

ISO Crime Coverages

- The primary crime coverage is known as Fidelity (a.k.a. "Employee Theft") and covers employee theft, forgery or alteration and other related crimes committed exclusively by employees of the insured
- Fidelity policies represent the overwhelming majority of the crime exposure faced by insureds (approximately 85% of the premiums and a similar percentage of the insured losses)
- The other main crime coverage rated by ISO is Burglary & Theft (B&T), which provides coverage against loss of property by non-employee theft, robbery or larceny and is comprised of the following six main coverages (Inside the Premises – Theft of Money and Securities, Inside the Premises – Robbery or Safe Burglary of Other Property, Outside the Premises, Inside the Premises – Theft of Other Property, Inside the Premises – Robbery of a Watchperson or Burglary of Other Property, Inside the Premises – Robbery of a Custodian or Safe Burglary of Money and Securities). All B&T coverage claimants must show evidence of forcible, unlawful entry as a prerequisite to establishing the validity of such claims.


SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 4

ISO Crime Coverage Form Options

- ISO commercial crime coverage forms are designed for any type of nongovernmental commercial or not-for-profit entity other than financial institutions
- Coverage for Financial Institutions is available via a separate, dedicated ISO program
- Coverage forms can be attached to another commercial policy form such as a BPP Form; whereas, the policy forms stand alone
- Separate ISO government crime coverage/policy forms are used to insure government entities such as states, counties, public utilities, school districts, etc.
- ISO crime program also includes employee theft and forgery forms for insureds that wish to buy only employee theft coverage, or only forgery or alteration coverage, or both. Other coverage forms/policies available in the Crime & Fidelity program include Kidnap/Ransom and Extortion insurance
- Two versions, a discovery form and a loss sustained form, are available for each coverage form and policy form. The former covers losses discovered during the policy period even though they may have occurred before the policy period, while the latter covers losses actually sustained during the policy period and discovered no later than one year after policy expiration.

SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 5

Actuarial & Rating Aspects



© 2018 Insurance Services Office, Inc. All rights reserved. 6

ISO Crime Experience Reviews

- ISO performs crime experience reviews every two years (odd years)
- For the Fidelity review, there are 3 sources of data:
 - Subline 965, which is data written under the ISO Crime and Fidelity Program
 - Surety and Fidelity Association of America (SFAA) data, which is monoline Fidelity policies written according to the SFAA plan, reported to the SFAA, and then shared with ISO
 - Subline 940, which is multiline data that includes a Fidelity portion written according to the SFAA plan
- The Fidelity review is always done with an evaluation date of 12/31/xxxx as ISO receives data from the SFAA once per year, with this evaluation date
- In addition, Fidelity is always reviewed on a policy year basis because the SFAA statistical plan does not provide loss occurrence date information necessary for an accident year review
- For the Burglary & Theft review, there are 2 sources of data:
 - Subline 960, which is the old Burglary & Theft program
 - Subline 965, which has both a Fidelity and Burglary & Theft component
- The B&T review is run on an accident year basis

SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 7

ISO Crime Loss Costs

- ISO files revised class rated Multistate loss costs for Fidelity coverage (i.e. Employee Theft) as per the experience reviews every two years
- In 2009, ISO revised the rating methodology for Burglary & Theft (B&T) and discontinued publishing separate B&T loss costs
- In place of loss costs, ISO files updated B&T rating factors every two years that vary by B&T insuring agreement and class and which are applied directly to the Fidelity loss costs when rating B&T coverage
- There are also a number of crime insuring agreements that use loss costs that do not vary by class (i.e. Money Orders and Counterfeit Money Insuring Agreements charges an annual loss cost of \$0.170 per \$1,000 of insurance regardless of class)
- ISO crime experience reviews have been consistently generating negative loss cost indications over the last several years
- The most recent 2017 experience review revises multistate advisory prospective loss costs for Fidelity coverages by -20.0% and Burglary and Theft coverages by -30.0% for an overall multistate advisory loss cost level change of -21.1% (with an effective date of 6/1/2018)

SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 8

ISO Crime Rating Algorithm – Past versus Present

- Under the prior rating methodology, Burglary and Theft coverages increased their loss costs as the limits increased and as location counts increased at a **constant rate**
- As a result, for risks with progressively higher limits and/or a progressively higher number of locations, the final algorithmically derived B&T loss costs, became quite high relative to the level of loss exposure
- This produced premiums for B&T coverages that would often exceed those for Employee Theft, creating a situation where the "minor" coverage (B&T) was driving the "major" coverage (Fidelity)
- Therefore in 2009, the prior B&T rating algorithm was replaced with one that uses the Employee Theft rated premium as the starting point, to which a multiplicative factor is applied to produce the premium for the respective B&T insuring agreement
- The benefit of using this algorithm is that the Employee Theft rating algorithm increases loss costs at a **decreasing rate** for increases in limit and increases in location counts (i.e. additional premises)
- Therefore using the Employee Theft algorithm as a proxy to rate B&T coverages helps ensure that B&T premiums are proportionately kept in line for the vast majority of businesses

SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 9

Rating Example - The Employee Theft Blanket Rating Algorithm

EMPLOYEE THEFT INSURING AGREEMENT	
Rating Data	
Risk: Bus Transportation Companies	
Class Code (Transit and ground passenger transportation)	4850
Loss Cost	\$1,096
Number of Ratable Employees	20
Number of Additional Premises	5
Limit of Insurance	\$145,000
Deductible Amount	\$5,000
Deductible Factor	0.85
Determination of Loss Cost Premium	
1. Sum the Limit of Insurance and the Deductible Amount (\$150,000).	
a. Compute the Exposure Units for 20 Employees @ \$150,000.	637,500
b. Compute the Exposure Units for 5 Additional Premises @ \$150,000.	42,500 X 5 = 212,500
c. Sum the Exposure Units in a. and b.	637,500 + 212,500 = 850,000
2. Determine the Exposure Units for the Deductible Amount (\$5,000).	
a. Compute the Exposure Units for 20 Employees @ \$5,000.	170,000
b. Compute the Exposure Units for 5 Additional Premises @ \$5,000.	9,000 X 5 = 45,000
c. Sum the Exposure Units in a. and b. Multiply by the Deductible Factor.	(170,000 + 45,000) X 0.85 = 182,750
3. Subtract the Exposure Units in 2. from the Exposure Units in 1.	850,000 - 182,750 = 667,250
4. Multiply the result in 3. by the Loss Cost to produce the premium (on a loss cost basis), which is rounded.	667,250 X \$1,096 = \$731.00

SERVE | ADD VALUE | INNOVATE

© 2018 Insurance Services Office, Inc. All rights reserved. 13

Rating Example - The Employee Theft Schedule Rating Algorithm

EMPLOYEE THEFT - NAME OR POSITION SCHEDULE INSURING AGREEMENT	
Rating Data	
Risk: Medical Supply manufacturer	
Class Code (Other manufacturing industries NOC)	3395
Loss Cost	\$1,064
Number of Ratable Employees	12
Limit of Insurance	\$17,500
Deductible Amount	\$2,500
Deductible Factor	0.85
Determination of Loss Cost Premium	
1. Sum the Limit of Insurance and the Deductible Amount (\$20,000).	
a. Compute the Exposure Units for first 5 Employees @ \$20,000.	53,500 X 5 = 267,500
b. Compute the Exposure Units for Add'l 7 employees @ \$20,000.	22,500 X 7 = 157,500
c. Sum the Exposure Units in a. and b.	267,500 + 157,500 = 425,000
2. Determine the Exposure Units for the Deductible Amount (\$2,500).	
a. Compute the Exposure Units for 5 Employees @ \$2,500.	25,500 X 5 = 127,500
b. Compute the Exposure Units for Add'l 7 employees @ \$2,500.	10,000 X 7 = 70,000
c. Sum the Exposure Units in a. and b. Multiply by the Deductible Factor.	(127,500 + 70,000) X 0.85 = 167,875
3. Subtract the Exposure Units in 2. from the Exposure Units in 1.	425,000 - 167,875 = 257,125
4. Multiply the result in 3. by the Loss Cost to produce the premium (on a loss cost basis), which is rounded.	257,125 X \$1,064 = \$274.00

SERVE | ADD VALUE | INNOVATE

© 2018 Insurance Services Office, Inc. All rights reserved. 14

Rating Example - The Burglary & Theft Rating Algorithm

BURGLARY AND THEFT - TRANSIT AND GROUND PASSENGER TRANSPORTATION	
Rating Data	
Risk: Commercial Motor Vehicle	
Class Code (Transportation, passenger and commercial motor)	4850
Loss Cost	\$1,096
Number of Ratable Employees	20
Number of Additional Premises	5
Limit of Insurance	\$145,000
Deductible Amount	\$5,000
Deductible Factor	0.85
Class Mobility Factor	2.337
Determination of Loss Cost Premium	
1. Sum the Limit of Insurance and the Deductible Amount (\$150,000).	
2. Determine the Exposure Units for the Deductible Amount (\$5,000).	
a. Compute the Exposure Units for 20 Employees @ \$5,000.	170,000
b. Compute the Exposure Units for 5 Additional Premises @ \$5,000.	9,000 X 5 = 45,000
c. Sum the Exposure Units in a. and b. Multiply by the Deductible Factor.	(170,000 + 45,000) X 0.85 = 182,750
3. Subtract the Exposure Units in 2. from the Exposure Units in 1.	850,000 - 182,750 = 667,250
4. Multiply the result in 3. by the Loss Cost and the Class Mobility Factor to produce the premium (on a loss cost basis), which is rounded.	667,250 X \$1,096 X 2.337 = \$1,705.00

SERVE | ADD VALUE | INNOVATE

© 2018 Insurance Services Office, Inc. All rights reserved. 15

Rating Example – Non-Class Rated Crime Insuring Agreements

MONEY ORDERS AND COUNTERFEIT MONEY INSURING AGREEMENT	
Rating Data	
Risk: Bakery	
Class Code (Specialty food stores)	4452
Loss Cost	\$0.170
Limit of Insurance	\$75,000
Deductible Amount	\$1,000
Determination of Loss Cost Premium	
1. Divide the Limit of Insurance by \$1,000.	$\$75,000 / \$1,000 = 75$
2. Multiply the result in 1. by the Loss Cost.	$75 \times \$0.170 = \12.75
3. Determine Deductible Factor @ \$1,000 with LDI of \$75,000.	0.87
4. Multiply the result in 2. by the Deductible Factor in 3. to produce the premium (on a loss cost basis), which is rounded.	$\$12.75 \times 0.87 = \11.00

SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 16

Potential Future Actuarial Enhancements

- As opposed to some of the other larger ISO commercial lines such as GL and Property that utilize an extension of exposures technique to re-rate each exposure we are currently unable to do so for Crime due to a lack of sufficient exposure detail in our Statistical Plan data
- Future initiatives to improve upon the quality of carrier submitted exposure data could enable us to use to this technique in Crime as well, which is the most accurate method for adjusting premiums to current rate levels
- As part of the 2009 changes to the B&T rating algorithm, ISO also removed territory tier group rating factors from the algorithm as they produced premium results that were inconsistent with the Fidelity coverage that is the main exposure written under the Crime and Fidelity program. For example for Fidelity, the insured's additional premises are not subject to a territory tier charge.
- Advances in modeling techniques over the last several years (i.e. GLM, Clustering, etc.), coupled with rich, new repositories of detailed, location based data could allow us to better reflect territory and possibly even more refined location differentials in our rating algorithm to further improve upon the level of risk segmentation available over the current ISO program

SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 17

Contact Information

Ajay Marathe, ACAS, MAAA
 Associate Actuarial Consultant,
 Specialty Commercial Lines Actuarial Products
 (201) 469-2225
Ajay.Marathe@verisk.com

SERVE | ADD VALUE | INNOVATE © 2018 Insurance Services Office, Inc. All rights reserved. 18