


Workers' Compensation Catastrophe Modeling & implementation

June 7, 2011
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Catastrophe Management

Zurich HelpPoint

Overview – Zurich Terrorism Modeling




- Books, quoted and pending information is modeled weekly.
- ZNA models a 'booked plus pending renewal' portfolio is modeled quarterly for Global Underwriting.
- Workers' Compensation is modeled at a location level through RMS Risk Tools, with street level geo-coding or better.
- Actuarial loss experience is used for loss calculations.

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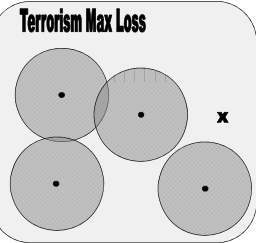
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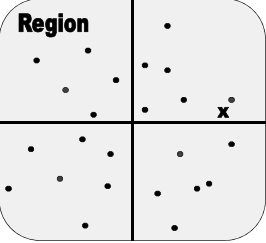
Detailed management as per aggregation



Terrorism Max Loss



Region



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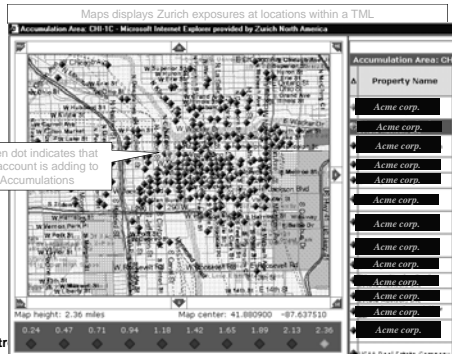
Terrorism Underwriting Process – at a glance



1. Obtain detailed information for Zurich Workers' Compensation Tool.
2. Enter detailed exposure information, receive initial modeling results and Technical Price.
3. After the weekly modeling run, review accumulations from Zurich's accumulation report on potential risk.
4. Decide whether risk is appropriate to Zurich's risk appetite.

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RiskBrowser example



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Weekly Reports



- Exception Report – potential 'errors' highlighted to underwriting for future correction
- Preliminary alert – if modeling indicates breach of risk appetite, key underwriting groups are notified
- Target change – regional targets change as needed
- RMS Spider Analysis – is executed weekly, and used to assist with the changing of Zurich accumulation exposure views or "hot spots"

Additional Quarterly Reports

- TML targets are evaluated for change
- The Probabilistic Model is run against the exposure
- Dirty bombs are analyzed
- More detailed data cleansing occurs
- Canadian targets run

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Workers' Compensation - Earthquake modeling



- Some data obtained for Terrorism modeling is utilized for Earthquake modeling.
- Due to difference in peril, earthquake modeling is less frequent.
- Zurich actuarial information is used for loss tables, as in Terrorism model.
- Earthquake modeling is used for risk assessment, pricing and capital calculations after being combined with property results.

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Difficulties with Workers' Compensation modeling tool



- Only Ground Up modeling is available, no SIR modeling capability.
- No MAOL (Maximum Any One Life) modeling available through existing Workers' Compensation models, so overstatement of results is possible.
- Contractor modeling (or mobile employee modeling) not plausible with existing catastrophe models.
- A&H modeling is not available, so it is naturally difficult to capture detailed information regarding those policies.
- Large cultural shift from Brokers in obtaining detailed Workers' Compensation information.

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Workers' Compensation Catastrophe Underwriting Summary



Underwriting catastrophic Workers' Compensation exposure at Zurich has remained consistent for the past several years:\

- Obtain as much detailed information as possible
- Maintain a near "real time" exposure information to allow underwriters to best use capacity
- Manage capacity within group's risk tolerance, utilizing underwriting guidelines and pricing thresholds as guides

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Any Questions?

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