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One of the most frequently asked questions we hear from clients is “how much earthquake coverage do I need?” Many factors typically go into the decision when trying to decide how much coverage to buy. By answering the following key questions it should help to simplify the decision-making process:

1. a. How big COULD the loss be?
b. How big is the loss MOST LIKELY to be?
2. What is THE COST of the coverage?
3. What are the contractual insurance requirements from lenders and other third parties?

How big COULD the loss be? From a very basic standpoint, your loss could be the total replacement value of your building(s), plus the loss of any expected business interruption costs including the loss of rental income.

How big is the loss MOST LIKELY to be? This is the million dollar question and the most difficult to determine or predict. However, over the past 20-plus years loss models for earthquakes have been developed to help predict a scenario-based estimate. In this approach, a specific earthquake is assumed to occur and the potential losses from the event are then estimated. A loss model incorporates data from seismologists, geophysicists, and structural and geotechnical engineers. The models incorporate this information and overlay it with the specific characteristics of a property (age, construction type, soil conditions, etc.) and then develop a probable outcome, or loss estimate, based on the combined information.

This approach, a scenario based estimate, is often referred to as a Probable Loss (PL) or Probable Maximum Loss (PML) analysis. The analysis provides loss estimates expressed as a percentage. The percentage is then converted to a loss estimate by applying the percentage to the replacement value of the property.

Any type of analysis is only as good as the data that is used in a particular study however and there is also a growing respect within the insurance industry for the limitation's of loss models and PML studies. The impacts of natural hazards/earthquakes are not completely understood and complicated to predict. These models are an estimate of a very complex set of circumstances. For this reason, most studies disclaim against any responsibility or liabilities arising from the information and act only as a guide of what could happen.

Though a PML analysis is not an exact science, it is one of the best tools property owners can use when selecting the appropriate limits. Most structural engineering firms will provide a seismic analysis as part of the services they offer. The cost varies depending on the scope of the analysis and the number of locations; however, most reports have a starting cost of around \$2,000 and go up from there.

How much does the coverage cost? Earthquake insurance can be expensive, depending on the age, location, construction, and soil conditions of the assets being insured. For instance, earthquake insurance can cost little to nothing for newer assets located on the East Coast as compared to the same type of assets located in San Francisco. Most insurance companies run their own seismic analysis for properties in earthquake prone areas. The rates and limits offered are a function of this analysis. Typically, rates and/or pricing are higher if a carrier provides coverage within the expected loss estimate. Conversely, if insurance companies price earthquake insurance above the expected loss estimate the cost for coverage scales down as the chance of loss affecting them goes down.



Consideration needs to be given to contractual insurance requirements. For example, some loans might require the replacement value or loan value to be insured, regardless of what the PML might suggest is an appropriate limit.

Armed with the following information, property owners will be guided as they select the right limit of coverage for their respective assets.

1. Seismic Analysis (How big is the loss most likely to be?)
2. Cost for Coverage.
3. Contractual Requirements.

One final consideration that will shape the selection of limits is the level of tolerance to the risk that will be incorporated into the decision of how much coverage to buy.