

Rate Framework Modernization

Risk Disparity Analysis
August 2015

Context

- In examining the proposed 22 industry classes, it is important to understand that while each class may have some level of risk disparity (employers bringing a different claims experience relative to the class), addressing this risk disparity can not be done at the expense of the actuarial predictability of each industry class.
- In addition, while the WSIB recognizes that there could be a level of risk disparity within the 22 classes, in large part, the proposed risk band approach, which sees the # of risk bands increase based on the level of disparity in each respective class, would address some of these concerns as each employer would gravitate towards a risk band and premium that would be reflective of their own risk profile and actuarial predictability.
- That said, the WSIB has undertaken further analysis to determine whether expansion of the 22 classes along the NAICS hierarchy, while ensuring the ability to set fair and stable rates through actuarial predictability, would produce better outcomes. This information is provided to support the engagement of stakeholders as part of the Rate Framework Modernization consultation

Risk Disparity

- Risk disparity would be examined by comparing the risk profile of the 22 proposed industry classes to the next level of the NAICS industry classes.

For example: Class G1 = NAICS 238 (3-digit). This analysis examined the 4-digit NAICS classes below 238, i.e. 2381, 2382, 2383, 2389.

- This would assist in determining if further expansion of the number of classes would produce improved outcomes that translates to a noticeably different premium rate at the class and employer levels.

Actuarial Predictability

- Each class must have a level of actuarial predictability that supports the setting of reliable and predictable premium rates that mitigate significant levels of volatility.
- The preliminary threshold for actuarial predictability was determined to be \$12 billion of insurable earnings over a 6 year period (i.e. \$2B per year).
- In undertaking this analysis, the WSIB further refined the threshold to consider \$6B of insurable earnings combined with \$15M in claims costs over a 6 year period.

Methodology - Risk Disparity Analysis

The proposed 22 industry classes were assessed for further expansion, if:

Rule 1 - Risk Disparity

- The proposed Class Target Premium Rate is greater than the Schedule 1 premium rate of \$2.46 **AND** the disparity in the risk profile of the originally proposed 22 industry classes and the next level of NAICS industry classes is greater than +/- 20%;

OR

- The proposed Class Target Premium Rate is less than the Schedule 1 premium rate of \$2.46 **AND** the disparity in the risk profile of the originally proposed 22 industry classes and the next level of NAICS industry classes is greater than +/- 40%;

AND

Rule 2 - Actuarial Predictability

- The expanded industry class meets a level of actuarial predictability that would support reliable and stable premium rate setting, established as:
 - \$12 billion in insurable earnings, over 6 years; or
 - \$6 billion in insurable earnings and \$15 million in claims costs, over 6 years.

Methodology - Risk Disparity Analysis

- After the application of the two rules, industry classes that have the similar risk disparity were merged as follows:

If the proposed Class Target Premium Rate is **greater than** the Schedule 1 premium rate (\$2.46), merge the subclasses into categories, that would become distinct industry classes:

- Low < -10%
- Medium -10% to 10%
- High >10%

If the proposed Class Target Premium Rate is **less than** the Schedule 1 premium rate (\$2.46), merge the subclasses into categories, that would become distinct industry classes:

- Low < -20%
- Medium -20% to 20%
- High > 10%

- When a subclass in a particular category (low, medium, high) is significantly different in risk disparity from the other subclasses in that same category and it meets the actuarial predictability rule, this subclass should also become its own industry class.

Results - Risk Disparity Analysis

- The charts below demonstrate the potential expansion of industry classes, utilizing the risk disparity methodology previously outlined in this presentation.

Proposed 22 Industry Classes

Class Letter	Class Description	2014 Class Rate
A	Primary Resource Industries	\$4.68
B	Utilities	\$1.06
C	Public Administration	\$3.86
D	Food, Textile, and Related Manufacturing	\$3.08
E	Resource and Related Manufacturing	\$3.30
F	Machinery and Related Manufacturing	\$3.20
G1	Building Construction	\$5.22
G2	Infrastructure Construction	\$4.87
G3	Specialty Trades Construction	\$4.57
H	Wholesale Trade	\$1.73
I	General Retail	\$1.66
J	Specialized Retail and Department Stores	\$1.46
K	Transportation and Warehousing	\$4.26
L	Information and Culture	\$0.61
M	Finance	\$1.37
N	Professional, Scientific and Technical	\$0.55
O	Administrative, Waste and Remediation	\$2.59
P	Hospitals	\$1.13
Q	Health and Social Services	\$2.28
R	Leisure and Hospitality	\$1.90
S	Other Services	\$2.43
T	Education	\$0.43
	Schedule 1	\$2.46



Results of Risk Disparity Analysis (32 Industry Classes)

Class Letter	Class Description	2014 Class Rate
A	Primary Resource Industries	TBD
B	Utilities	TBD
C	Public Administration	TBD
D	Food/Textile & Related Manufacturing	TBD
E1	Non-Metallic/Mineral Manufacturing	TBD
E2	Printing, Petroleum/Chemical Manufacturing	TBD
F1	Metal/Transportation/Furniture Manufacturing	TBD
F2	Machinery/Electrical/Other Manufacturing	TBD
F3	Computer/Electronics Manufacturing	TBD
G1	Building Construction	TBD
G2	Infrastructure Construction	TBD
G31	Foundation/Structure/Building Exterior Contractors	TBD
G32	Building Equipment Contractors	TBD
G33	Specialty Trade Contractors	TBD
H1	Petroleum/Food/Vehicle/Other Wholesale	TBD
H2	Personal/Building Materials/Machinery Wholesale	TBD
I1	Vehicle/Building Material/Food & Beverage Retail	TBD
I2	Furniture/Home/Clothing Retail	TBD
I3	Electronics/Appliances/Personal Care Retail	TBD
J	Specialized Retail & Department Stores	TBD
K1	Rail/Water/Truck & Postal Service Transportation	TBD
K2	Air/Ground/Pipeline/Courier Transportation, & Warehousing	TBD
L	Information & Culture	TBD
M	Finance	TBD
N	Professional, Scientific & Technical	TBD
O	Administrative, Waste & Remediation	TBD
P	Hospitals	TBD
Q1	Nursing & Residential Care Facilities	TBD
Q2	Ambulatory Health Care & Social Assistance	TBD
R	Leisure & Hospitality	TBD
S	Other Services	TBD
T	Education	TBD
	Schedule 1	2.46

Concordance – Results from Risk Disparity Analysis to North American Industry Classification System (NAICS)

- The proposed classification structure, while using a lettering system to align with legislative provisions, is mapped to the NAICS numbering system.
- The accompanying chart identifies the correspondence between the WSIB’s proposed classification structure and the 2, 3 or 4 digit level found in NAICS.
- For further information on the business activities included in each class, see link to Statistics Canada website on NAICS – [Click Here](#)

Proposed Classification Structure		NAICS Equivalent
A	Primary Resource Industries	11-21
B	Utilities	22
C	Public Administration	91
D	Food/Textile & Related Manufacturing	31
E1	Non-Metallic/Mineral Manufacturing	321-322-326-327
E2	Printing, Petroleum/Chemical Manufacturing	323-324-325
F1	Metal/Transportation/Furniture Manufacturing	331-332-336-337
F2	Machinery/Electrical/Other Manufacturing	333-335-339
F3	Computer/Electronics Manufacturing	334
G1	Building Construction	236
G2	Infrastructure Construction	237
G31	Foundation/Structure/Building Exterior Contractors	2381
G32	Building Equipment Contractors	2382
G33	Specialty Trade Contractors	2383 & 2389
H1	Petroleum/Food/Vehicle/Other Wholesale	411-412-413-415-418
H2	Personal/Building Materials/Machinery Wholesale	414-416-417-419
I1	Vehicle/Building Material/Food & Beverage Retail	441-444-445-447
I2	Furniture/Home/Clothing Retail	442-448
I3	Electronics/Appliances/Personal Care Retail	443-446
J	Specialized Retail & Department Stores	45
K1	Rail/Water/Truck & Postal Service Transportation	482-483-484-491
K2	Air/Ground/Pipeline/Courier Transportation, & Warehousing	481-485-486-487-488-492-493
L	Information & Culture	51
M	Finance	52-53-55
N	Professional, Scientific & Technical	54
O	Administrative, Waste & Remediation	56
P	Hospitals	622
Q1	Nursing & Residential Care Facilities	623
Q2	Ambulatory Health Care & Social Assistance	621-624
R	Leisure & Hospitality	71-72
S	Other Services	81
T	Education	61