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Calculation of the Experience Modification Factor:

The formula is designed to tailor a rate to the employer. To do so, it must reflect a basic statistical law; the larger the base, the more accurate the actual record. In addition to a minimum premium threshold, scales and weightings are used to assure statistical accuracy. Employers above a

certain size actually determine their own final modification base entirely on their own record.

In the calculation, the industry average is compared to the actual record. The resulting ratio of "actual" over "expected" results in the experience modification.

$$\frac{\text{Actual}}{\text{Expected}} = \text{Experience Modification}$$

Loss severity versus loss frequency:

Recognition of the difference between severity and frequency is fundamental to experience rating. While severity is primarily a matter of chance once an accident has occurred, frequency is largely controllable. Therefore, frequency is a better measure of management control than severity. A weighting is used for each of these in calculating the experience modification with a greater emphasis on frequency.

All losses less than \$2,001 are considered totally *primary*, as indicators of frequency (used at full value). Losses of

\$2,001 or more are discounted, by use of a table to distinguish between *primary* and *excess* (severity) losses.

Weighting factors used are: "expected loss rate," "D ratio," "B," and "W" values and claim discount amounts. These are obtained from tables published in the WCIRB California Experience Rating Plan Manual. These factors are explained further in the following illustrations of frequency versus severity, and the rating example.

Why Experience Rating?

Insurance is based on the theory of spreading or sharing of risk by members of a group who are likely to experience losses. The losses of an entire group can be predicted with a fair degree of accuracy. However, it is not possible to determine which group member will actually have the loss. Because of this, the cost of insurance is apportioned to each member on the basis of average cost for the group. It is

assumed that each member's own experience will approximate the average.

In reality, while there must be a method for allocating premiums, very few risks are really "average"; some are much worse, some much better. A method is needed to recognize those differences to encourage the prevention of industrial accidents. Experience Rating provides that method.

What it is:

California's Workers' Compensation Experience Rating Plan, approved by the Department of Insurance, and overseen by the Workers' Compensation Insurance Rating Bureau (WCIRB), tailors the cost of insurance to the performance of the individual employer. It compares the employer's past loss record to all members of that same industry classification. The Workers' Compensation insurance "cost" is

then adjusted to arrive at the fair and equitable premium necessary to provide coverage for that employer.

This system allows the employer the opportunity to control insurance costs through measurable loss control programs. The potential premium savings provide the incentive to establish and maintain meaningful safety programs.

Who is eligible:

Every policyholder is required by California law to participate, if the company's payroll produces a specified minimum premium at published manual rates during the

experience rating period. The minimum earned premium is currently \$20,200.

How it works:

The insured's manual premium is adjusted by the experience modification which is expressed as a percentage factor. The result is called the standard premium. If an employer has a good loss record with an experience modification of 75%, the standard premium will be 25% below manual. On the other hand, if the experience modification is 125%, due to a poor loss record, then a surcharge of 25% above manual will be applied.

Both the credits and the debits can be significant. For example, a risk that develops a manual premium of \$100,000 would pay only \$75,000 with a 75% experience modification, or \$125,000 with a 125% "mod." The difference in premium is \$50,000 for one year.

The experience modification factor is computed and published annually for each experience rated risk by the WCIRB, not the insurance company. This factor is applied on the policy anniversary date for a period of one year. Any insurer issuing a policy must use the published modification.

Experience rating is not the same as a dividend plan. Experience rating adjusts future worker's compensation premiums. Dividends are excess premium dollars returned to an insured after a policy has expired. Dividend plans are not mandatory or automatic and may be applicable to non-experience rated as well as experience rated policies. Dividend plans are quoted by the insurance company on an individual basis, and by law cannot be guaranteed.

Unit Statistical Filing.

XX Experience rating begins with a Unit Statistical Filing. Every insurance company must report the individual experience of each policy to the WCIRB. The first filing is made 18 months after the inception of the policy. Two additional filings are made at 12 month intervals to reflect any changes

in open or late reported claims. The filing includes total payroll by each classification code. Claims of \$2,001 and over are listed individually, those less than \$2,001 are grouped together.

The rating period:

XX A period of three years is used for the rating, beginning four years and 9 months before the rating date. The most

recent year is omitted to permit open or late reported claims to close or develop more stable reserves.

Policy Periods and Unit Stat. Reports Used to Calculate a New Experience Modification For a 3/1/94-95 Policy.

New Mod.	1st				Unit Stat. Reports
	2nd	1st		Policy Periods	
	3rd	2nd	1st		
3/1/94-95	3/1/93-94	3/1/92-93	3/1/91-92	3/1/90-91	
Current	Not Used	Used	Used	Used	

The Experience Rating Form:

1. Class Code - The industry classification as published in the WCIRB Workers' Compensation Manual.
2. Year - The policy years of payroll figures.
3. Payroll - The insured's California payroll by class code.
4. Expected Loss Rate - The portion of each class rate anticipated to pay claim costs by classification. (See Table II of the Experience Rating Manual.)
5. Expected Losses - The expected losses for that insured's operation by class.

$$\text{Expected losses} = \left(\frac{\text{Payroll \$}}{100} \right) \times \left(\text{Expected Loss Rate} \right)$$
6. "D" Ratio - Ratio of primary to expected losses. (See Table II of the Experience Rating Manual.)
7. Primary Expected Losses - (Expected Losses) x ("D" Ratio)
 The employer's expected controllable portion of losses by class.
8. Total Expected Losses (d) - Sum of all items in Column 5.
9. Total Primary Expected Losses (e) - Sum of all items in Column 7.
10. Total Expected Excess Losses (f)=(d)-(e) - The difference between the totals of expected losses and primary expected losses.
11. Claim Number (or Designation) - The insurer's reference number assigned to each claim Over \$2,001, listed individually. Claims under \$2,001 are simply grouped by policy year.
12. Type of Injury - Symbols used to indicate type of injury.
 X - Medical Only
 N - Permanent Disability less than 25%
 M - Permanent Disability more than 25%
 P - Permanent Total Disability
 T - Temporary Disability
 D - Death
 S - Contested Death
 R - Personal, Special Death Benefit
13. "O" or "F" - Symbols used to indicate whether the claim is open (O) and therefore an estimate (reserve); or closed after final payment (F).
14. Policy year - The policy year in which the injury occurred.
15. Actual Incurred Losses - The total per claim cost, paid and estimated.
16. Primary Actual Losses - The discounted (controllable) portion of the per claim cost. (See Table I of the Experience Rating Manual.) Or compute: $\left(\frac{9,000 \times \text{Actual Loss}}{7,000 + \text{Actual Loss}} \right)$
17. Total Actual Incurred Losses (a) - Sum of Columns 15.
18. Total Primary Actual Losses (b) - Sum of Columns 16.
19. Total Actual Excess - The difference between actual and primary losses. (c)=(a)-(b)
20. "B" Value - (See Table III of Experience Rating Manual.) A stabilizing element use to limit the effect of a single severe loss on the modification of a small risk. It is a stabilizing element that is added to both the primary actual and primary expected losses.
21. "W" Value - (See Table III of Experience Rating Manual.) The "W" value is designed to modify excess losses based on the size of the risk. As the size of the risk increases, its own actual experience is used to an increasing degree, and the "W" value increases from .00 to 1.00.
22. Rateable excess losses=

$$\left(\frac{\text{"W" value}}{\text{item 21}} \right) \times \left(\frac{\text{c or actual excess losses}}{\text{item 19}} \right)$$
23. A mathematical step in the actual calculation of the experience modification factor.

$$\left(\frac{\text{I-"W" value}}{\text{item 21}} \right) \times \left(\frac{\text{f or expected excess losses}}{\text{item 10}} \right)$$
24. Total (g) - The final weighted loss history or "is" for the individual employer for the experience modification factor calculation.

$$\left(\frac{\text{g:total primary actual losses}}{\text{item 18}} \right) + \left(\frac{\text{"B" value}}{\text{item 20}} \right) + \left(\frac{\text{rateable excess losses}}{\text{item 22}} \right) + \left[\frac{(1-w) \times f}{\text{item 23}} \right]$$
25. Total (h) - The final weighted average industry loss history or "should be" for the experience modification factor calculation.

$$\left(\frac{\text{h:Total Expected Losses}}{\text{item 8}} \right) + \left(\frac{\text{"B" value}}{\text{item 20}} \right)$$
26. The Experience Modification Factor = $\frac{g}{h} \left(\frac{\text{item 24}}{\text{item 25}} \right)$

**WORKERS' COMPENSATION INSURANCE RATING BUREAU
OF CALIFORNIA
EXPERIENCE RATING FORM**

Safety Pays Machine Shop

Los Angeles

ILLUSTRATES HIGH FREQUENCY

BUREAU NUMBER	-F
9 6547	
EFFECTIVE	3-1-94
CARRIER	

Zenith Insurance Company
ISSUING OFFICE
Los Angeles
POLICY NUMBER

Z 12345

EXPECTED LOSSES	CLASS CODE	YR 92 PAYROLL	YR 91 PAYROLL	YR 90 PAYROLL	YR PAYROLL	EXPECTED LOSS RATE	EXPECTED LOSSES	"D" RATIO	PRIMARY EXPECTED LOSSES
	3632	1,200,000	1,000,000	800,000		4.24	127,200	.29	36,888
	8742	100,000	80,000	70,000		0.75	1,875	.28	525
	8810	150,000	120,000	100,000		0.52	1,924	.30	577

EXPECTED EXCESS (f) = (d) - (e)	EXPECTED LOSSES (d)	PRIMARY EXPECTED LOSSES (e)
93,009	130,999	37,990

ACTUAL LOSSES	CLAIM NUMBER	TYPE INJ	♀	POLICY YEAR	ACTUAL * INCURRED LOSSES	PRIMARY ACTUAL LOSSES	CLAIM NUMBER	TYPE INJ	♀	POLICY YEAR	ACTUAL * INCURRED LOSSES	PRIMARY ACTUAL LOSSES
	634799	N	F	90	10,000	5,294	Under 2,001	F		90	5,800	5,800
	659451	N	F	90	23,500	6,934						
	203554	T	F	91	7,000	4,500	Under 2,001	F		91	6,500	6,500
512675	N	F	91	6,000	4,154							
312374	P	F	91	9,000	5,062							
312375	T	F	91	10,000	5,294							
274455	N	F	92	10,000	5,294	Under 2,001	F		92	7,000	7,000	
274478	P	O	92	25,000	7,031							
297863	M	O	92	14,000	6,000							
297906	T	O	92	9,000	5,062							

ACTUAL EXCESS (c) = (a) - (b)	ACTUAL INCURRED LOSSES (a)	PRIMARY ACTUAL LOSSES (b)
68,875	142,800	73,925

RATING PROCEDURE

TOTAL PRIMARY ACTUAL (b)	** "B" VALUE	** "W" VALUE	RATABLE EXCESS LOSSES = W x (c)	(1-W) x f	TOTAL (g)
73,925	8,700	.13	8,954	80,918	172,497

130,999	** "B" VALUE
TOTAL EXPECTED LOSSES (d)	

* INDEMNITY AND MEDICAL COMBINED
** ENTER TABLE III WITH EXPECTED LOSSES (d)

139,699	TOTAL (h)
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123	g
EXPERIENCE MODIFICATION	h

Frequency Example

Manual Premium \$100,000 x 1.23=\$123,000 Modified Premium

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**WORKERS' COMPENSATION INSURANCE RATING BUREAU
OF CALIFORNIA
EXPERIENCE RATING FORM**

Safety Pays Machine Shop

Los Angeles

ILLUSTRATES HIGH FREQUENCY

BUREAU NUMBER	9 6547	-F
EFFECTIVE	3-1-94	
CARRIER	Zenith Insurance Company	
ISSUING OFFICE	Los Angeles	
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EXPECTED LOSSES	CLASS CODE	YR 92 PAYROLL	YR 91 PAYROLL	YR 90 PAYROLL	YR PAYROLL	EXPECTED LOSS RATE	EXPECTED LOSSES	"D" RATIO	PRIMARY EXPECTED LOSSES
	3632	1,200,000	1,000,000	800,000		4.24	127,200	.29	36,888
	8742	100,000	80,000	70,000		0.75	1,875	.28	525
	8810	150,000	120,000	100,000		0.52	1,924	.30	577

EXPECTED EXCESS (f) = (d) - (e)	EXPECTED LOSSES (d)	PRIMARY EXPECTED LOSSES (e)
93,009	130,999	37,990

ACTUAL LOSSES	CLAIM NUMBER	TYPE INJ	SEX	POLICY YEAR	ACTUAL * INCURRED LOSSES	PRIMARY ACTUAL LOSSES	CLAIM NUMBER	TYPE INJ	SEX	POLICY YEAR	ACTUAL * INCURRED LOSSES	PRIMARY ACTUAL LOSSES	
	634799		N	F	90	10,000	5,294	Under 2,001		F	90	5,800	5,800
	659451		N	F	90	23,500	6,934						
	203554		T	F	91	7,000	4,500	Under 2,001		F	91	6,500	6,500
512675		N	F	91	6,000	4,154							
312374		P	F	91	9,000	5,062							
312375		T	F	91	10,000	5,294							
274455		N	F	92	10,000	5,294	Under 2,001		F	92	7,000	7,000	
274478		P	O	92	25,000	7,031							
297863		M	O	92	14,000	6,000							
297906		T	O	92	9,000	5,062							

ACTUAL EXCESS (c) = (a) - (b)	ACTUAL INCURRED LOSSES (a)	PRIMARY ACTUAL LOSSES (b)
68,875	142,800	73,925

RATING PROCEDURE

TOTAL PRIMARY ACTUAL (b)	** "B" VALUE	** "W" VALUE	RATABLE EXCESS LOSSES = W x (c)	(1-W) x f	TOTAL (g)
73,925	8,700	.13	8,954	80,918	172,497
130,999	8,700				
TOTAL EXPECTED LOSSES (d)	** "B" VALUE				TOTAL (h)
130,999	8,700				139,699

* INDEMNITY AND MEDICAL COMBINED
** ENTER TABLE III WITH EXPECTED LOSSES (d)

Frequency Example

Manual Premium \$100,000 x 1.23=\$123,000 Modified Premium

123
EXPERIENCE
MODIFICATION **9**
H

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