

Behavioural data can help marine insurers assess risk – Swiss Re sigma



By Insurance Marine News, 22nd August 2019

Behavioural data can be combined with other information such as internal claims, exposure and weather data to build models that capture the key drivers for different incident categories, according to the latest [sigma report No 4/2019 Advanced analytics: unlocking new frontiers in P&C insurance](#)



It noted that marine was a cyclical business where market and client segmentation were key drivers of profitability. Traditional characteristics of a ship (age, tonnage, vessel flag) offered only limited information about operational behaviour and the extent of a vessel's vulnerability to risk.

"Using detailed behavioural and situational data now available from data providers for more than 100,000 vessels, insurers can develop a range of potential applications, eg, compare vessels to identify hazardous operational behaviour ", *sigma* said.

The data would include variables such as speed, proximity to other vessels, number of vessels in the same port at the same time (i.e., aggregation risk), time spent in dangerous waters, and reports of delayed maintenance.

Some marine insurers had used pilot projects to combine five-year claims history with these new data and found that small changes based on behavioural insights could help reduce their loss ratio by as much as 7%.

The publication noted, for example, that insurers could collect missing premiums from specific vessels that sailed into a war or piracy zone but had not reported so doing. Insurers were currently identifying which of potentially hundreds of new behavioural data points had better predictive power than traditional static factors in supporting real world decision-making.

Potential applications of new data in marine insurance

Reinventing risk management

Real-time awareness of risk exposure to minimize loss concentration (eg, analysis of ports or high-risk regions where more than one ship of a fleet are at the same time).

Behavioural underwriting

Enhance underwriting with data-driven behavioural risk factors (eg, speed analysis, delayed maintenance, allow underwriters to form a behavioural profile of a vessel).

More accurate pricing models

Combining traditional vessel inspection data and new risk indicators to improve the accuracy of pricing models.

Faster claims examinations

New data can also help in claims adjudication. Comparing recent vessel activity with historical journey profiles can help determine if the vessel was moving differently

Sigma said that competitive advantage would go to those insurers "able to use Big Data and advanced analytics to identify early signals for emerging risks, to gain insights into customer behaviour and to make operations more efficient".

However *sigma* warned that the ability to gain useful predictive insights from the ever-increasing amounts of data was "challenging". Insurers had large amounts of unstructured claims data, but to date they had underinvested time and resources into data curation. Further, most new data were not created specifically for insurance specifically. Marine data, for example, tended to be aggregated for operational purposes. The owners of information might neither understand insurance nor what would need to be done to make data usable for insurers.

Application of analytics

Enabling growth

Data- enabled products for new / currently uninsured / underinsured vessels.

Engaging customers

Improve client dialogues with data driven risk insights and vessel segmentation.

Optimising portfolios

Behavioural and situational data on vessels can improve accumulation monitoring.

Improving efficiency

Combining vessel and other data for faster claim payouts, subrogation for cargo risks.

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