



CASE STUDY

Data enhancement: Ensuring data quality that meets exacting underwriting standards

Company: Tokio Marine America

Headquarters: New York, NY

Industry: Insurance

Moody's Products:

- Managed Client Services/Analytical Services Team



The goal

MAINTAINING EXPOSURE DATA QUALITY

Tokio Marine America (TMA) is a U.S.-based commercial property and casualty insurance company and part of Tokio Marine Insurance Group. Operating across all 50 states, it works with major brokers and leading independent insurance agents throughout the region providing a wide range of insurance solutions across multiple industries.

The company maintains rigorous underwriting standards for every risk it writes and fundamental to this is a commitment to ensuring that decisions extending from individual risk to portfolio level are made based on the most accurate and complete exposure data available. This approach improves catastrophe modeling and enhances technical pricing, enabling TMA to maintain

more consistent rates for clients throughout the insurance market cycle.

TMA applies stringent data evaluation criteria and has been working with the Moody's Managed Client Services and Analytical Services team in several capacities including ensuring high levels of data completeness.

In this case study, the company had provided Moody's insurance solutions with data relating to a specific property account for a Japanese client with several high-value assets located in the U.S.

The objective

ANALYZING DATA QUALITY FOR PROPERTY ACCOUNT

The Moody's insurance solutions team delivers several data-related services to TMA, which include risk data assessment and cleansing, catastrophe modeling activities, and generating portfolio roll-ups and management reports. The first phase of the process for any data received is to conduct a thorough review of the information quality and completeness and highlight any information gaps.

TMA's portfolio spanned 60 separate locations with property exposures across the U.S., including a significant number of high-value assets located in Florida. The total insured value of the account was approximately US\$900 million. The account information included standard data sets relating to building locations and Construction Occupancy Protection Exposure (COPE).

TMA initially required the team to conduct a thorough check of the account information to establish whether it met their minimum quality standards.

The process

DQI ASSESSMENT AND FEEDBACK

To ensure high quality data, the team scored the data against its Data Quality Index which analyzes the exposure information in terms of the availability of location details and COPE building characteristics. It achieved a score of 3.7 out of 5, which was below the minimum level required by TMA.

The missing data for the account included:

- Negative BI values
- Missing address details for high exposure values
- Incomplete COPE for high exposure values

The findings were instantly reported to TMA, and the teams worked together to secure the missing data from a range of different sources, including the Industry Exposure Database which was used to provide a significant amount of the COPE information, including construction type, occupancy, and number of stories.



Vinay Annigeri
HPR Property Manager, TMA

Since we began working with Moody's, the relationship has led to a huge number of very positive changes across many aspects of our business.

We've improved our data quality, replaced numerous cumbersome data processes, reduced manual data input requirements and instances of duplication, and ultimately created a much more streamlined ecosystem.

The outcome

SIGNIFICANT DATA IMPROVEMENT ENHANCES EXPOSURE UNDERSTANDING

Using the augmented account data the Moody's team conducted a reassessment of the account's DQI score and confirmed that the data now exceeded TMA's

minimum data quality standard.

Through analyzing the enhanced data sets and running the losses through RiskLink, the team was able to show the impact on overall annual average losses at the individual peril level. The analysis revealed a 12% reduction in ground-up (GU) losses for the combined perils, with a:

- 19% reduction in GU windstorm losses
- 3% increase in GU convective storm losses
- 1% reduction in GU earthquake losses

Conducting the analysis for the individual high-value exposure locations in the account, the team revealed:

- For the second highest TIV location a 46% reduction in GU earthquake losses, a 68% reduction in GU windstorm losses, and a 31% reduction in GU convective storm losses.
- For the sixth highest TIV location a 47% reduction in GU earthquake losses, a 22% increase in GU windstorm losses, and a 43% increase in GU convective storm losses.

The improved data accuracy for location and COPE for a number of the high value locations resulted in a 22% increase in the TIV for the overall account.

In total, the initial assessment and subsequent analysis of the account data took the team approximately 6.5 hours.

By having access to more accurate exposure insights based on the enhanced account data, the TMA underwriting team can achieve the following:

- Reduce underwriting decision-making timeframes
- Improve efficiencies at every stage in the risk assessment process
- Apply more stringent risk selection criteria

- Accurately select the layers which it wishes to write on
- Charge premium rates precisely aligned with the risk exposure
- Conduct more robust and informed reinsurance discussions based on more accurate data
- Demonstrate higher quality data as part of rating agency assessment processes



Alex Ficuciello
Senior Catastrophe
Risk Analyst, TMA

From the modeling of the individual risks to the portfolio rollup and reporting requirements, there is so much more confidence due to the enhanced, more complete data sets we're working with. With experts working on the data cleansing and modeling processes, we know we are in good hands.

Looking forward, our aim is to build on the consistency and quality of the elevated data baseline that the Moody's team has enabled us to set, working together to continue to raise our data standards to new heights.



With over a 100 year history in the U.S., Tokio Marine America (TMA) offers tailored products to a diverse range of customers --- from small to large-sized global businesses seeking traditional multi-line coverage, to larger private and public companies requiring full risk management solutions.

Our commitment to providing the highest level of service is paramount. More than 93% of our customers recommend TMA based on our superior claims service. TMA enjoys an A++ (Superior) rating from A.M. Best. With a solid foundation of financial stability, our strength lies in understanding your business and working in partnership to exceed your expectations.

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