

## VII. ADEQUACY AND ACCURACY OF WCIRB AND CDI RATES

### Approach and Analysis

In this section we compare the BRS projections to those that were in the 2006 pure premium rates recommended by the WCIRB and to those that were approved by the CDI. In this section we also revisit historical WCIRB and CDI pure premium rate changes with the benefit of hindsight.

#### *Background*

As discussed in Section I, the California workers' compensation insurance market operates in an open rating system. The CDI adopts advisory pure premium rates, which reflect anticipated loss, allocated loss adjustment expense and unallocated loss adjustment expense per \$100 of payroll. These pure premium rates are advisory. The insurance companies may charge rates that include pure premium rate assumptions that are higher, lower, or the same as those adopted by the CDI. Insurance company rates may also reflect items not included in pure premium, such as brokerage/agency expense, overhead costs, and anticipated investment income.

Prior to the CDI adoption of pure premium rates, the California WCIRB submits a filing of recommended pure premium rates to the CDI. The California Insurance Code 11750.3 states that a rating bureau (WCIRB) may be established, and its purposes include the following:

- (a) To provide reliable statistics and rating information with respect to workers' compensation insurance and employer's liability insurance incidental thereto and written in connection therewith.
- (b) To collect and tabulate information and statistics for the purpose of developing pure premium rates to be submitted to the commissioner for issuance or approval.

According to a noted expert on workers' compensation, "...the WCIRB is much more than a mere private trade organization furnishing statistics to the Insurance commissioner. It provides the key overall rate making function."<sup>1</sup>

From 1995 through 2001, the WCIRB recommended and the insurance commissioner adopted pure premium rates on an annual basis. Due to rapid changes in workers' compensation costs, the WCIRB and CDI began recommending and adopting new rates twice per year starting in 2002.

#### *Comparison of 2006 Pure Premiums: BRS, WCIRB & CDI*

At this point in time, the precise impact of the 2002, 2003, and 2004 legislative reforms is very hard to quantify. Therefore, we have calculated rate changes using reasonable low, middle and high assumptions. The result is a range of rate indications for 2006. The following figure shows that the most recent pure premium rates recommended by the WCIRB and adopted by the CDI are within our range of reasonable estimates:

<b>Exhibit VII.1. Comparison of 2006 Pure Premium Change</b>			
<b>Estimate</b>	<b>BRS</b>	<b>WCIRB*</b>	<b>CDI**</b>
<b>Low</b>	(5%)		
<b>Middle</b>	(19%)	(15.9%)	(15.3%)
<b>High</b>	(34%)		
* WCIRB amended pure premium rate filing (9/15/05)			
** Insurance Commissioner Garamendi adopted pure premium rates (11/10/05)			

It is important to note that none of the BRS projections reflect future legal, legislative or regulatory changes. BRS is not able to predict these, even though they could potentially have a very significant impact on what the proper rates would be for 2006.

The calculation and support for the preceding WCIRB and BRS projections is detailed in Appendix I.

### ***Differences in Key Assumptions: BRS, WCIRB & CDI***

The differences in 2006 pure premium rate projections outlined in section 5.2 are driven by differences with respect to a few key assumptions. Those assumptions are listed below, followed by a discussion of each.

<b>Exhibit VII.2. Comparison: Differences in Key Assumptions</b>					
	<b>BRS Low Savings</b>	<b>BRS Middle Savings</b>	<b>BRS High Savings</b>	<b>WCIRB</b>	<b>CDI</b>
<b># of Years Average for Selected PP</b>	2	2	1	2	1
<b><u>Permanent Disability</u></b>					
% Costs no longer ratable	7.0%	12.5%	20.0%	7.0%	7.0%
% savings on ratable claims (ex apportionment)	20.0%	37.0%	50.0%	33.0%	40.5%
Total PD savings (ex apportionment)	26.0%	45.0%	60.0%	38.0%	44.7%
Apportionment	(2.0%)	(5.0%)	(8.0%)	(6.7%)	(6.7%)
<b><u>PD Savings</u></b>					
PD Savings as a % of PD Costs					
ex utilization	(26.2%)	(45.1%)	(60.1%)	(38.1%)	(44.7%)
with utilization	(38.2%)	(65.9%)	(87.8%)	(55.7%)	(56.3%)
PD Savings as a % Total Costs					
ex utilization	(5.6%)	(9.7%)	(12.9%)	(8.2%)	(9.6%)
with utilization	(8.2%)	(14.2%)	(18.9%)	(12.0%)	(12.1%)
<b><u>Medical Utilization</u></b>					
Explicit Adj. to LDF's	No	No	No	No	Yes
Adjusted due to Benefit Level Change	Yes	Yes	Yes	Yes	No
One-time Adj. due to ACOEM	(10.0%)	(20.0%)	(30.0%)	Not Explicit	
Average Date Implemented	4/1/04	5/1/04	6/1/04		
<b><u>Other</u></b>					
Ultimate Loss Projection Data	3Q05	3Q05	3Q05	2Q05	2Q05
Overall Medical Trend	10.0%	7.0%	4.0%	No Explicit Adjustment	

### ***Number of Years Average for Selected Pure Premium Rate:***

- All of the projected 2006 pure premium rates utilize experience from historical years as a baseline. Adjustments are then made to that historical experience in order to account for the impact of the reforms, inflation and other factors. Since the reforms have significantly changed workers' compensation claims costs, it is preferable to base the projections on experience from newer years as opposed to older years. Counterbalancing this consideration is the fact that workers' compensation costs have a very long payout pattern. Therefore, the estimated ultimate cost of claims associated with newer years could vary significantly from the true cost.

As a result of the above considerations, BRS feels that it is appropriate for the BRS low and middle estimates to use both 2003 and 2004 accident year experience as a basis for projecting 2006. This is consistent with the WCIRB methodology.

The CDI and BRS High estimates use only accident year 2004 as a baseline for projecting 2006. BRS considers this "aggressive" because payout patterns published by the WCIRB suggest that less than 21% of the ultimate costs associated with accident year 2004 had been paid as of June 30, 2005, which is the valuation date of the data used in the CDI and WCIRB projections. This means that the 2006 rates are based on accident year 2004 ultimate loss projections, and over 79% of the 2004 ultimate losses are, in turn, based on estimates.

### ***Permanent Disability – Percent of Costs No Longer Ratable:***

One of the significant changes incorporated in SB899 is the introduction of the use of AMA Guides to rate permanent disability claims. Based on a review of individual claim files, it appears that some claims which had been ratable as permanent disability claims prior to the implementation of SB899 would not be ratable under the current AMA Guides. In other words these claims would now receive a disability rating of 0%.

There have been several studies which examined this effect, including the following:

Brigham & Associated, Inc. (Brigham): With regards to claims that are no longer ratable, Dr. Brigham found that "88 (37%) of the 238 cases that previously had ratable PD, did not have ratable PD according to the AMA Guides. Of these 88 cases now with no ratable PD, the mean original PD rating was 19.7%..."<sup>2</sup> Given that the mean rating of all the PD claims under the old schedule was 22.0%; it appears that the percent of claims that are no longer ratable should correspond closely with the percent of costs eliminated by removing non-ratable claims.<sup>3</sup>

In general, BRS feels that the estimated percent of non-ratable claims provided by this analysis is quite high. It is the BRS understanding that some claims in this study may be considered to be non-ratable for technical reasons which had little impact under the old system. However, BRS assumes that a doctor would address and rectify these problems if the permanent disability rating hinged on these factors under the new PD rating system.

UC Davis (Leigh/McCurdy): This study found that 21 of the 218 (9.6%) of the “valid” claims reviewed had 0% impairment under the new system. All 218 injuries had some ratable disability under the old system.<sup>4</sup> The injuries which showed no impairment under the new system had an average rating of 27.95% under the old system. This is lower than the average rating under the old system of 42% for all 218 claims analyzed. This means that reducing the number of PD claims under the new system by 9.6% for non-ratable claims would have less than a 9.6% impact on the total costs.

WCIRB/CDI: Both the WCIRB and CDI pure premium rate filings assume that PD costs will be reduced by 7% for claims that are no longer ratable under the new system.

BRS: Based on the above considerations BRS has estimated that the impact of the AMA Guides on non-ratable claims will reduce PD costs by 7%, 12.5% and 20% for the low savings, middle savings and high savings scenarios, respectively.

### ***Permanent Disability – Savings Associated with Ratable Claims (ex Apportionment)***

In addition to causing some claims to be no longer ratable, the introduction of the AMA Guides has also caused the average PD ratings to decrease on ratable claims. The following analyses are relevant to this issue:

Brigham & Associated, Inc. (Brigham): The average disability rating for injuries in this study decreased by 57.8%. Under the old system, the average disability rating was 24.9%, and this was reduced to 10.5% under the new system. This contemplates only those claims that were ratable under both the old and new systems.<sup>5</sup> This reflects only the reduction in ratings, and that may differ from the reduction in dollars.

UC Davis (Leigh/McCurdy): This study “estimated that the ratio of disability to impairment (the “multiplier” to be roughly 3.0 with a range of 2.5 to 3.8.”<sup>6</sup> This means that according to this study, the impairment-based AMA system will result in ratings which are 60% ( $=1/2.5 - 1$ ) to 74% ( $=1/3.8 - 1$ ) lower than the old system. This includes claims which are no longer ratable under the new system. Excluding non-ratable claims results in a range of 56% to 71%.

UC Berkeley (Neuhauser): The results of this study indicate that the new PD system results in ratings that are about 40% lower than under the old system. Given the progressive nature of the PD schedule, this translates into a reduction in costs of about 50%. These estimates are based on a memo titled “Analysis of ratings under the new PD schedule, through August 17, 2005” which was sent from Frank Neuhauser to Christine Baker (Executive Officer, CHSWC) and Dave Bellusci (Senior VP & Chief Actuary, WCIRB) on 10/5/05. The results are outlined on page 2 and are based on an analysis of 2,400 claims.

In addition, Dr. Neuhauser verbally reported to the CHSWC Board on 12/9/05 that he had updated his study to include roughly 3,500 claims, and that the results had not changed. He indicated that ratings under the new system continue to be roughly 40% lower than under the old system, and this represents a dollar savings of roughly 50%. This excludes the impact of apportionment and non-ratable claims.

WCIRB/CDI: In their 2006 pure premium rate calculations, the WCIRB and CDI estimated dollar savings from the new PD system of 33% and 40.5%, respectively. These figures exclude the impact of non-ratable claims, apportionment and changes to utilization.

BRS: Based on the above considerations, BRS has estimated that the new PD system will lower PD costs by 20%, 37% and 50% for the low savings, middle savings and high savings scenarios, respectively.

***Permanent Disability – Savings Associated with Apportionment:***

Changes to apportionment have also related in savings related to PD claims.

UC Berkeley (Neuhauser): The results of this study indicate that about 11.0% of claims now include apportionment, and the overall impact of apportionment is to reduce PD costs by 5.5%. These estimates are based on a memo titled “Analysis of ratings under the new PD schedule, through August 17, 2005” which was sent from Frank Neuhauser to Christine Baker (Executive Officer, CHSWC) and Dave Bellusci (Senior VP & Chief Actuary, WCIRB) on October 5, 2005. The results are outlined on page 2 and are based on an analysis of 2,400 claims.

In addition, Dr. Neuhauser verbally reported to the CHSWC Board on 12/9/05 that he had updated his study to include roughly 3,500 claims, and that the results had not changed substantially. He indicated that roughly 11% of claims include apportionment, and apportionment reduced total PD costs by 5% - 6%.

It is important to note that the results of these studies only include apportionment to non-industrial causes. The results can be summarized as follows:

% Claims apportioned: 11% (non-industrial only)  
Average ratings % apportioned on those claims w/apport. = 41%  
Impact on dollars divided by impact on ratings: 1.0  
**Overall apportionment (as a % of PD claims): 5% - 6%**

Octagon Claims Review: Part of this study includes a claim review of over 400 files from large California workers’ compensation insurance companies. Apportionment claims were not specifically requested by Octagon, yet apportionment was pursued in 24% of the claims reviewed.

The claims in this review are not fully randomized: some insurance companies identified which claims Octagon should review, while other insurers gave Octagon a large list of claims to choose from. We found no obvious correlation between the amounts of choice Octagon had in its ability to select the claims to review and the percent of claims in which apportionment was reviewed.

In addition, Octagon identified that apportionment could have been pursued in 30% of the claims. Also, if pre-reform claims are excluded from the sample, then apportionment was pursued in 28% of the cases.

WCIRB/CDI: In its amended July 1, 2004, rate filing, the WCIRB states as follows: Based, in part, on

WCRI research from Wisconsin, the Commission on Health and Safety and Workers' Compensation (CHSWC) estimated that projected permanent disability benefit costs would be reduced by approximately 4% due to the apportionment provisions related to prior injuries. The SB 899 provisions related to apportionment will also affect the cost of permanent disability on claims with no related prior workers' compensation injuries. For example, the most recently available WCIRB data on the nature of injuries suggests that strains and other miscellaneous cumulative injuries comprise approximately 45% of all permanent disability claim costs, and these types of injury are most likely to be impacted by changes in apportionment. As a result, the WCIRB has judgmentally estimated an average 10% reduction in permanent disability awards resulting from the SB 899 provisions related to apportionment.<sup>7</sup>

The impact of apportionment on indemnity costs as a percent of total costs is calculated by the WCIRB to be 6.7%. This is calculated as follows:

**Overall apportionment (as a % of PD claims): 10%**

Indemnity utilization factor = 1.26

PD as a % of indem = 53%

Overall apportionment (as a % of indem) = 6.7% (10% x 1.26 x 53%)

The WCIRB and CDI use the same 6.7% assumption regarding apportionment savings.

BRS: Our assumptions regarding savings related to apportionment are as follows:

**BRS Low: Overall apportionment (as a % of PD claims): 5%**

This is based on Neuhauser's estimates. There are several conservative aspects associated with this estimate. It is based on the assumption that the percent reduction in ratings and costs are identical and it excludes industrial apportionment. We note that the recent Dykes case decision could limit the impact of industrial apportionment.

**BRS High: Overall apportionment (as a % of PD claims): 12%**

% PD claims apportioned = 24% (based on Octagon review)

Average % ratings apportioned on claims with apportionment = 41%

Ratio impact on dollars / impact on ratings = 1.25

Total impact = 12% = 24% x 41% x 1.25

**BRS Middle: Overall apportionment (as a % of PD claims): 8.5%**

Average of Low & High selections

Another area in which BRS assumptions differ from those of the WCIRB and CDI is the assumed PD as a percentage of total indemnity. The WCIRB and CDI both relied on prior data to assume that PD costs will comprise 53% of total indemnity. BRS modified that assumption to reflect the likely change in the underlying distribution that will result from other aspects of the

legislation that will lower PD costs. BRS assumes that the PD to Indemnity percentage is 30%, 36% and 43% for the low savings, middle savings, and high savings, respectively.

### ***Adjustment to Medical Loss Development Factors***

In adopting the 2006 pure premium rates, the CDI points out that there is potential for the medical loss development factors to be understated. The CDI writes:

The reforms have a discernable impact on the medical paid loss development pattern. In the chain-ladder loss development method, incremental payments during the most recent period for an accident year are expressed as a ratio to the cumulative payments during all prior periods for the same accident year. These ratios on past accident years then become the basis for projections of ratios at comparable levels of maturity for the more current years.

Here the prior cumulative payments on the older accident years were made under the pre-reform system and the incremental payments were made under the post-reform system. To apply the resulting ratio to (the) current year where the cumulative payments have also been made under the post-reform system will result in an underestimation of the ultimate payments.<sup>8</sup>

Adjusting for this potential distortion increases the projected ultimate costs and thus decreases the projected savings from the reforms. Both the WCIRB and CDI adjust medical loss development factors for the impact of changes in medical fees and caps on chiropractic and physical therapy visits. However, only the CDI makes a further adjustment for the impact of medical utilization reforms on loss development pattern.

While we agree with the CDI that the reforms could lead the medical loss development factors to be distorted, we do not believe that they are currently understated. Most of the historical medical paid age-to-age ratios increased for many years in a row through 2004 and then decreased in 2005. The factors used in the WCIRB rate filing are close to their all-time high, and they are far above long-term averages. Therefore we do not think that the medical paid loss development factors are understated and so we did not adjust the factors for changes in medical utilization.

### ***Adjustment to Medical Utilization Due to Other Benefit Level Changes***

Both the WCIRB and CDI agree that changes in indemnity benefits have an additional impact on indemnity utilization. For example, both the WCIRB and CDI agree that if indemnity benefits were to increase by 5%, then total indemnity costs would actually increase by more than 5% due to an increase in indemnity utilization. Similarly, a 5% decrease in indemnity benefits would result in savings greater than 5%.

The WCIRB also projects that changes to indemnity benefit level will impact medical utilization, whereas the CDI does not. Given that indemnity claims almost always have both indemnity and medical costs associated with the claim; BRS believes that it makes sense to reflect changes to indemnity benefit levels on both indemnity and medical utilization.

***Adjustment of Medical Utilization Due to ACOEM, Utilization Review and MPN's:***

The strengthening of utilization review, the use of the ACOEM Guidelines and that introduction of MPNs has led to substantial medical cost savings.

UC Berkeley (Neuhauser): Prior to the implementation of SB899, Dr. Neuhauser estimated potential low, middle and high savings resulting from the introduction of the ACOEM Guidelines to be 16.2%, 36.7% and 53.4%, respectively.<sup>9</sup> This analysis is based primarily on differences in medical utilization in workers' compensation versus group health insurance. The estimated savings exclude the impact of limits on chiropractic and physical therapy treatments as well as the impact of the repeal of the primary treating physician presumption.

BRS: Based on changes in loss projections before and after the reforms BRS has estimated the impact of evidence-based medicine on pre-reform liabilities (Section III of this report). We estimate that ACOEM/Utilization Review have decreased liabilities by \$2.9B, \$3.4B and \$4.0B, for our low, middle and high savings scenarios, respectively. Assuming total liabilities of \$29.7B, these translate into the following percentage savings: 9.7%, 11.4% and 13.4%. Given that it is probably harder to establish utilization review for established claims than for new claims, and we found few instances in which carriers moved older claims into new MPN's, BRS believes that these estimates provide a reasonable lower range for the impact of ACOEM/Utilization Review/MPN's on medical costs.

CWCI: Over the past several months the CWCI has released a six-part analysis of the impact of the reforms. Part 5 of this series relates directly to medical utilization.<sup>10</sup> This study provides a detailed analysis of the number of visits per indemnity claim and the average cost per indemnity claim by service type and year.

Based on the information in the CWCI report, BRS derived the following changes in average cost per indemnity claim for all services combined.

<b>Exhibit VII.3. Percent Change in Payments: All Procedures*</b>			
<b>Age of Year</b>	<b>2001 to 2002</b>	<b>2002 to 2003</b>	<b>2003 to 2004</b>
At 3 months	9.5%	3.9%	(5.9%)
At 6 months	9.5%	4.1%	(9.4%)
At 9 months	8.5%	4.5%	(11.9%)

\* Assumes no change in number of indemnity claims per year

The above exhibit shows that the increase in medical costs slowed down between 2002 and 2003, and costs decreased between 2003 and 2004. One interpretation of the above information is that the introduction of evidence-based medicine has caused the average medical cost of an indemnity claim to decrease by 11.0%. BRS believes that other factors deserve consideration:

- Timing: The implementation of ACOEM/UR/MPN's by insurance carriers happened throughout 2004 and did not begin on January 1, 2004. Therefore, some of the 2004 costs do not yet reflect the impact of these changes.

- Underlying Medical Inflation: It is likely that without the reforms medical costs would have continued to inflate. Equating the decrease in costs to the impact of the reforms likely understates their true effect. For example, if costs at 9 months would have increased 4.5% between 2003 and 2004 without the reforms, then the fact that average costs decreased by 11.9% actually reflects an impact of the reforms of 15.7%. At 3 months the total effect would be 9.4%.
- Caps in Chiropractic/Physical Therapy Visits: The above figures also reflect the introduction of 24-visit caps on chiropractic and physical therapy services. However, it is unlikely that these caps had a significant impact on the above 3-month numbers.
- Medical Fees Changes: The 2004 costs reflect medical fee changes outlined in SB 228.

Therefore, 9.4% is a reasonable low estimate of the savings per indemnity claim.

WCIRB Indemnity Claim Frequency: While the CWCI study analyzes the average cost per indemnity claim, another important consideration is the decrease in indemnity claim frequency reported by the WCIRB. The following chart shows the reported change in indemnity frequency over the past few years:

<b>Exhibit VII.4. Indemnity Claim Frequency by Accident Year*</b>				
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Frequency	20.9	19.6	16.7	14.8
Change in Frequency		(5.9%)	(15.1%)	(11.4%)

\* Frequency = Ultimate Claim Counts per \$Million On-level Earned Premium  
WCIRB Actuarial Committee Meeting, 12/1/05, page III-C-36

While the WCIRB and CDI projections assume that decreases in benefits will result in some decrease in claims frequency, the above changes are more significant than anticipated.

WCIRB On-Level Medical Pure Premium 2003 vs. 2004: The most recent WCIRB quarterly study shows a significant difference between the on-level medical pure premiums for 2003 versus 2004. The 2004 pure premium of 0.368 is almost 21% lower than the 2003 pure premium of 0.464.<sup>11</sup> Since these pure premiums are on-level, they reflect most changes due to the reforms. However, the WCIRB has elected not to explicitly adjust for ACOEM/UR. We believe that at least part of this 21% difference is attributable to ACOEM/UR.

WCIRB 2006 Rate Filing: The WCIRB adjusts for ACOEM/UR/MPN's in its 2006 rate filing through reducing its assumptions regarding medical trends.

...recent legislation was intended to significantly affect the utilization of medical services. The WCIRB believes the impact of AB749, SB228, and SB899 on utilization of medical services will be significant. However, there is no credible statistical basis for directly estimating the impact of these legislative provisions on the utilization of medical services – either separately or in combination. Nevertheless, given the nature and extent of these legislative changes and the magnitude of the post-1996 California workers' compensation medical inflation rate relative to general medical inflation or workers' compensation medical inflation in other states, in the WCIRB's July 1, 2004 and January 1, 2005 pure premium rate filings, the WCIRB judgmentally reduced the indicated annual inflationary growth in medical cost levels 75%.

There are a number of indications that medical cost levels are being impacted by recent reforms. Also, the full impact of the legislative reforms impacting the utilization of medical services has likely not yet been reflected in experience. As a result, the WCIRB recommends, as it did in its July 1, 2005 pure premium rate filing, projecting the on-level medical ratio for 2006 policies based strictly on the average of the latest two accident year ratios rather than applying a trend rate to the average of the latest two on-level medical loss ratios<sup>12</sup>

WCIRB Legislative Cost Monitoring Report: While the WCIRB does not explicitly quantify the amount of the adjustment for ACOEM/UR in its 2006 rate filing, it did initially estimate that the impact of “Other Utilization Provisions” (i.e. medical utilization excluding physical medicine caps) would decrease affected medical costs by 25%.<sup>13</sup>

BRS: Rather than reflect anticipated savings by negating a trend, BRS has elected to explicitly state savings assumptions for the following reasons:

- a. Underlying Inflation: While the reforms have temporarily impacted medical utilization and costs, there is still underlying inflation.
- b. Timing: The effects of the provisions in the reforms being quantified are different depending on the time period being analyzed. The effect is different for accident year 2004 versus 2005 versus 2006, and we feel that it is appropriate to reflect these differences.

Underlying Inflation: While the reforms have temporarily impacted medical utilization and costs, there is still underlying inflation.

Timing: The effects of the provisions in the reforms being quantified are different depending on the time period being analyzed. The effect is different for accident year 2004 versus 2005 versus 2006, and we feel that it is appropriate to reflect these differences.

Our low, middle and high savings estimates of the impact of ACOEM/UR/MPN’s on affected medical costs are 10%, 20% and 30%, respectively.

#### Loss Valuation Date

- The WCIRB and CDI estimates are based on losses valued as of 6/30/05, whereas our analysis relies on losses valued as of 9/30/05. Using more recent data caused our savings projections to be higher than the projections would have been otherwise.

#### Medical Trend

- As discussed in section 5.7.3, the 2006 WCIRB rate filing offsets medical trend with savings from ACOEM/UR/MPN’s. In contrast, we have an explicit savings adjustment for these items. Counterbalancing these savings are annual medical trends of 4%, 7% and 10% for the low savings, middle savings and high savings scenarios, respectively.

Identical Assumptions: BRS, WCIRB & CDI

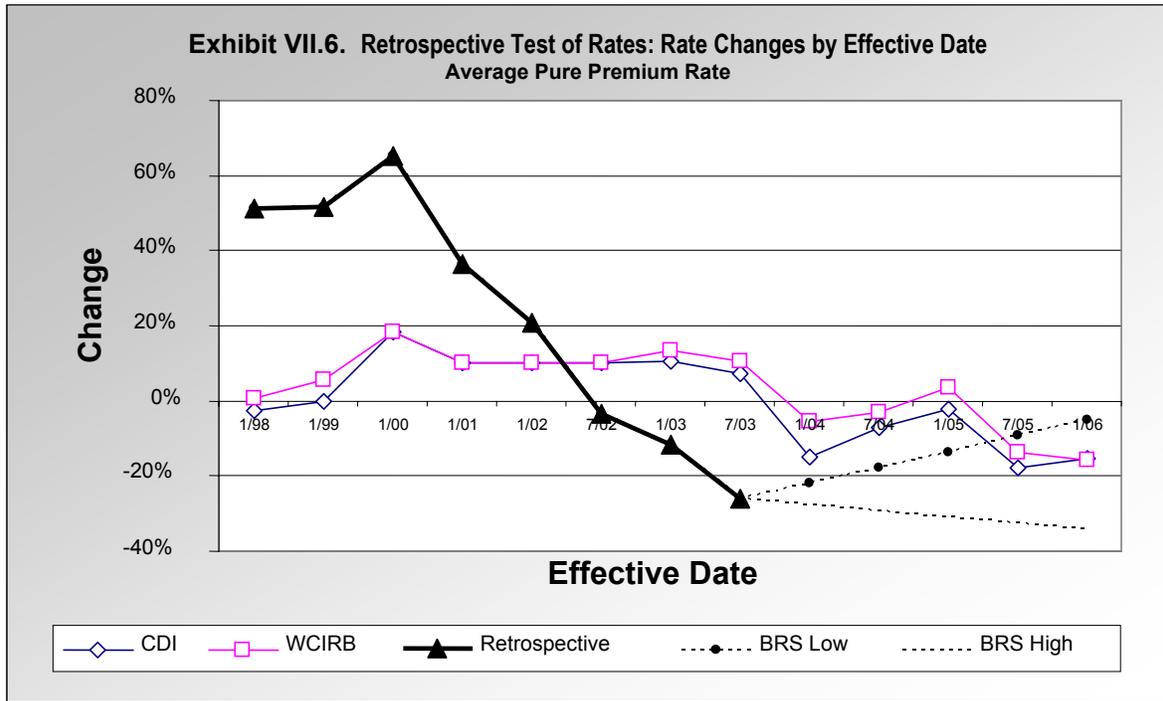
The BRS, WCIRB, and CDI studies share identical assumptions on many key issues.

- **Medical Fees:** Based on detailed analysis by the CWCI, we have assumed that changes to the medical fees will lower medical costs by 9.4% as of 1/1/04. Slight increases followed in 2005 and 2006.
- **Limit on Chiropractic and Physical Medicine Services:** Based on analysis by the CWCI, we have assumed that the limit of 24 visits for chiropractic and physical medicine will lower medical costs by 3.6% and 2.5%, respectively.
- **Other Major Assumptions:** The following is a chart of other assumptions that BRS and the WCIRB have in common:

Exhibit VII.5. Common Assumptions: BRS, WCIRB, CDI		
Description	% Impact	Inception
<u>Indemnity</u>		
<u>% Indemnity</u>		
AB749 Indemnity Benefit Increases	6.0%	1/1/05
	5.8%	1/1/06
	0.2%	1/1/08
Vocational Rehabilitation/Vouchers	(12.6%)	1/1/04
2-Year Cap on Temporary Disability	(5.3%)	4/19/04
2-Tier Permanent Disability Benefits	(1.8%)	1/1/05
# of Weeks of Permanent Disability	(5.4%)	1/1/05
<u>Medical</u>		
<u>% Medical</u>		
Employer's Liability for 1 <sup>st</sup> Aid	0.7%	4/19/04
Medical Legal	(0.3%)	4/19/04

## Retrospective Analysis of CDI Approved and WCIRB Recommended Pure Premium Rate Changes

In addition to analyzing the WCIRB and CDI 2006 pure premium rates, BRS also analyzed the accuracy of historical WCIRB recommended and CDI approved pure premiums. The following graph compares the WCIRB/CDI pure premium rate changes to the retrospective rate changes.



The above chart shows that in the late 1990's and early 2000's, the pure premium rate changes recommended by the WCIRB as well as those approved by the CDI underestimated the true cost of claims for those years. In 2003 and 2004 the WCIRB and CDI rates overestimated the cost of claims.

There are several important caveats regarding the above exhibit:

**Retroactive Impact of Reforms:** The "retrospective" rates in the above exhibit reflect losses net of the impact of the reforms. For example, consider the effective date July 1, 2002, in the exhibit above. The rate filing effective July 1, 2002, affects all policies incepting between July 1, 2002 and December 31, 2002. Assuming annual policies, the injury dates covered by these policies include July 1, 2002 (the beginning of a policy incepting July 1, 2002) through December 31, 2003 (the end of a policy that incepted on December 31, 2002).

The above exhibit shows that the WCIRB recommended - and the CDI approved - a pure premium rate increase of about 10% as of July 1, 2002. Retrospectively we can see that losses came in lower than expected, and in fact a slight rate decrease was warranted. However, part of the reason that losses appear to be lower than expected is that the losses were impacted by

reforms that were not anticipated in the July 1, 2002 rate filings. For example, the medical fee reductions in SB 228 as well as the introduction of evidence-based medicine in SB 899 have retroactively decreased claims costs anticipated in the July 1, 2002, rate filings.

Policy Periods: The above projections are based on premium and loss information by policy period, yet the initial ultimate loss projections were on an accident year basis. Therefore we needed to allocated accident year losses to various periods, and this required estimation.

2004 through 2006: As we have stated several times in this report, there is substantial uncertainty regarding the ultimate cost of claims associated with injuries in the most recent years. Therefore we have provided a range of indications regarding retrospective rate changes for policies incepting in 2004 – 2006.

There are several conclusions that can be drawn from the preceding exhibit:

Bias: In statistics, a biased estimator is one that for some reason on average over- or underestimates what is being estimated. One way to test the WCIRB and CDI rates for bias is to analyze the recommended and approved rate changes retrospectively. Given that there are some years in which it the WCIRB/CDI pure premium rates underestimate costs, and other years in which the costs are overestimated, we do not see obvious evidence of bias.

Accuracy: Clearly there are years in which actual results vary significantly from the WCIRB and CDI projections. One observation is that the WCIRB and CDI projections take time to catch up to new trends and systemic changes. For example, in the late 1990's and early 2000's, claims costs were escalating at an increasing rate. The WCIRB/CDI rates took a few years to catch up to that cost escalation. A similar pattern has emerged with decreases in claims costs. Early indications are that the reforms are generating more savings than had been initially anticipated in both the WCIRB and CDI rates. It is important to note that the savings from the reforms are still subject to substantial uncertainty.

The calculation supporting the retrospective analysis of WCIRB and CDI rates is largely based on information provided by the WCIRB and is detailed in Appendix J. First, insurance carrier calendar year premium is broken down by policy period and also restated at CDI pure premium rate levels. Second, ultimate calendar/accident year loss ratios from the WCIRB's December 1, 2005 Actuarial Committee Meeting are converted in relation to CDI pure premium and broken down by policy period. Lastly, policy period loss ratios (in relation to CDI pure premium) are calculated and compared to "target" loss ratios.

WCIRB has proposed a special committee to provide monitoring of medical costs, utilization, claim frequency, benefit payments, and other workers' compensation system components in order to proactively evaluate the impact of the reforms in emerging post-reform period through multi-year retrospective measurements of key cost components. Also on the committee would be CDI, CWCI, CHSWC, DWC, University of California, and carrier representatives.

## Chapter VII Endnotes

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<sup>1</sup> Arthur Levine; Levine on California Workers' Compensation, September 2003, page 4.B.3. Mr. Levine also serves as staff counsel to the public members of WCIRB's Governing Committee.

<sup>2</sup> Christopher R. Brigham, MD, CIME, FAADEP, FACOEM; Permanent Impairment – Disability Rating Study: Impact of the AMA Guides to the Evaluation of Permanent Impairment, Fifth Edition on Permanent Disability Ratings in the State of California, 5/17/05, page 6/A-15

<sup>3</sup> Christopher R. Brigham, MD, CIME, FAADEP, FACOEM, page 6/A-15

<sup>4</sup> J. Paul Leigh, Ph.D., and Stephen A. McCurdy, M.D.; Differences in Workers' Compensation Disability and Impairment Ratings Under Old and New California Law, page 40

<sup>5</sup> Christopher R. Brigham, MD, CIME, FAADEP, FACOEM; page 6/A-15

<sup>6</sup> Leigh and McCurdy, page 16

<sup>7</sup> WCIRB Rate Filing; July 1, 2004, page A: A-26

<sup>8</sup> CDI; A Decision in Order Adopting 1/06 Rates, File #RH 05-046947, page 4-5

<sup>9</sup> Frank Neuhauer; Outline: Estimating the Range of Savings from Introduction of Guidelines Including ACOEM Revised sent to Christine Baker, CHSWC, 10/20/03, page 1

<sup>10</sup> Alex Swedlow; CWCI; Changes in Medical Utilization and Average Cost by Medical Service Type; 12/8/05, page 4-5

<sup>11</sup> WCIRB Rate Filing 9/15/05; Amended 1/06, Exhibit 6, page A-19

<sup>12</sup> WCIRB 2006 Rate Filing, page A:A-6

<sup>13</sup> WCIRB; 2005 Legislative Cost Monitoring Report, 9/15/05, page 1