%	-5.0%	-3.3%	-1.8%	-2.8%	-3.8%

Exhibit 3.1: Change in Modification from Variable Split Baseline
PYs 2010-2014: All Expected Loss Cohorts

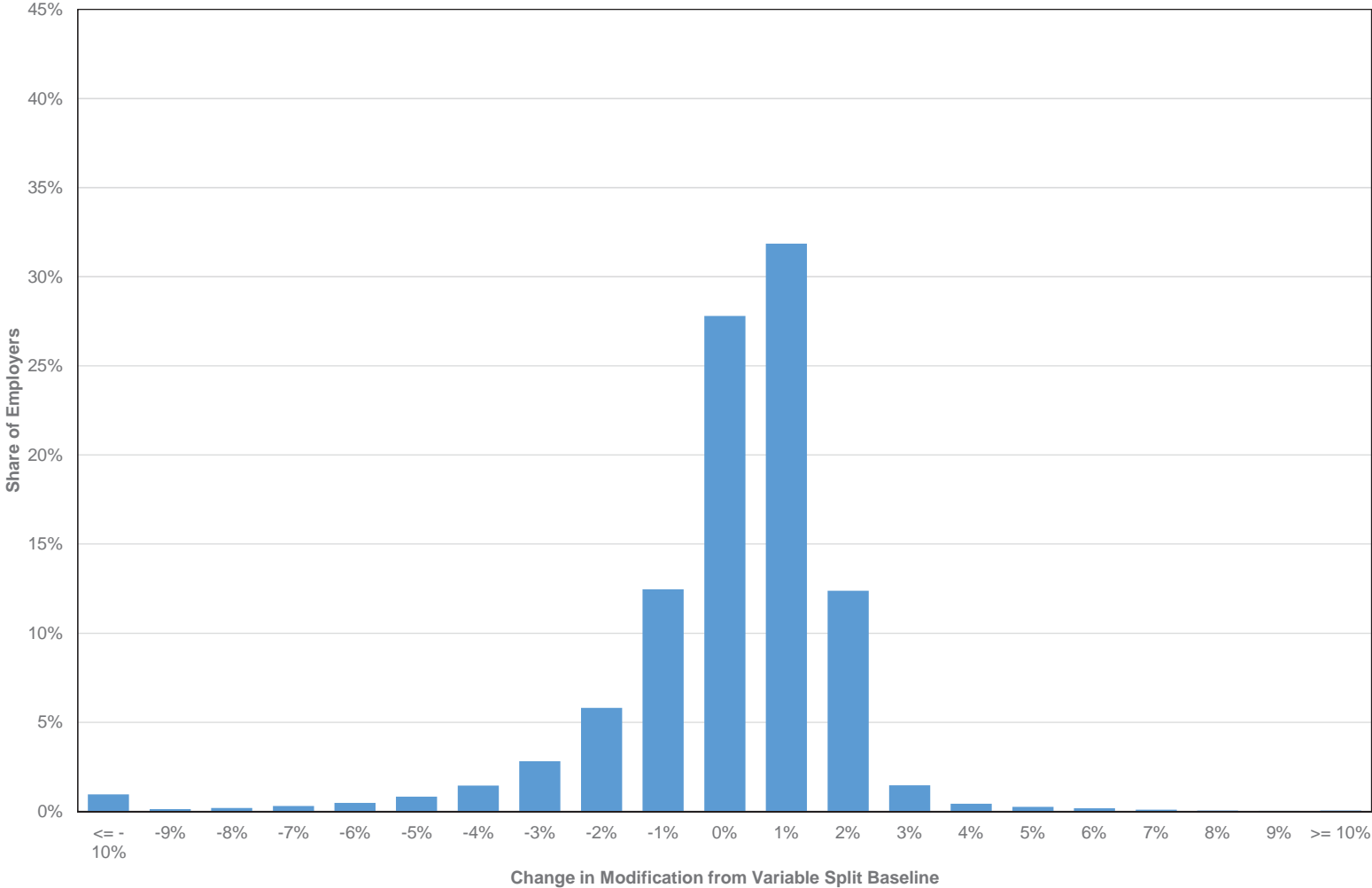
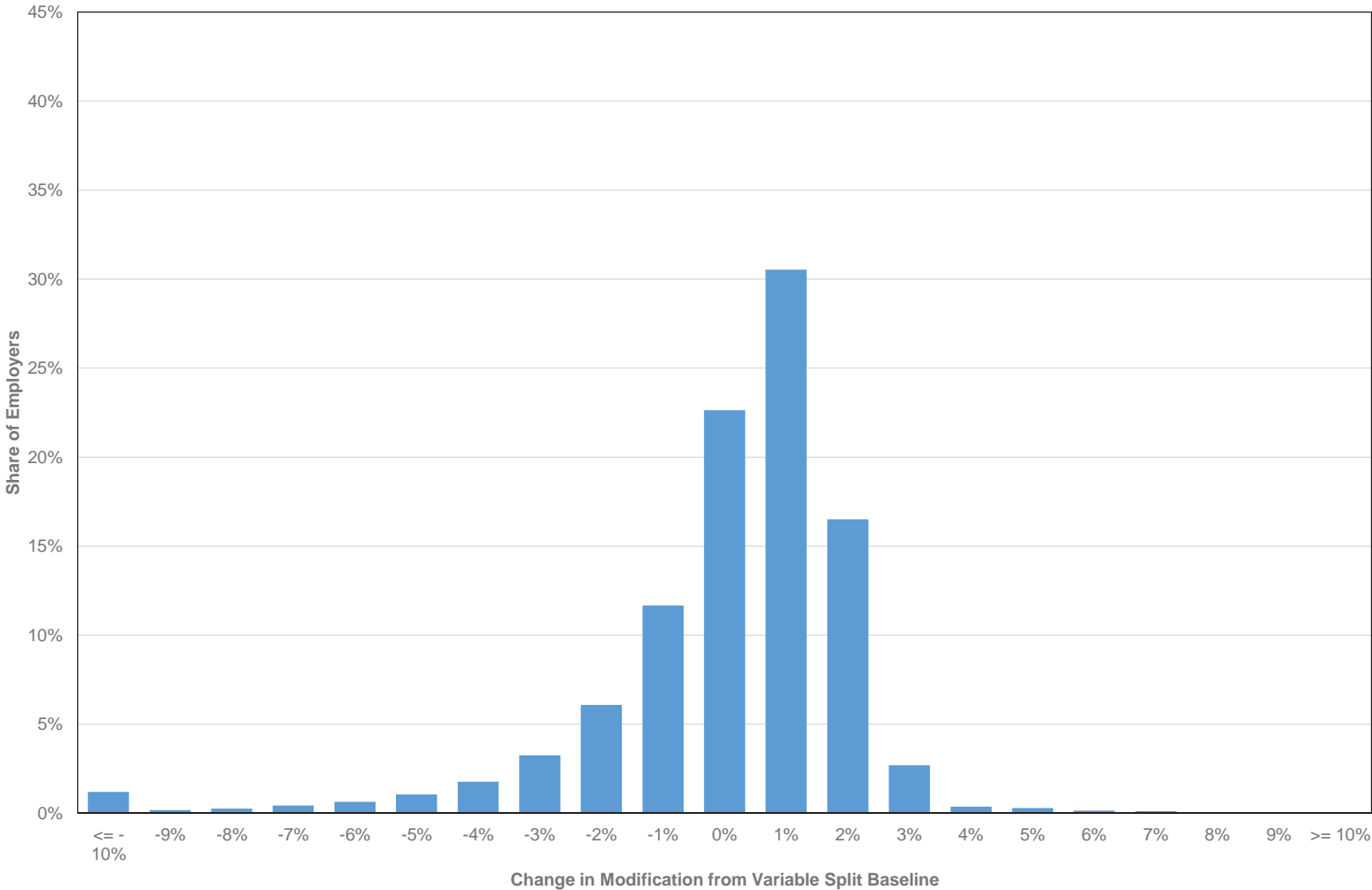
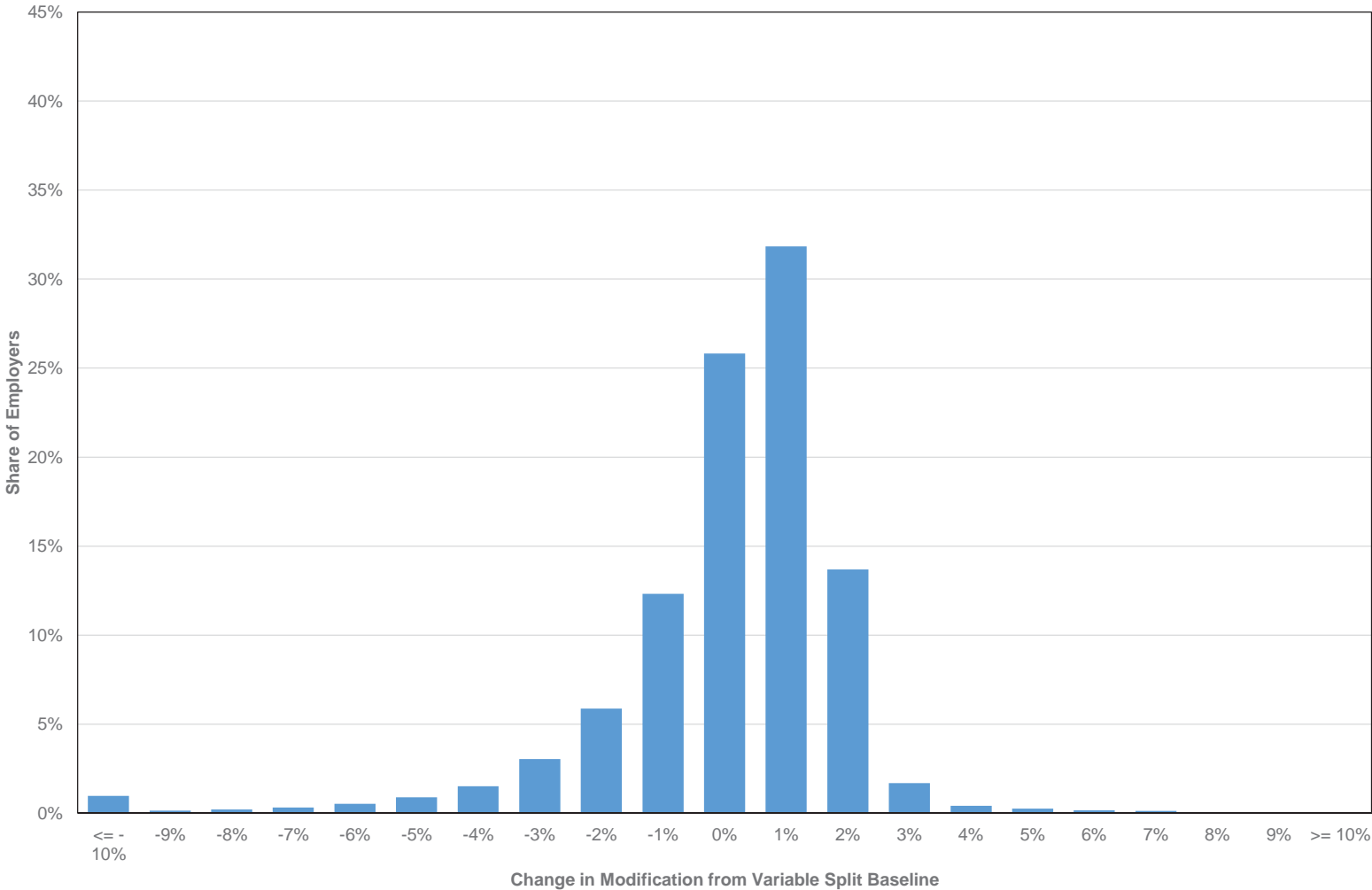


Exhibit 3.2: Change in Modification from Variable Split Baseline
PY 2010: All Expected Loss Cohorts



**Exhibit 3.3: Change in Modification from Variable Split Baseline
PY 2011: All Expected Loss Cohorts**



**Exhibit 3.4: Change in Modification from Variable Split Baseline
PY 2012: All Expected Loss Cohorts**

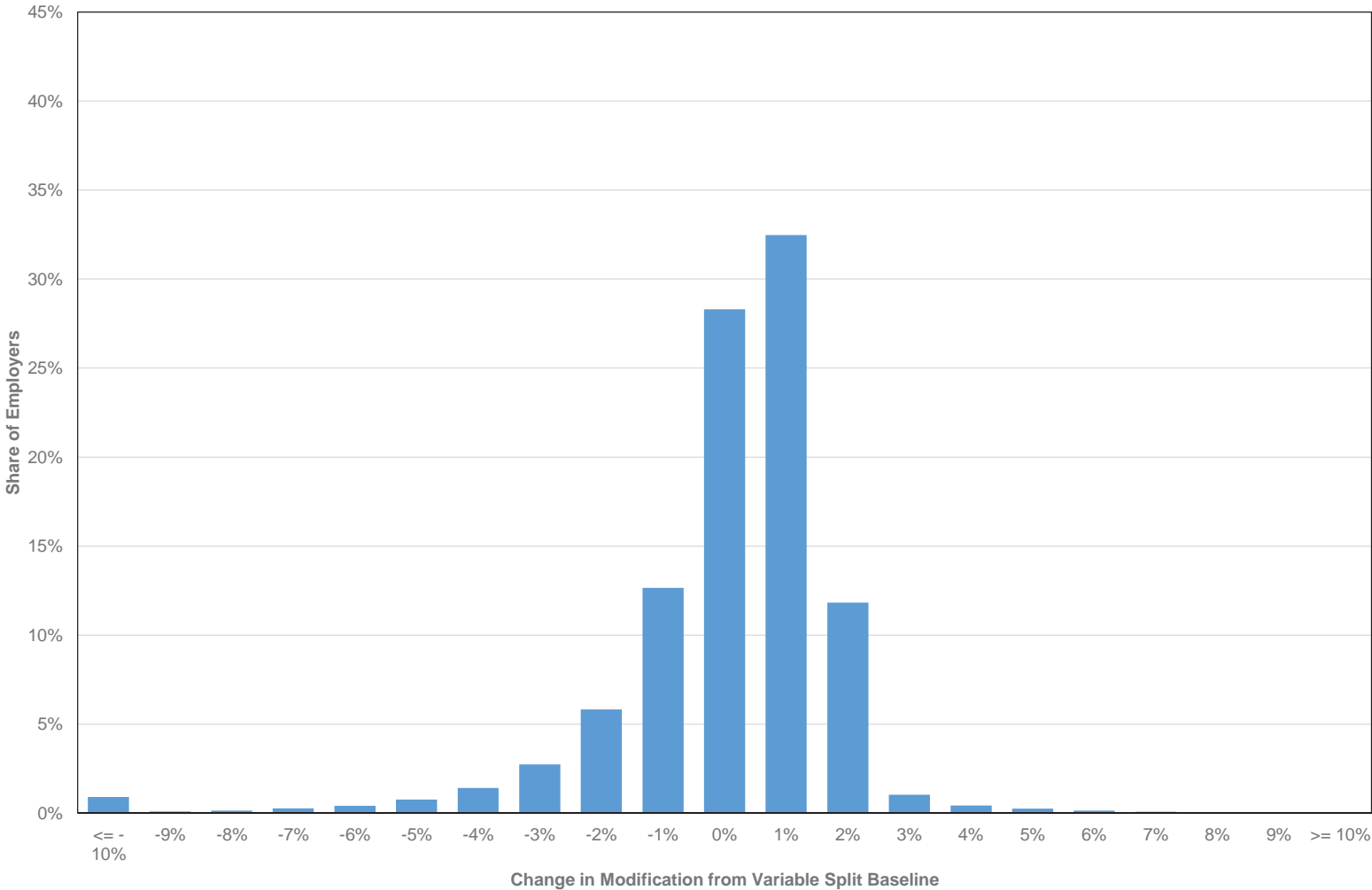


Exhibit 3.5: Change in Modification from Variable Split Baseline
PY 2013: All Expected Loss Cohorts

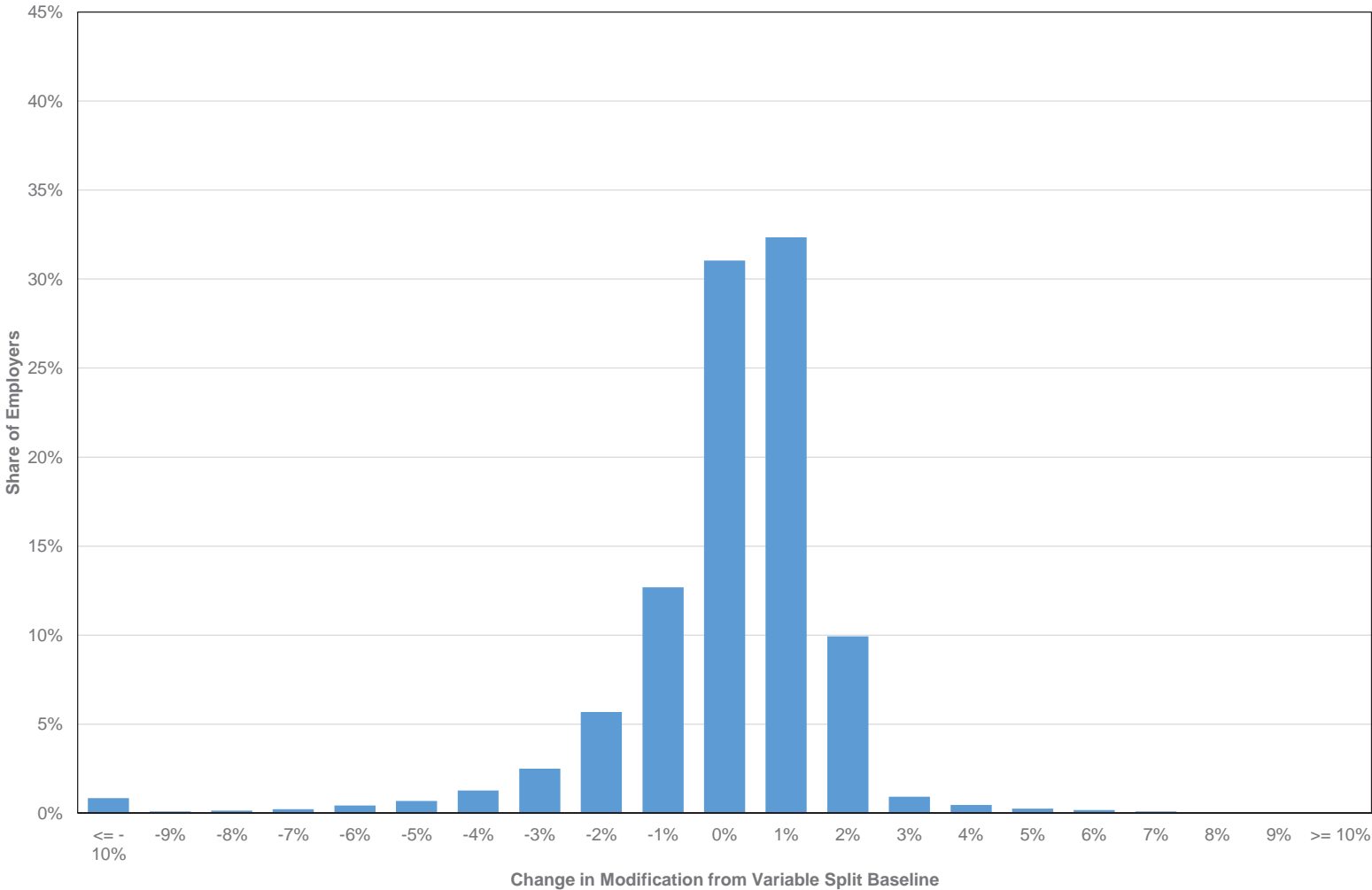
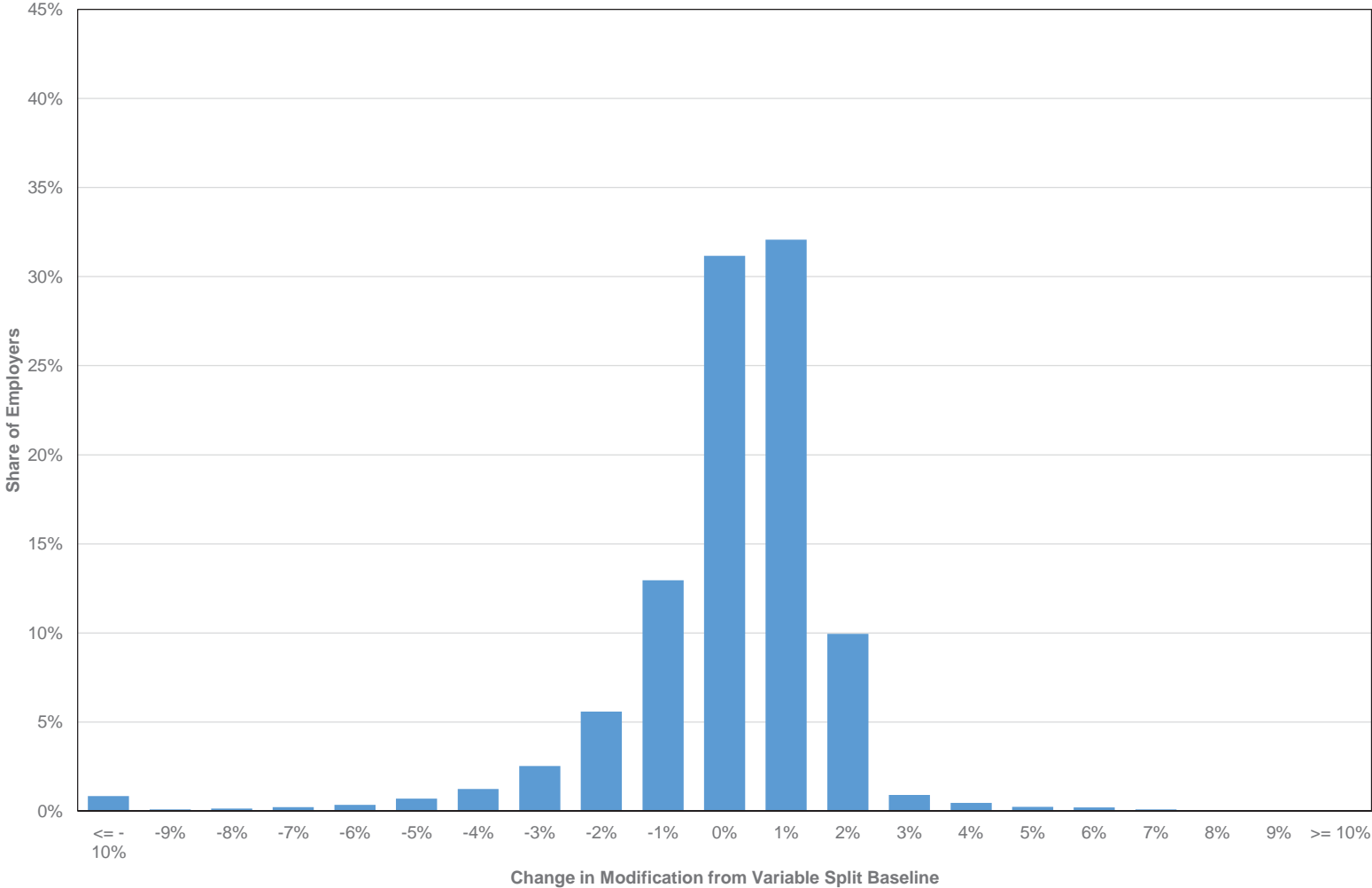


Exhibit 3.6: Change in Modification from Variable Split Baseline
PY 2014: All Expected Loss Cohorts



**Exhibit 3.7: Change in Modification from Variable Split Baseline
PYs 2010-2014: Expected Loss Cohorts L11 - L20 (Small Risks)**

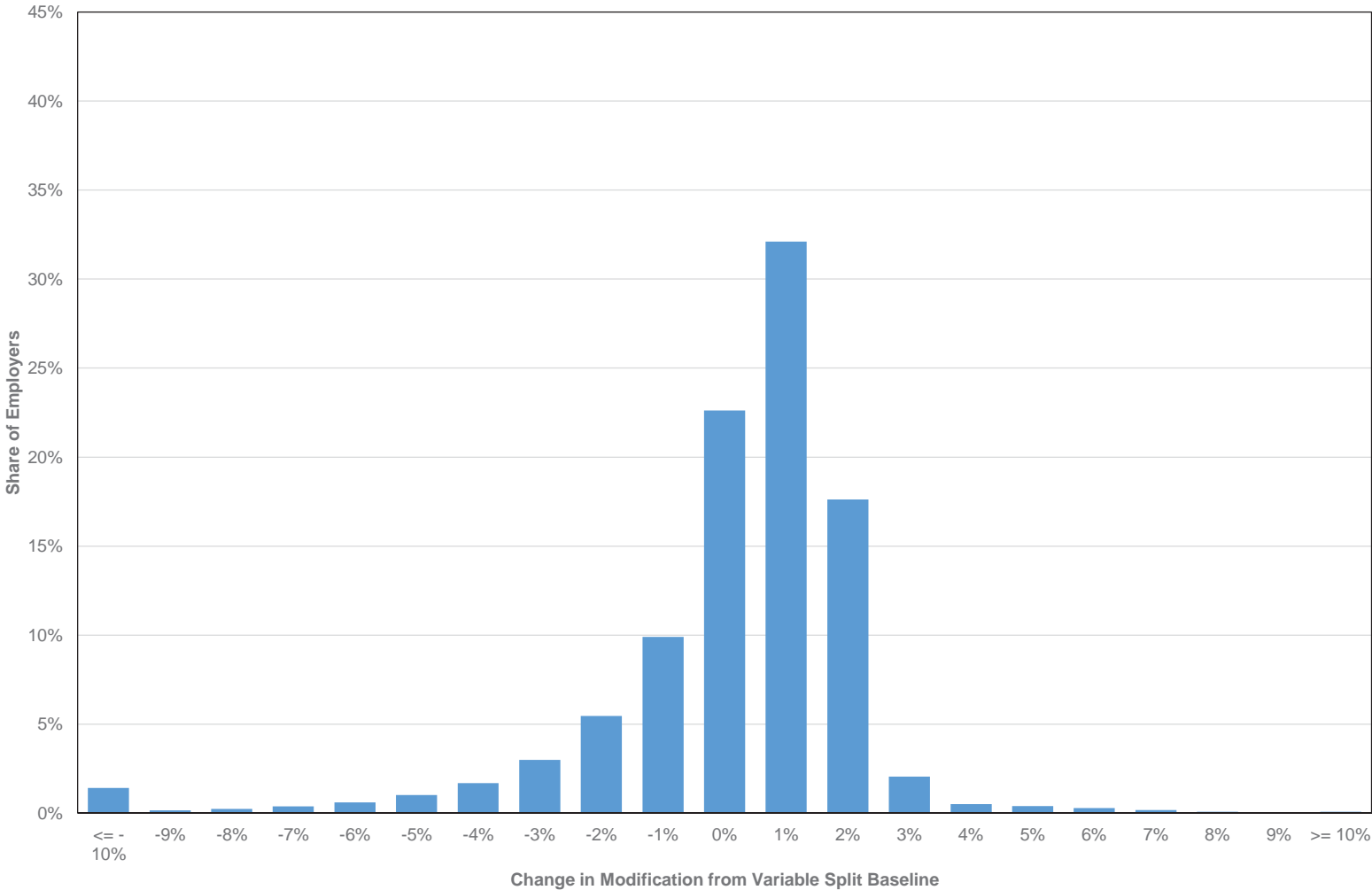


Exhibit 3.8: Change in Modification from Variable Split Baseline
PY 2010: Expected Loss Cohorts L11 - L20 (Small Risks)

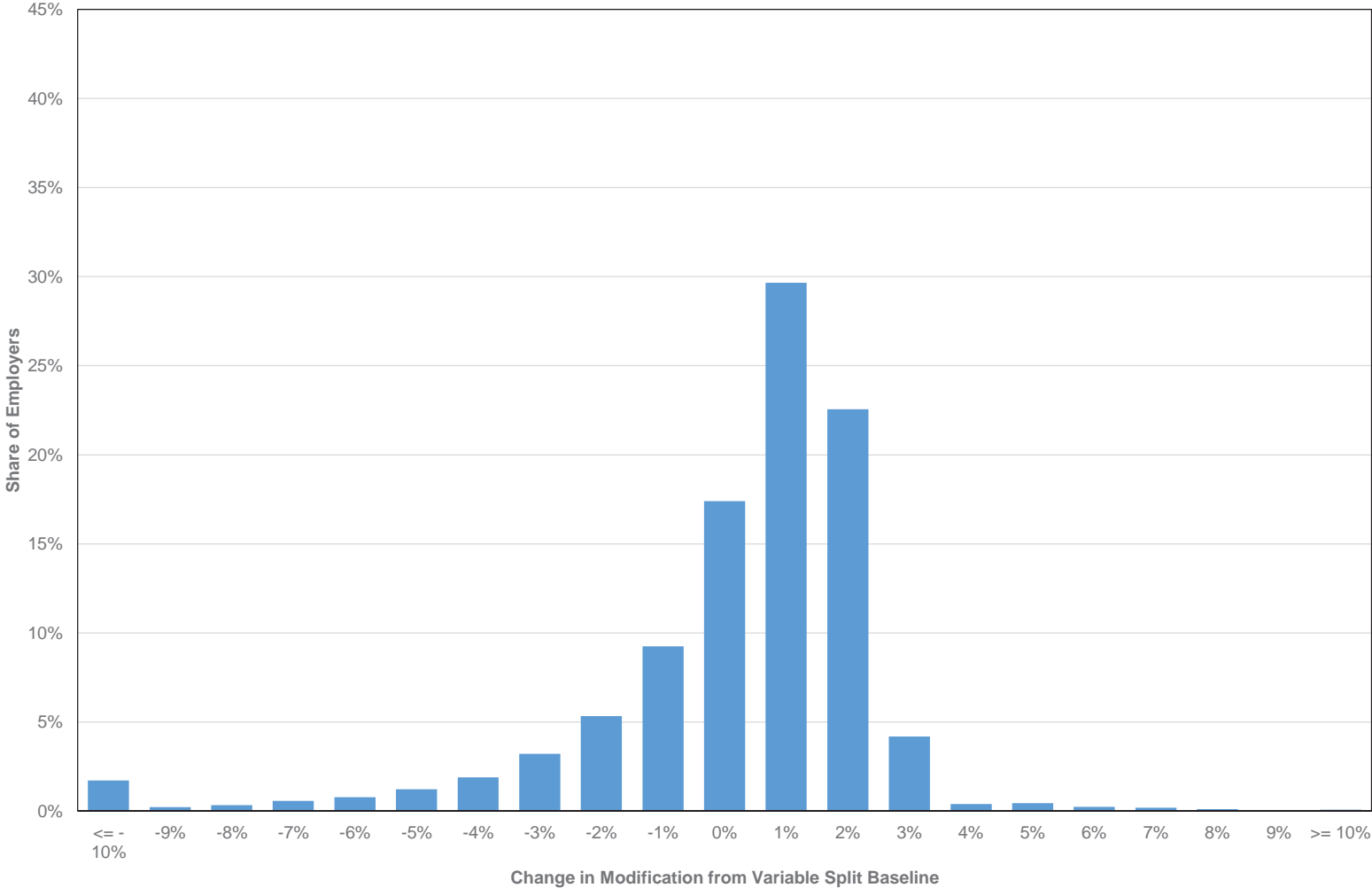
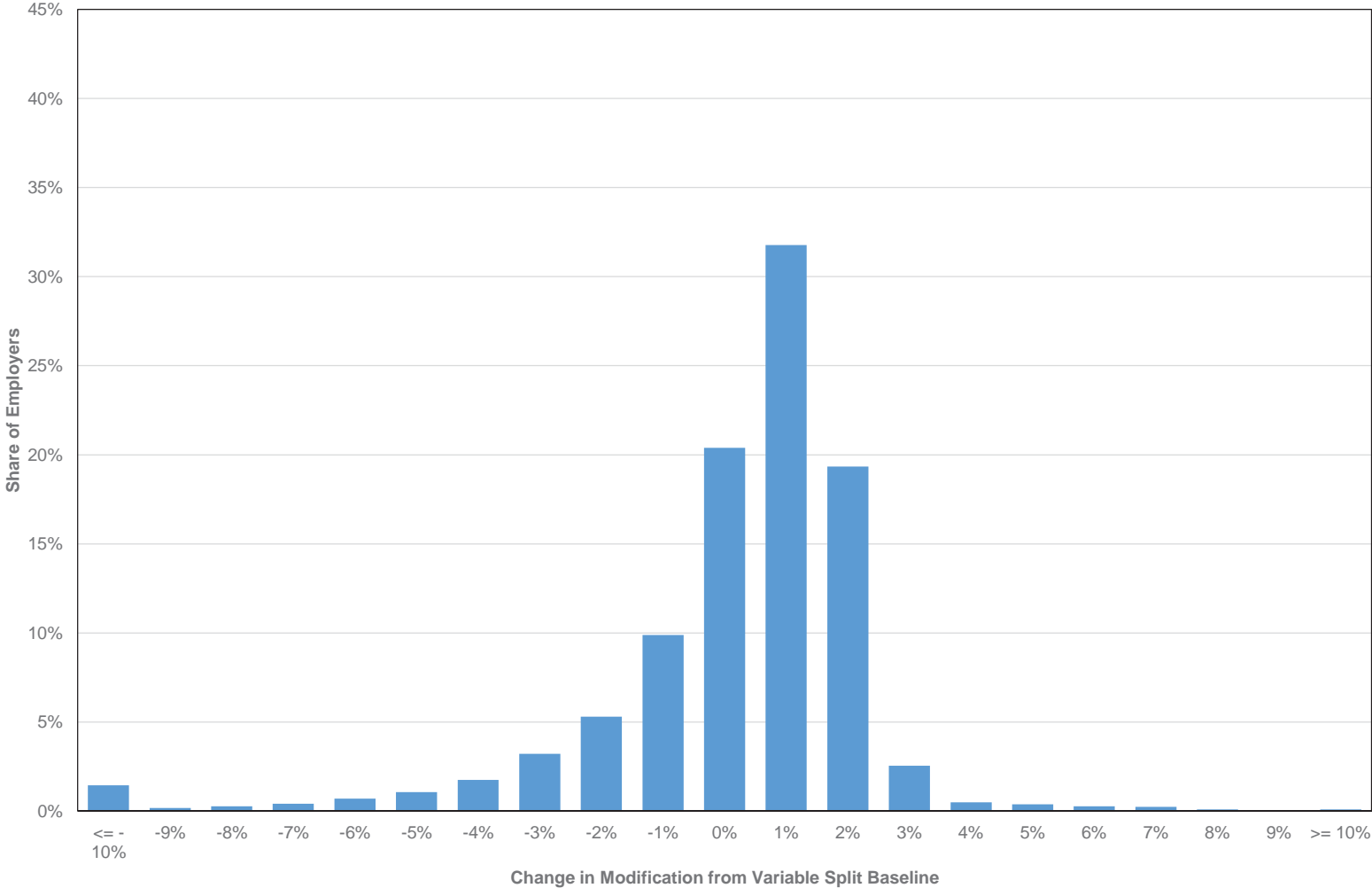
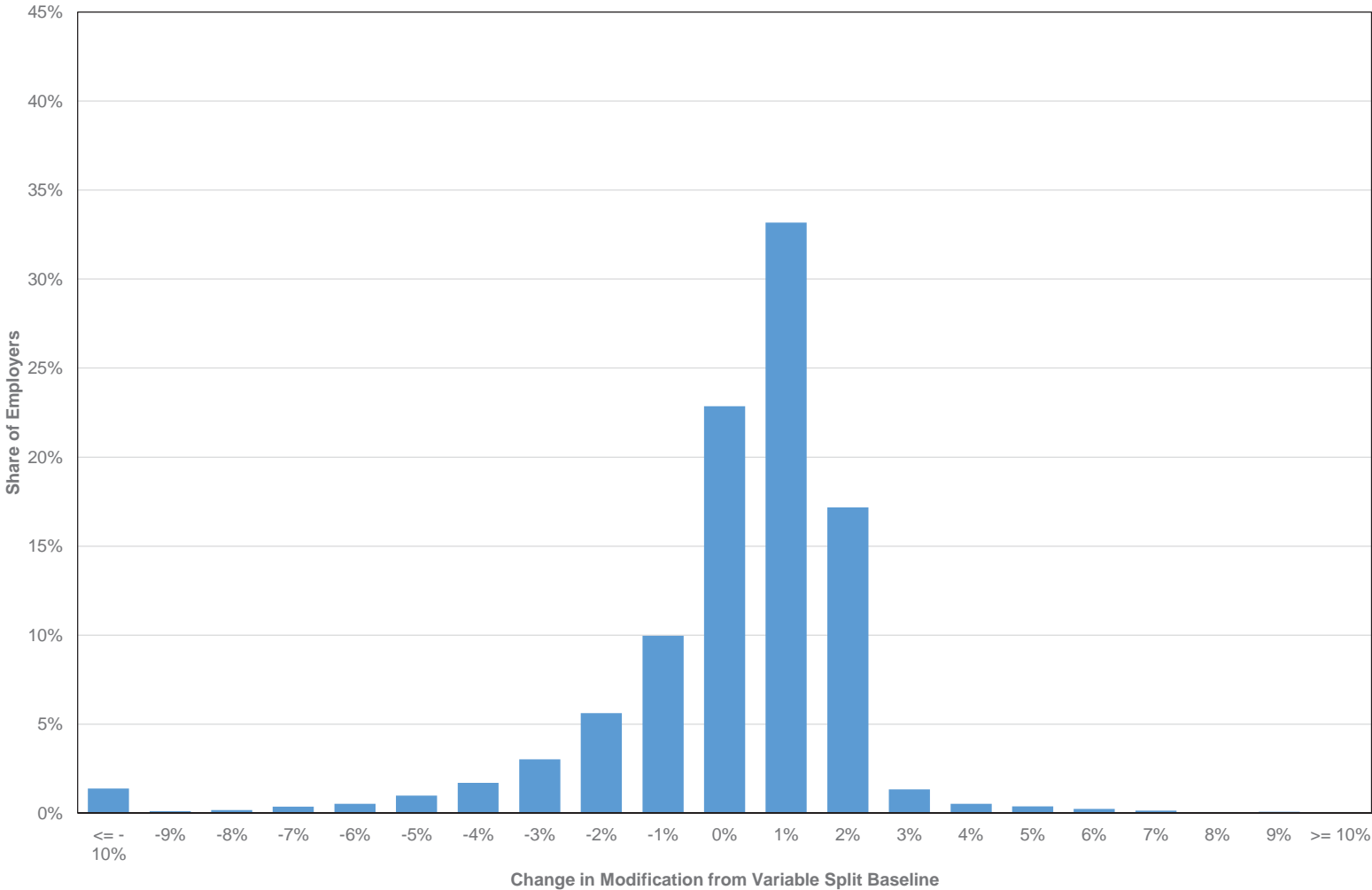


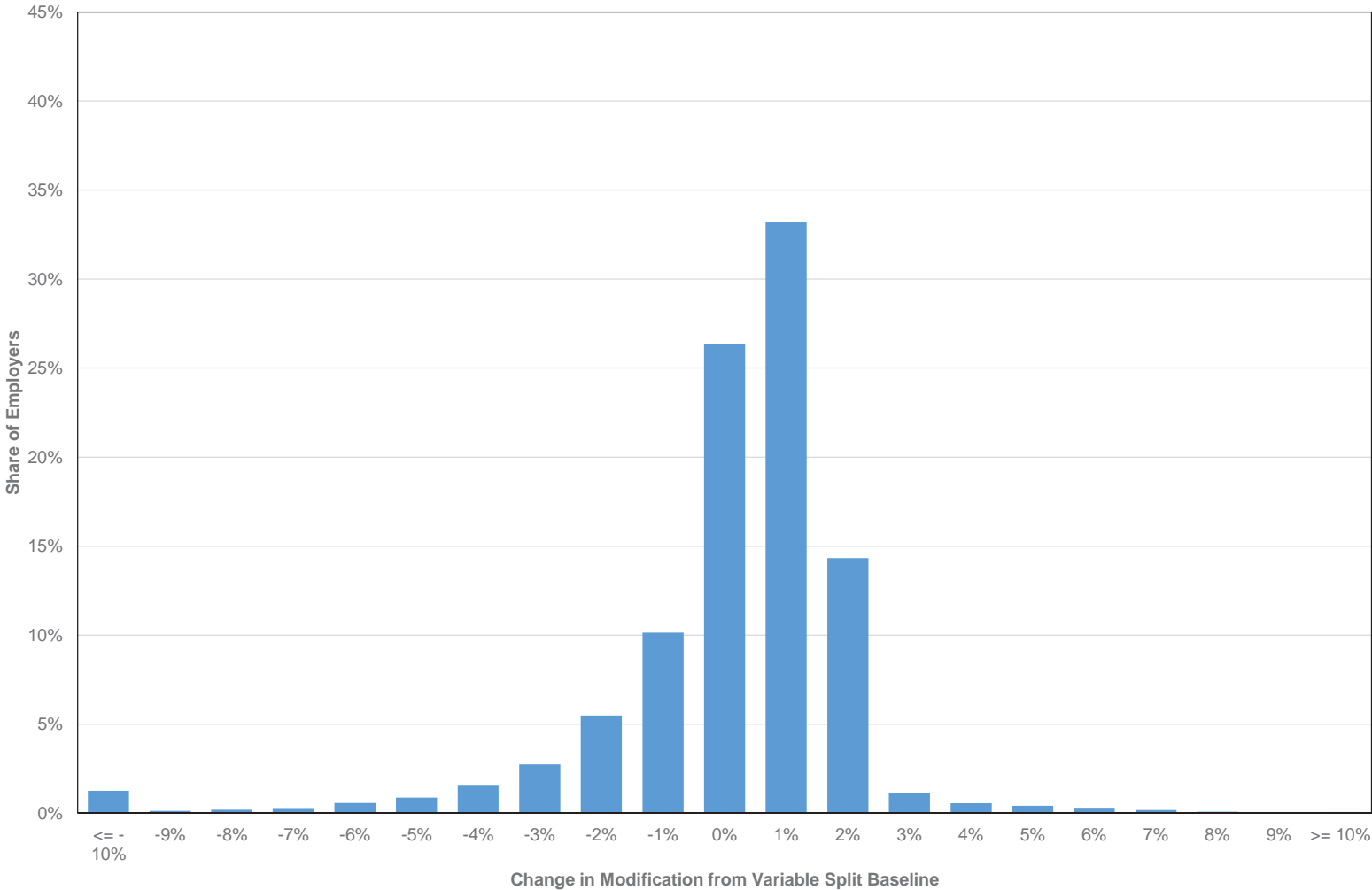
Exhibit 3.9: Change in Modification from Variable Split Baseline
PY 2011: Expected Loss Cohorts L11 - L20 (Small Risks)



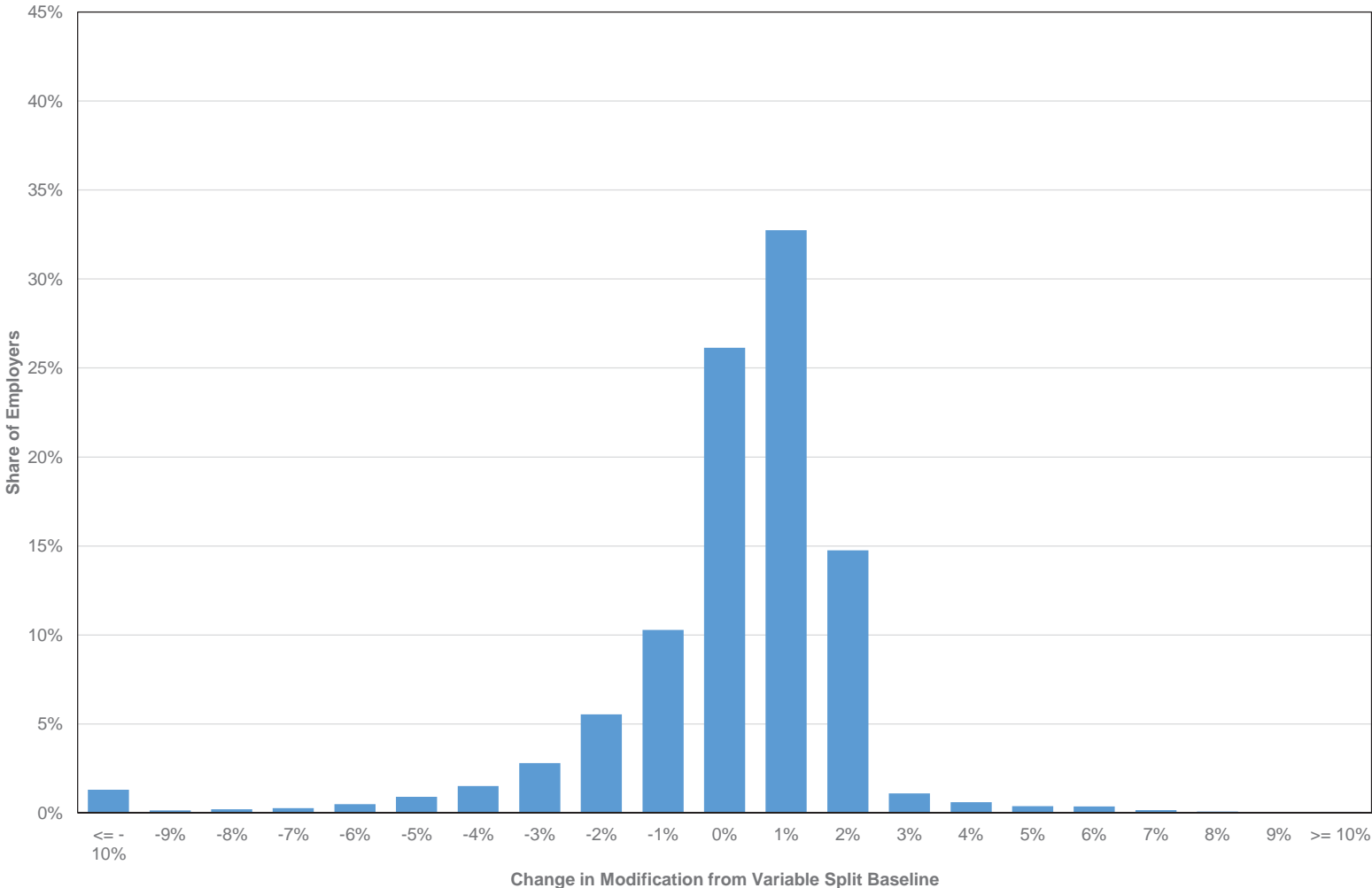
**Exhibit 3.10: Change in Modification from Variable Split Baseline
PY 2012: Expected Loss Cohorts L11 - L20 (Small Risks)**



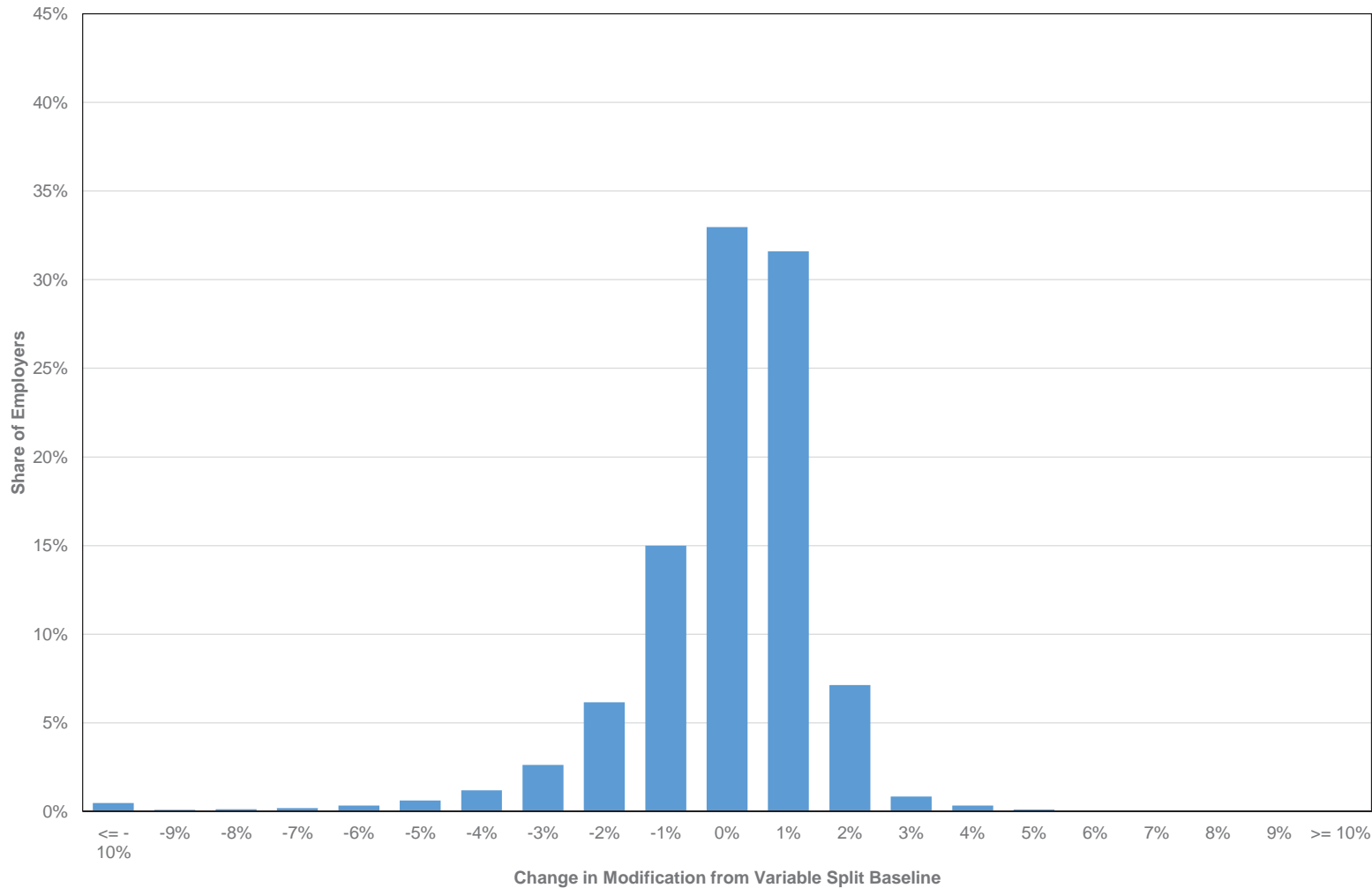
**Exhibit 3.11: Change in Modification from Variable Split Baseline
PY 2013: Expected Loss Cohorts L11 - L20 (Small Risks)**



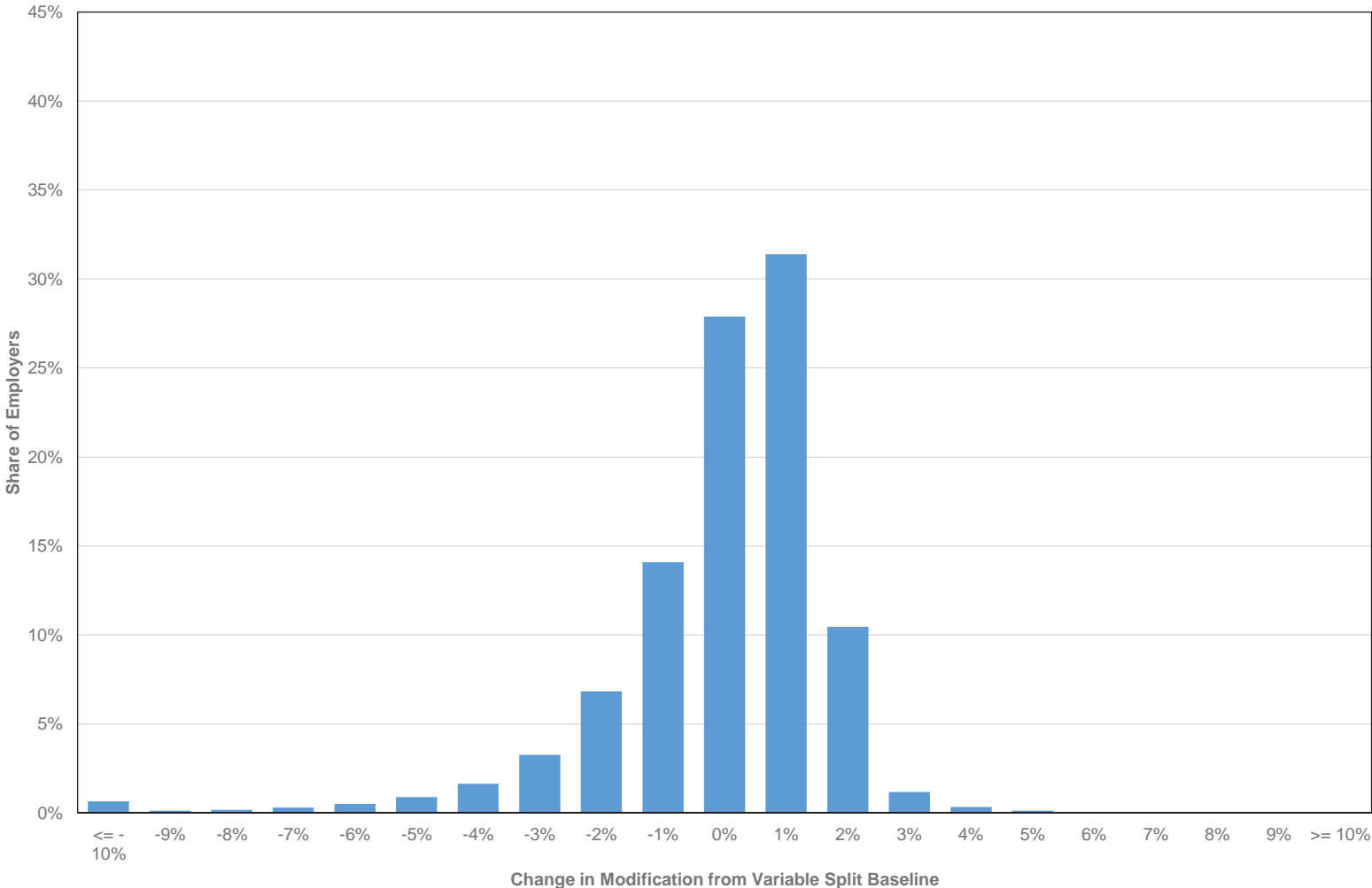
**Exhibit 3.12: Change in Modification from Variable Split Baseline
PY 2014: Expected Loss Cohorts L11 - L20 (Small Risks)**



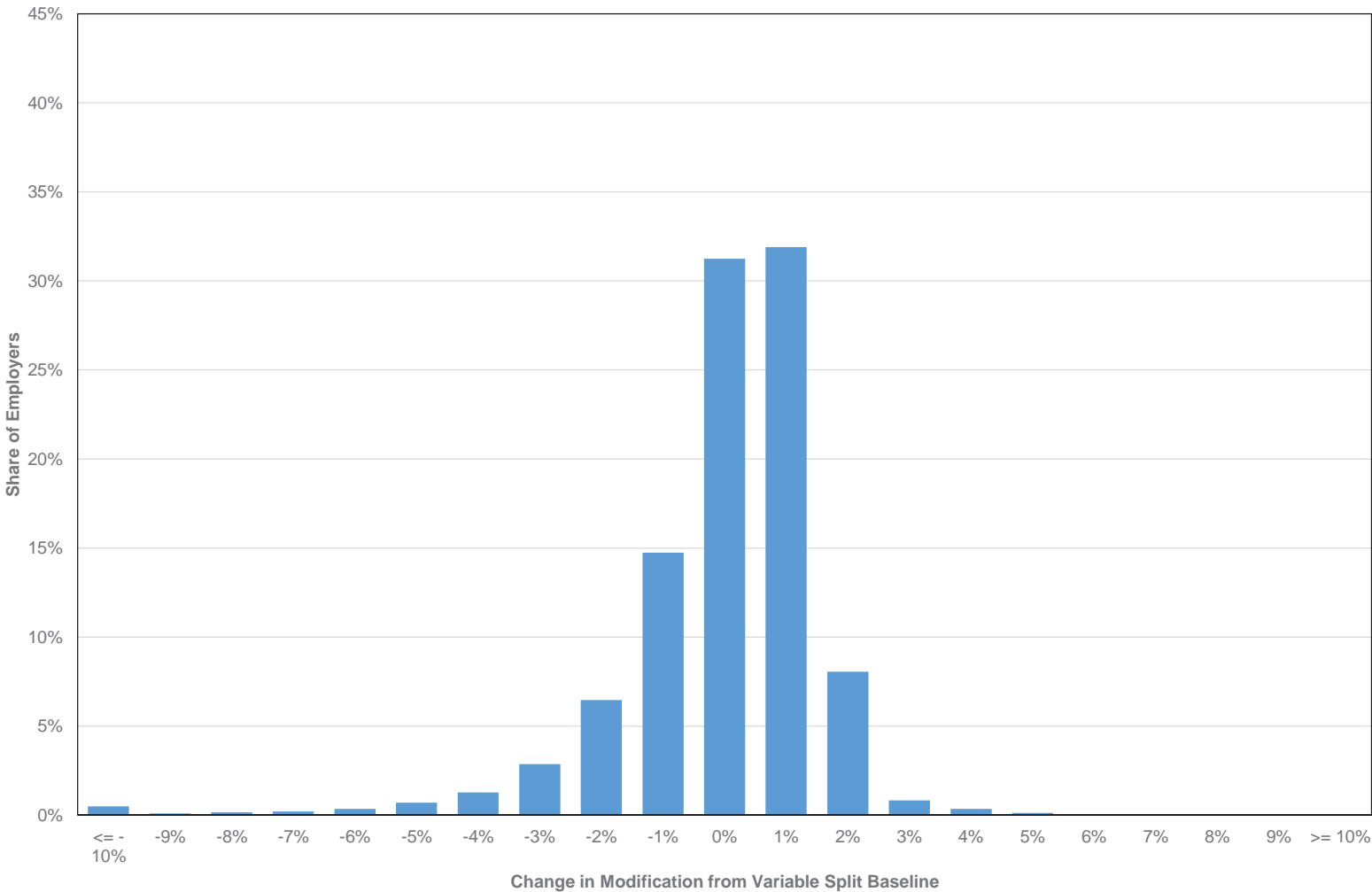
**Exhibit 3.13: Change in Modification from Variable Split Baseline
PYs 2010-2014: Expected Loss Cohorts L01 - L10 (Large Risks)**



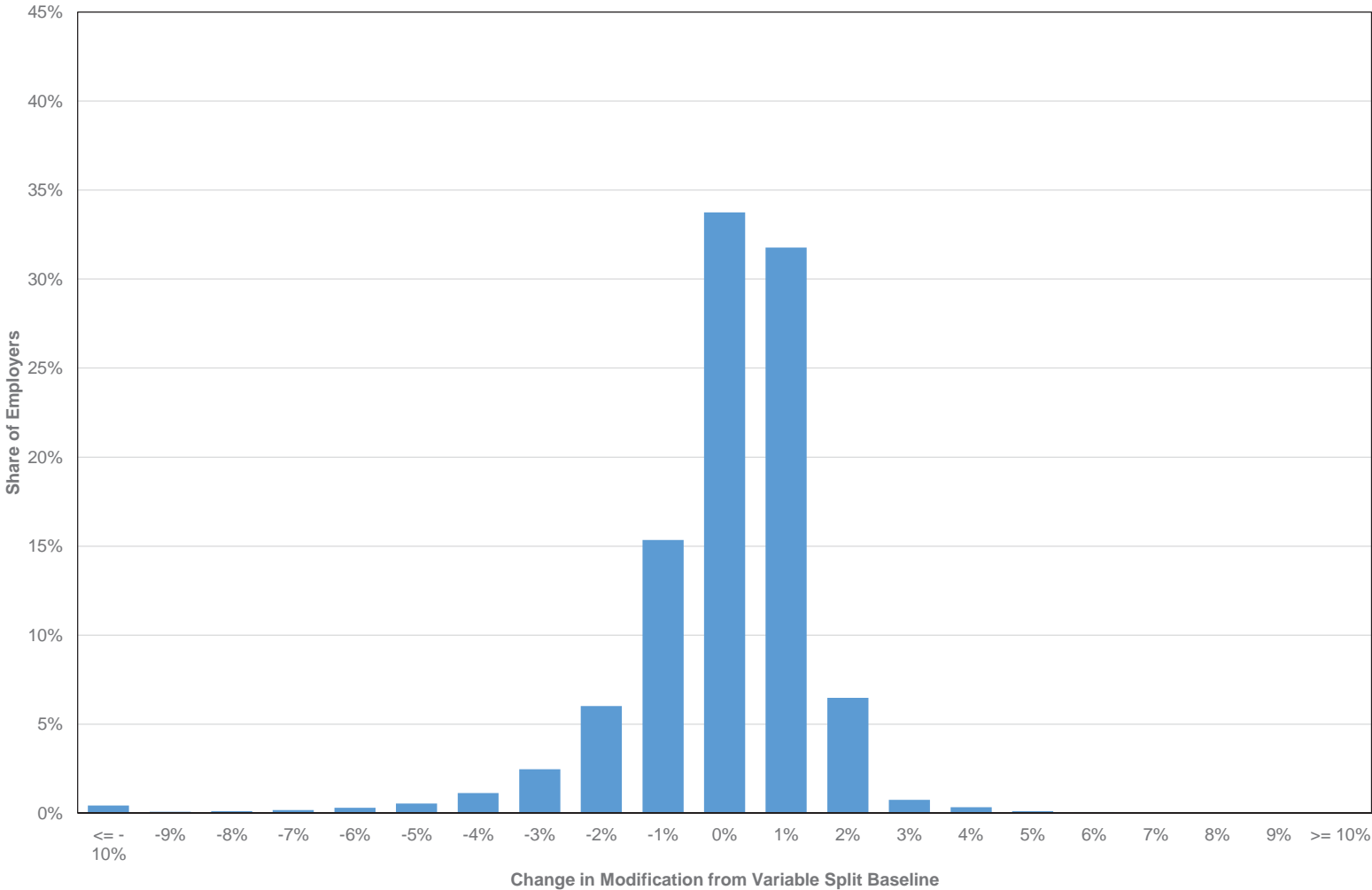
**Exhibit 3.14: Change in Modification from Variable Split Baseline
PY 2010: Expected Loss Cohorts L01 - L10 (Large Risks)**



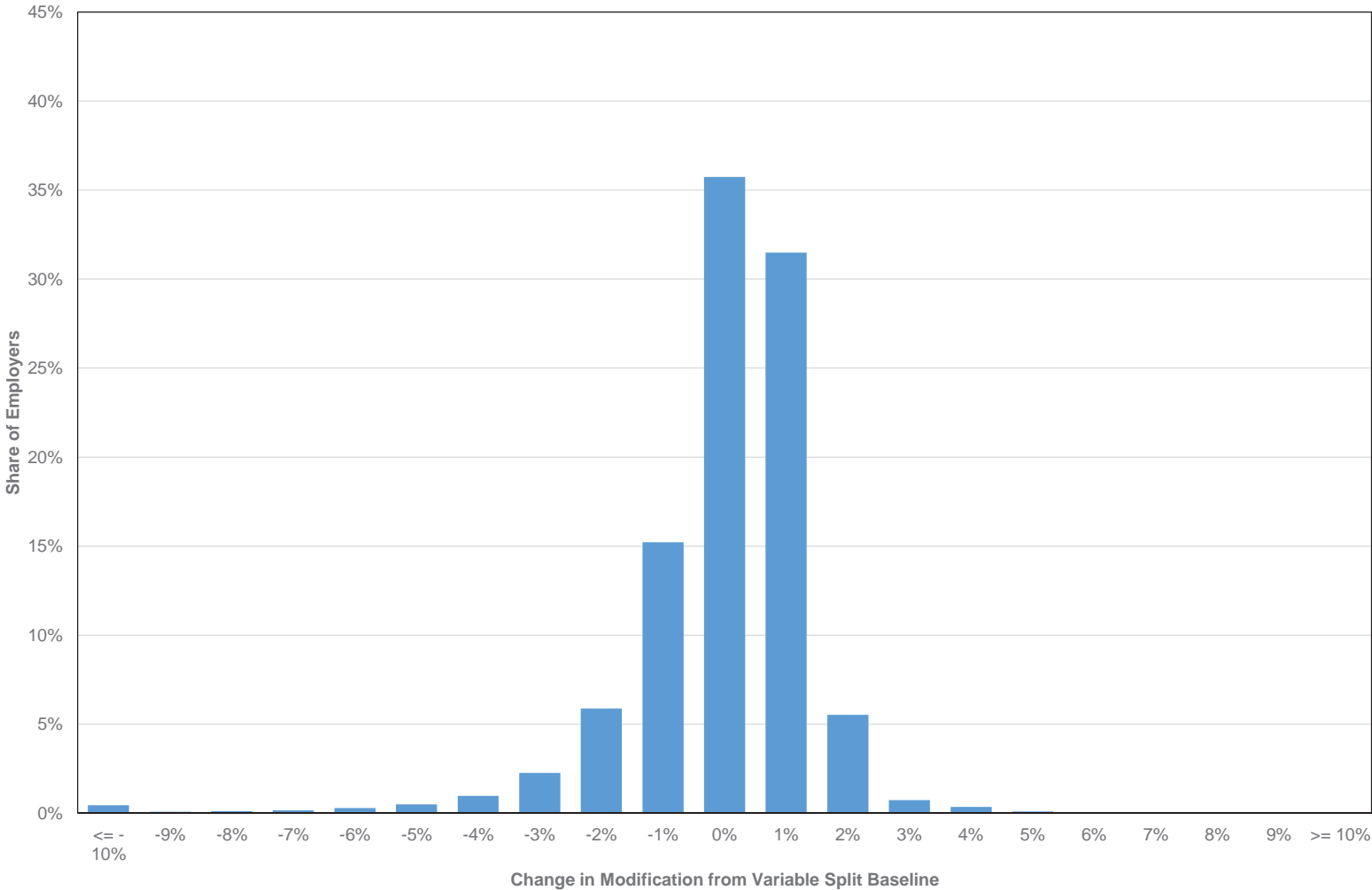
**Exhibit 3.15: Change in Modification from Variable Split Baseline
PY 2011: Expected Loss Cohorts L01 - L10 (Large Risks)**



**Exhibit 3.16: Change in Modification from Variable Split Baseline
PY 2012: Expected Loss Cohorts L01 - L10 (Large Risks)**



**Exhibit 3.17: Change in Modification from Variable Split Baseline
PY 2013: Expected Loss Cohorts L01 - L10 (Large Risks)**



**Exhibit 3.18: Change in Modification from Variable Split Baseline
PY 2014: Expected Loss Cohorts L01 - L10 (Large Risks)**

