# DELAWARE COMPENSATION RATING BUREAU, INC. 

Indicated Residual Market Rate Change

Page 1 presents the overall indicated changes in rates and loss costs.
Derivation of the indemnity and medical trend factors and trended loss ratios shown on page 1 is presented on pages 2 and 3.

Page 4 shows the derivation of overall frequency trend factors for each of the latest four policy years.

For the 2011 Filing, the Bureau has made an adjustment to the frequency trend to recognize the pattern shown in the most recent DCRB data. Frequency trend prior to $1 / 1 / 2009$ and subsequent to $21 / 31 / 09$ is based on a 7 point (2002-2008) exponential trend of $-8.6 \%$ per year. For the period $1 / 1 / 09-12 / 31 / 09$, frequency trend is equal to $+1.5 \%$.

Due to the impact of Senate Bill 1 and consistent with an adjustment to medical severity trend that was a part of the compromise reached with the Insurance Department for the 2009 Filing, medical severity trend is separated between pre-Senate Bill 1 and Post Senate Bill 1 trends. The difference between the two trend rates is a reduction of 1.8 points in medical trend attributed in the resolution of the 2009 filing to effects of the implementation of a medical fee schedule which was substantially operational beginning 9/1/2008.

## INDICATED CHANGE IN RATE LEVEL

(1a) Policy Year 2006 Loss and Loss Adjustment Expense Ratio
(1b) Policy Year 2007 Loss and Loss Adjustment Expense Ratio
(1c) Policy Year 2008 Loss and Loss Adjustment Expense Ratio
(1d) Policy Year 2009 Loss and Loss Adjustment Expense Ratio
(1e) Average (Midpoint $=7 / 1 / 2008$ )
(2a) Policy Year 2006 Loss and LAE Ratio Trended to 12/1/2012
(2b) Policy Year 2007 Loss and LAE Ratio Trended to 12/1/2012
(2c) Policy Year 2008 Loss and LAE Ratio Trended to 12/1/2012
(2d) Policy Year 2009 Loss and LAE Ratio Trended to 12/1/2012
(2e) Average at 12/1/2012
(3a) Senate Bill 1 Adjustment

| Indemnity | Medical | Total |
| :---: | :---: | :---: |
| 0.3673 | 0.5729 | 0.9402 |
| 0.3824 | 0.6664 | 1.0488 |
| 0.3266 | 0.6348 | 0.9614 |
| 0.3474 | 0.6735 | 1.0209 |
| 0.3559 | 0.6369 | 0.9928 |
|  |  |  |
| 0.2783 | 0.5640 |  |
| 0.3091 | 0.6615 |  |
| 0.2816 | 0.6354 |  |
| 0.2877 | 0.6121 |  |
| 0.2892 | 0.6183 | 0.9075 |
|  |  |  |
| 1.0000 | 0.8260 |  |
| 0.2892 | 0.5107 | 0.7999 |
|  |  | 0.0747 |
|  |  | 0.0646 |
|  |  |  |
| 0.2942 | 0.5703 | 0.8645 |
| $34.0 \%$ | $66.0 \%$ |  |
|  |  | 0.7101 |

(7) Indicated Change in Rates (5a) / (6)
(8) Estimated Effect of the $7 / 1 / 12$ Benefit Change
1.2174
(9) Indicated Change in Residual Market Rate Level (7) * (8)
1.2230
(9a) Factor to Adjust for Compromise With Insurance Department 0.9525
$\begin{array}{ll}\text { (9b) Change in Residual Market Rate Level to Reflect Compromise (9) * (9a) } & 1.165\end{array}$
(10) Indicated Change in Voluntary Market Loss Costs (9) * $[0.7343 / 0.7688] \quad 1.1681$
(10a) Factor to Adjust for Compromise With Insurance Department 0.9525
(10b) Change in Voluntary Market Loss Cost Level to Reflect Compromise (10) * (10a) 1.113

## CHANGES IN MANUAL PREMIUM LEVEL BY INDUSTRY GROUP

(11) Current Collectible Premium Ratio
(12) Proposed Collectible Premium Ratio
(13) Change in Collectible Premium Ratio (12) / (11)
(14) Change in Residual Market Manual Rate Level (9b) * (13)
(15) Change in Voluntary Market Manual Loss Cost Level (10b) * (13)
(16) Current Offset for Residual Market Surcharge

| 1.0354 | 1.0186 | 0.9301 |  |
| :--- | :--- | :--- | :--- |
| 0.8690 | 0.9585 | 0.8402 |  |
| 0.8393 | 0.9410 | 0.9033 | 0.9023 |
|  |  |  |  |
| 0.9778 | 1.0963 | 1.0523 | 1.0512 |
|  |  |  |  |
| 0.9341 | 1.0473 | 1.0054 | 1.0043 |
|  |  |  | 0.9954 |
|  |  |  | 0.9955 |
|  |  |  |  |
| 0.9342 | 1.0474 | 1.0055 | 1.0044 |

* $\$ 2,630,000$ on a pre-Senate Bill 1 basis.


## DETERMINATION OF TREND

| INDEMNITY |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Policy Year |  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| Actual Loss Ratio |  | 0.4945 | 0.4196 | 0.3956 | 0.3673 | 0.3824 | 0.3266 | 0.3474 |
| Normalized Frequency |  | 0.6732 | 0.5941 | 0.5320 | 0.5008 | 0.4660 | 0.4113 | 0.4173 |
| Severity Loss Ratio |  | 0.7346 | 0.7063 | 0.7436 | 0.7334 | 0.8206 | 0.7941 | 0.8325 |
|  | X | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|  | y | 0.7346 | 0.7063 | 0.7436 | 0.7334 | 0.8206 | 0.7941 | 0.8325 |
| 7 Point Exponential Regression: y = 0.691500 * $1.025615 \wedge x$ |  |  |  |  |  |  |  |  |
| Selected Annual Trend Factor $\quad 2.6$ |  |  |  |  |  |  |  |  |
| Policy |  | Fitted Value @ |  | Fitted Value |  | Severity |  | Frequency |
| Year |  | Midpoint of PY |  | @ 12/1/11 |  | Trend Factor |  | Trend Factor |
|  |  |  |  |  |  |  |  |  |
| 2006 |  | 0.7651 |  | 0.8886 |  | 1.1614 |  | 0.6523 |
| 2007 |  | 0.7847 |  | 0.8886 |  | 1.1324 |  | 0.7137 |
| 2008 |  | 0.8048 |  | 0.8886 |  | 1.1041 |  | 0.7808 |
| 2009 |  | 0.8254 |  | 0.8886 |  | 1.0766 |  | 0.7693 |
| Trended Loss Ratio |  |  |  |  |  |  |  |  |
| Policy |  | Actual Loss |  | Combined |  | Trended |  |  |
| Year |  | Ratio |  | Trend Factor |  | Loss Ratio |  |  |
|  |  | (5) |  | $(6)=(3) \star(4)$ |  | $(7)=(5) *(6)$ |  |  |
| 2006 |  | 0.3673 |  | 0.7576 |  | 0.2783 |  |  |
| 2007 |  | 0.3824 |  | 0.8082 |  | 0.3091 |  |  |
| 2008 |  | 0.3266 |  | 0.8621 |  | 0.2816 |  |  |
| 2009 |  | 0.3474 |  | 0.8282 |  | 0.2877 |  |  |
| Average 0.2892 |  |  |  |  |  |  |  |  |

[^0]
## DETERMINATION OF TREND



## DETERMINATION OF TREND

## Claim Frequency

Policy Year Frequency per \$1 million of Expected Losses

$$
\{1=\text { PY 1997, } 13 \text { = PY 2009\} }
$$

| Policy <br> Year | Claim <br> Frequency | Normalized <br> Frequency |
| :---: | :---: | ---: |
| 1997 | 28.18 | 1.0000 |
| 1998 | 25.09 | 0.8903 |
| 1999 | 24.79 | 0.8797 |
| 2000 | 22.49 | 0.7981 |
| 2001 | 19.61 | 0.6959 |
| 2002 | 19.86 | 0.7048 |
| 2003 | 18.97 | 0.6732 |
| 2004 | 16.74 | 0.5941 |
| 2005 | 14.99 | 0.5320 |
| 2006 | 14.11 | 0.5008 |
| 2007 | 13.13 | 0.4660 |
| 2008 | 11.59 | 0.4113 |
| 2009 | 11.76 | 0.4173 |


| Policy Year | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| $\mathbf{x}$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| $\mathbf{y}$ | 0.7048 | 0.6732 | 0.5941 | 0.5320 | 0.5008 | 0.4660 | 0.4113 | 0.4173 |

7 Point (2002-2008) Exponential Regression: $\mathbf{y}=0.782303 * 0.9138552^{\wedge} \mathbf{x}$

| Selected Frequency Trend Factor to $1 / 1 / 09=$ | $-8.6 \%$ |
| :--- | :---: |
| Selected Frequency Trend Factor from $1 / 1 / 09$ to $1 / 1 / 10=$ | $1.5 \%$ |
| Selected Frequency Trend Factor $1 / 1 / 10$ to $12 / 1 / 12=$ | $-8.6 \%$ |


|  | Frequency | Frequency <br> Trend $1 / 1 / 09$ | Frequency <br> Trend $1 / 1 / 10$ <br> Policy <br> Year | Trend to |
| :---: | :---: | :---: | :---: | ---: |
|  | 1/1/09 | to $1 / 1 / 10$ | Total Frequency |  |


[^0]:    \# See Page 12.4 for column (4).

