



RMS ExposureRefine™ Service Confirms Fireman's Fund's Leadership in Pursuit of High-Quality Exposure Data

"Focusing on data quality not only enables us to price risk and manage our portfolio more effectively, it is a key differentiator with reinsurers and can enhance rating agency assessments by reducing uncertainty in catastrophe modeled results."

Juergen Guhe

Chief Risk Officer, Fireman's Fund

THE CHALLENGE

As one of the larger U.S. insurers offering a range of commercial, specialty, and personal lines insurance products and services, Fireman's Fund handles exposure data that varies considerably in terms of its completeness and accuracy when underwriting and analyzing its risks. The company accesses the market through many different agents and brokers, so maintaining good data quality across the different business lines is a constant challenge.

RMS has a long-standing relationship with Fireman's Fund and its parent company, Allianz. Most of Fireman's Fund's reinsurers also incorporate RMS catastrophe models in their risk management processes. Natural catastrophe risk has a major impact on how much capital is required by Fireman's Fund, which means that having good data on insured exposures is particularly important to Juergen Guhe, the company's Chief Risk Officer:

"Underwriting and data discipline are closely related, and are key to transparency and success. It is vital that catastrophe risk modeling results are accurate, and the main determinant of this is the quality of the data going into the models."

FIREMAN'S FUND INSURANCE COMPANY PROFILE

- \$5.7 billion of gross written premiums
- Commercial, personal, and specialty insurance, primarily in the U.S.
- Owned by Allianz SE of Munich, Germany
- Headquartered in Novato, California

BUSINESS CHALLENGE

To achieve the best trade-off between risk and return, Fireman's Fund needed to ensure its capital was being allocated appropriately and that it was buying sufficient levels of reinsurance. The foundations for this lay in making sure the exposure data fed into its catastrophe models to estimate potential insured losses was of the highest quality. By employing best practices in data quality, Fireman's Fund could reduce uncertainty in modeled results, demonstrate superior risk management processes to the rating agencies, and help to secure optimal reinsurance terms and conditions.

KEY BENEFITS

- Improved data quality, placing Fireman's Fund in the top quartile among its peers for data quality
- Increased confidence in reinsurance decisions and capital requirements
- Processes enhanced for continuous data quality improvement

“It is not good enough for me that our data is complete, I need to have the confidence that it is correct. Wrong information is worse than missing information.”

Alberto Leal

*Actuarial Director and
Corporate Catastrophe
Manager, Fireman’s Fund*

Despite the difficulties involved in getting and maintaining quality data, Fireman’s Fund has made this a priority in recent years and believes it is a market leader. It had few surprises from the hurricanes of 2004 and 2005 and is confident it is making the right decisions about how much reinsurance to buy. But Alberto Leal, Actuarial Director and Corporate Catastrophe Manager at Fireman’s Fund, has high standards and realizes there is still room for improvement.

Fireman’s Fund recognized it could be doing more to communicate the high quality of its data to its reinsurers and rating agencies. Reinsurers are offering more favorable terms and conditions to companies with data that is significantly better than their peers, but without any standard metric for analyzing and communicating data quality, an organization’s assessments are subjective. With the right independent assessment of data quality, Fireman’s Fund realized it could gain further reinsurance benefits. Fireman’s Fund engaged the RMS ExposureRefine™ service to:

- Assess and improve the quality of its data in terms of completeness and accuracy
- Increase confidence among Fireman’s Fund’s reinsurers and in the level of its data quality
- Identify priorities for further investigation and longer-term improvements

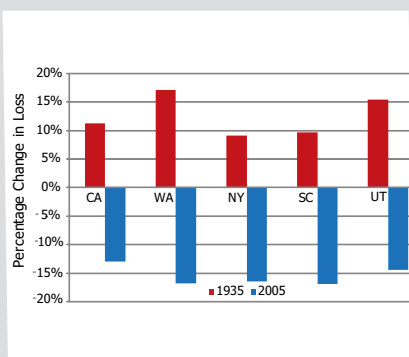
THE SOLUTION

The ExposureRefine™ service uses a combination of RMS data quality analytical tools and capabilities to assess, measure, and improve exposure data. This includes the proprietary RMS ExposureSource™ database of comprehensive, high-resolution U.S. commercial and residential property & casualty (P&C) exposure data, compiled from a number of third-party sources, and validated through extensive field surveys, consultations with local planning departments, satellite imagery, building photographs, and other sources of research. The service can determine when crucial information such as construction class, occupancy, height, year built, and building value is missing or of insufficient resolution, and the impact this has on modeled losses. Once these gaps have been analyzed, ExposureRefine draws on the ExposureSource database to help improve the resolution of existing data and complete missing data.

However, to improve catastrophe model output, it is critical to not only ensure that data is complete, but also to determine when existing information is inaccurate, as this can significantly distort results. Although Fireman’s Fund knew it could assess some aspects of the accuracy of its data, it recognized that RMS has the advanced tools and capabilities to uncover and correct suspicious information systematically.

Sophisticated heuristics were used to decide when data lacked objectivity, or was illogical or erroneous, and to determine how it should be changed—employing human intervention where there was ambiguity. RMS also enhanced missing or inaccurate data by comparing it against the comprehensive ExposureSource database. As a result, Fireman’s Fund could be assured that the quality of their portfolio had been assessed for accuracy and all significant errors that would impact modeled losses had been corrected.

Loss Sensitivity Analysis by State



For properties with missing age information, Fireman’s Fund used ExposureRefine to assess how the best and worst case scenarios would impact modeled losses in different states

The RMS team worked closely with Fireman’s Fund over a number of weeks and from the start it was clear the company had a strong commitment to data quality. The exercise ensured that the data was complete and accurate, and, ultimately, of high quality.

THE BUSINESS BENEFITS

1. Fireman’s Fund Established as a Market Leader and Data Quality Enhanced

Based on a comprehensive investigation and its knowledge of the industry, RMS determined that Fireman’s Fund was in the top quartile of U.S. commercial and specialty insurance companies for data quality for both its commercial and marine portfolios. This independent assessment gave Fireman’s Fund the ability to obtain the best possible terms and conditions with reinsurers.

By engaging the ExposureRefine service, Fireman’s Fund achieved further improvements in its data. For example, of the locations geocoded to ZIP Code level, 37% were enhanced to street level and one or more attributes were corrected for 12% of buildings.

2. Increased Confidence in Reinsurance Decisions and Capital Requirements

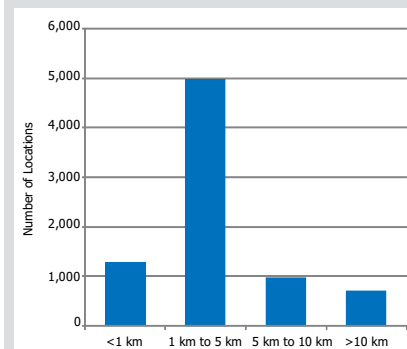
The results of the project gave Fireman’s Fund the confidence that their data was complete and accurate, and that they were therefore making effective reinsurance purchase decisions.

By improving data quality—thereby reducing uncertainty and increasing the accuracy of model results—they were also reassured that they were allocating their capital most effectively. Furthermore, with an independent and objective assessment of data quality, they could clearly demonstrate this to the rating agencies.

3. Processes and Priorities Recommended for Ongoing Data Quality Assessment and Improvement

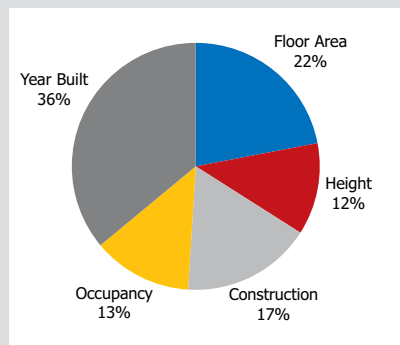
Building on the success of the ExposureRefine exercise, RMS has recommended priorities for cost-effectively improving data quality as well as methods to ensure superior data is maintained, and Fireman’s Fund is now introducing enhanced data quality measurement as a regular part of its underwriting assessments. This will help to ensure a continued focus on quality and to enable Fireman’s Fund to quickly identify and resolve any potential problems.

Location-Level Geocoding Improvements



The ExposureRefine service was used to improve geocoding resolution from ZIP Code to street level, with the graph above showing the distance the location moved as a result of the analysis

Building Attributes Enhanced Using the ExposureSource™ Database



The ExposureSource database helped to improve Fireman’s Fund’s data quality by enhancing the level of detail for a range of building characteristics

