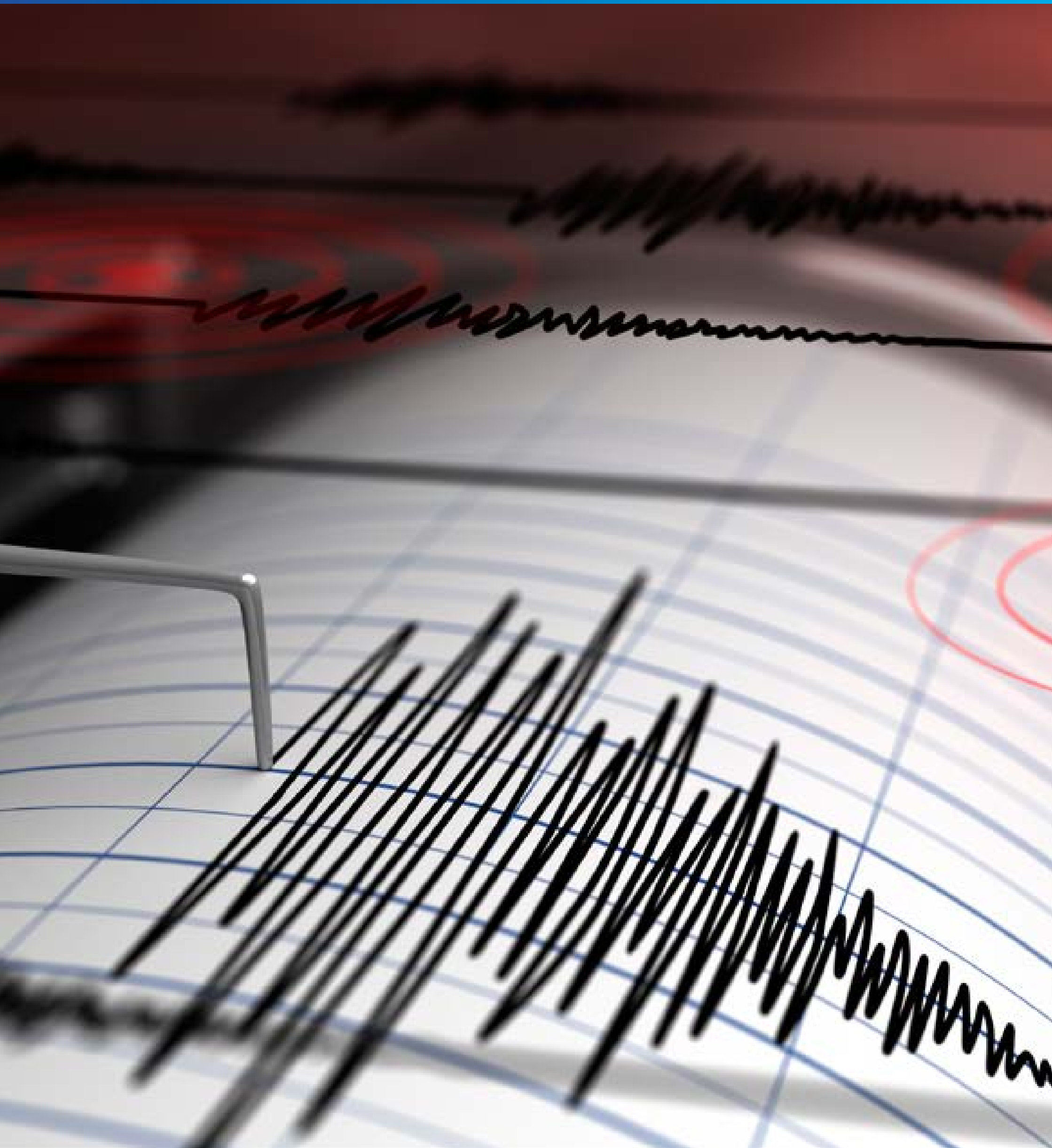
Swiss Re
Corporate Solutions

QUAKE: Rapid Response Earthquake Coverage for Public Entities



Earthquakes and other natural catastrophes can have detrimental and long-lasting impacts on the budget of a public entity, creating liquidity challenges following a catastrophic event. Due to the loss adjustment process, there are often substantial delays in receiving reimbursement or disaster aid from various sources, including traditional insurance policies and the federal government. In some circumstances, expenses incurred by a public entity may not be covered by either the federal government or traditional insurance. However, modern risk management techniques and innovative risk-transfer structures, like parametric insurance products, can provide a buyer greater flexibility and rapid access to funds following natural disasters.

The first 90 days following a disaster are the most critical in helping an institution recover. Securing the necessary financial resources in the immediate aftermath is paramount to successful recovery. It is for this reason Swiss Re Corporate Solutions developed QUAKE, a parametric, rapid-payout earthquake insurance product.

What is parametric insurance?

Parametric insurance products are linked to reputable, objective third-party sources, which are used to determine an insurance payout. They are designed to provide catastrophe coverage and complement, but not replace, traditional insurance coverage. Using this structure, parametric insurance payouts are quickly determined, easily measured, and effectively eliminate loss adjustment hassles. The proceeds from a parametric insurance payout can be used at the buyer's full discretion.

Swiss Re Corporate Solutions' QUAKE Product

Our QUAKE insurance product is designed to complement traditional property or standalone earthquake insurance purchased by a public entity. It is an important addition to an institution's existing insurance portfolio, filling gaps in coverage and providing rapid reimbursement following an earthquake disaster.

Our QUAKE insurance product can be structured to protect an insured from indirect economic losses, such as loss of revenue and business interruption, and direct losses incurred from currently uninsured or underinsured risks. And it can be structured as either a single-index trigger or a multi-index trigger.

Swiss Re Corporate Solutions' QUAKE product is structured around a "ground-shaking intensity index," using the official ground-shaking intensity maps – known as ShakeMap – from the United States Geological Survey (USGS). Based on this simplified structure, which uses recognized and readily accessible government data as the payout basis (the Modified Mercalli Intensity "MMI" scale), Swiss Re Corporate Solutions can help a public entity better protect its assets and obtain financial liquidity soon after a disaster scenario.

While the scenarios herein are illustrative, Swiss Re Corporate Solutions' QUAKE product can be customized to address the unique needs of a public or private institution. Insureds can choose a structure that best suits their needs (eg, a payout scale, a limit per postal ZIP code or a maximum contract limit). The QUAKE policy also contains few exclusions. However, we cannot insure against losses incurred from earthquakes caused by war, terrorism or nuclear explosion.

Contact one of our experts to learn how Swiss Re Corporate Solutions' QUAKE can complement your traditional earthquake insurance program.

QUAKE Multi-index Trigger

Here's How it Works:

1. A buyer typically has property and assets spread among multiple ZIP codes. The first step is to determine which ZIP codes will be included in coverage.

2. The total property value per ZIP code is determined and an exposure percentage is assigned to the ZIP code.

3. The buyer decides how much insurance they want to purchase. The value is then allocated to the ZIP codes according to the exposure percentage.

4. There is a contractual payout scale established, defined by ground-shaking intensity, such as MMI.

5. Following an earthquake event, payout is determined per ZIP code, using an objective third-party index at the covered ZIP codes. The more severe an earthquake is, the higher the policy payout may be.

6. The payout percentage is determined per ZIP code, based on 4 (MMI Intensity Payout).

7. The payout percentage is then calculated and funds are dispersed to the insured within 30 days of the date of loss.

Illustration*

<table>
<tr><th>1
ZIP Code</th><th>2
Exposure</th><th>3
Limit**</th><th>4
MMI Intensity Payout</th><th>5
Event Intensity</th><th>6
% Payout per Location</th><th>7
Event Payout</th></tr>
<tr><td>94401</td><td>8%</td><td>2M</td><td rowspan="6">6.50 – 7.49 = 25%
7.50 – 8.49 = 50%
8.50(+) = 100%</td><td>7.53</td><td>50%</td><td>1,000,000</td></tr>
<tr><td>94080</td><td>20%</td><td>5M</td><td>6.61</td><td>25%</td><td>1,250,000</td></tr>
<tr><td>94102</td><td>11%</td><td>2.75M</td><td>6.87</td><td>25%</td><td>687,500</td></tr>
<tr><td>94103</td><td>28%</td><td>7M</td><td>6.85</td><td>25%</td><td>1,750,000</td></tr>
<tr><td>94104</td><td>33%</td><td>8.25M</td><td>6.45</td><td>0%</td><td>0</td></tr>
<tr><td></td><td>Total limit</td><td>25M</td><td>Total payout</td><td></td><td>4,687,500</td></tr>
</table>

*Provided as a hypothetical scenario to graphically illustrate how QUAKE may work.
** All limits in the illustration are expressed in US dollars.

QUAKE can also be structured as a single-index trigger, where the ground shaking per ZIP code (3) is multiplied by the percent exposure in each ZIP code (2) to calculate the post-event index (4) for each ZIP code. The post-event index is then summed over all ZIP codes, and if higher than the trigger index, a payout is made.

Illustration*

1 ZIP Code	2 Exposure	3 Post-event MMI	4 Post-event Index
94401	8%	7.53	0.5448
94080	20%	6.61	1.322
94102	11%	6.87	0.7557
94103	28%	6.85	1.918
94104	33%	6.45	2.1285
		Total Index	6.669
		Coverage Limit	25,000,000
		Trigger Index	6.0
		Payout Due	25,000,000

*Provided as a hypothetical scenario to graphically illustrate how QUAKE may work.

Key Features

- QUAKE is a buyer-specific product, customized to the buyer's portfolio of assets.
- The coverage trigger can be tested against historical events.
- The policy limit is set at the buyer's discretion.
- Single- or multi-year options are available.
- The contract is structured with one full-limit payout per policy term.

Contacts

Contact us to learn how Swiss Re Corporate Solutions can create innovative solutions to help you manage your risks.

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More at www.swissre.com/corporatesolutions

Swiss Re Corporate Solutions QUAKE relies on ShakeMap from the United States Geological Survey (USGS). It is intended to cover indirect or underinsured losses, and not exclusively insured physical damage. Therefore, it is possible for the client to incur physical damage that is not covered under QUAKE. QUAKE cannot insure against losses incurred from earthquakes caused by war, terrorism or nuclear explosion.

Swiss Re Corporate Solutions offers innovative, high-quality insurance capacity to mid-sized and large multinational corporations across the globe. Our offerings range from standard risk transfer covers and multi-line programmes, to highly customised solutions tailored to the needs of our clients. Swiss Re Corporate Solutions serves customers from over 50 offices worldwide and is backed by the financial strength of the Swiss Re Group. For more information about Swiss Re Corporate Solutions, please visit
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