

# EARTHQUAKE INSURANCE IN JAPAN

## ESTABLISHING THE EARTHQUAKE INSURANCE SYSTEM

Japan is well known for its frequent earthquakes. Traditionally, the thinking has been that it is difficult to provide insurance coverage for damage caused by earthquakes. One reason for this is that nobody can be sure when an earthquake will strike. Another reason is that there is a risk that a major earthquake could cause tremendous damage. Earthquake insurance was for many years the subject of a great deal of research and discussion, to little avail. Despite this, there was considerable public demand for a system of earthquake insurance on dwelling risks\* to enable victims of an earthquake who have lost their homes or property to rebuild their life. Responding to this demand, the non-life insurance business continued to study ways to build such a system.

The Niigata Earthquake of June 1964 prompted efforts to establish the system. The government and the non-life insurance industry conducted a detailed examination of the earthquake insurance system, ultimately leading to the Law concerning Earthquake Insurance. The system for earthquake insurance on dwelling risks was built based on this law and Japan Earthquake Reinsurance Co., Ltd. (JER) was established. We play a key role in taking on full responsibility with the reinsurance of earthquake insurance contracts entered into by non-life insurance companies.

## MECHANISM OF THE EARTHQUAKE INSURANCE SYSTEM

Earthquake insurance is arranged as an optional rider to fire insurance which covers buildings for residential use and/or personal property. Earthquake insurance cannot be purchased on its own. If you conclude a fire insurance contract without earthquake insurance, you are required to seal the earthquake insurance check column of the fire insurance contract application form. If you have entered into a fire insurance contract without earthquake insurance, you will be able to purchase earthquake insurance while your fire insurance contract is valid. In some areas, however, if an announcement warning of an earthquake has been made, you may not be able to purchase earthquake insurance.

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\* Non-life insurance is divided into two groups: insurance in the household risks field taken out by individuals to cover various risks in the home, and insurance in the corporate risks field taken out by companies to cover various company's risks. The same distinction applies to earthquake insurance. Insurance taken out by individuals is called earthquake insurance on dwelling risks, and the other insurance is called as earthquake insurance for companies. The Law concerning Earthquake Insurance targets at earthquake insurance on dwelling risks.



## INSURANCE COVERAGE

Loss of or damage to buildings for residential use and/or personal property through fire, destruction, burial or flooding caused directly or indirectly by any earthquake or volcanic eruption, or resulting tsunami (hereinafter referred to as an earthquake, etc.).

Fire insurance\* does not cover

1. any losses caused by fire (including the spread thereof, and expanded loss) resulting from an earthquake, etc., and
2. any fire that has spread because of an earthquake, etc. Earthquake insurance is needed to compensate for these kinds of losses.

## INSURABLE INTERESTS

Buildings for residential use and/or personal property

None of the following is insurable:

A building used as a plant or office, and not used for dwelling purposes, precious metals, gems or antiques valued at 300,000 yen or more per piece, currency, securities (checks, share certificates, gift certificates), certificates of deposit, revenue stamps, postal stamps, automobiles and certain other items.

## TERM INSURED

Short-term, one year and long-term (two to five years)

## AMOUNT INSURED

The policyholder is required to set the amount insured under earthquake insurance within a range of 30-50% of the amount of insurance provided by his/her fire insurance. However, the amount insured is limited to a maximum of 50 million yen for a building\*\* and 10 million yen for personal property.

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\* Fire insurance

Ordinary fire insurance, long-term comprehensive insurance, deposit life comprehensive insurance, dwelling fire insurance, householders' comprehensive insurance, storekeepers' comprehensive insurance and certain other types of insurance.

\*\* The amount insured of a condominium building such as apartment building is limited to 50 million yen, totaling exclusive areas and common areas.

## PAYMENT OF INSURANCE CLAIMS

Insurance claims are paid according to the policyholder's earthquake insurance to cover total, half or partial loss of the policyholder's residential building and/or personal property.

Insurable objects	Degree of loss	Amount of insurance claim paid
Residential buildings, personal property	Total loss	100% of amount insured (up to the current price* of the insurable objects)
	Half loss	50% of amount insured (up to 50% of the current price of the insurable objects)
	Partial loss	5% of amount insured (up to 5% of the current price of the insurable objects)

## AUTHORIZATION CRITERIA OF LOSSES

Total loss, half loss or partial loss applies to any of the following cases:

Degree of loss	Residential building		Personal property
	Amount of loss of major structural parts	Area of floor burnt down or washed away (partial loss applies when the residential building is flooded above floor level)	Degree of loss of or damage to the personal property
Total loss	50% or more of the current price of the residential building	70% or more of the total floor area of the residential building	80% or more of the current price of the personal property
Half loss	From 20% to less than 50% of the current price of the residential building	From 20% to less than 70% of the total floor area of the residential building	From 30% to less than 80% of the current price of the personal property
Partial loss	From 3% to less than 20% of the current price of the residential building	The residential building was damaged but not totally or half lost although it was flooded above the floor level or above 45 cm or higher from the ground level.	From 10% to less than 30% of the current price of the personal property

## CASES WHEN NO INSURANCE CLAIM IS PAYABLE:

- Loss or damage due to willful acts or gross negligence or violation of law
- Loss or theft of the objects of the insurance
- Loss or damage due to war or insurrection
- Loss or damage occurring ten days or more after the earthquake
- Loss or damage caused only to gates, walls, fences, and other parts that are not major structural parts.

\* Current price

The current price is such that the amount of depreciation according to the service year is deducted from the price of a new building.



## LIMIT OF TOTAL AMOUNT OF INSURANCE CLAIMS TO BE PAID

Limit of total amount of insurance claims to be paid\* is limited to 6,200 billion yen as revised in April 6, 2012 per earthquake, etc.. (On the same day, the liability limits of JER, non-life insurance companies and the government, as well as the methods of determining the burden of liabilities, were revised. Please refer to page 22 for the details.) In the event the total amount of insurance claims payable exceeds the limit, law allows insurance claims per contract to be reduced.

## PREMIUM RATE

The premium rate for earthquake insurance is calculated by the Non-Life Insurance Rating Organization of Japan\*\* on the basis of the Law concerning Non-Life Insurance Rating Organizations. The basic rate of insurance premiums consists of a risk premium rate applicable to or appropriate for the future payment of insurance claims and a loading premium rate applicable to or appropriate for non-life insurance company expenses and agency commissions.

$$\text{Premium rate} = \text{Risk premium rate} + \text{Loading rate}$$

The Headquarters for Earthquake Research Promotion\*\*\*, a government organization, published the Probabilistic Seismic Hazard Maps. The risk premium rate is calculated based on the latest revised damage projection method to cover all earthquakes (number of epicenters: about 730,000 epicenter model) used in the preparation of the maps that are assumed to have the potential to cause damage in the future.

The premium rate actually applied is calculated by multiplying the basic rate of the insurance premium that is set according to the structure of the residential building and the residential building to accommodate personal property that are subject to insurance and the building location, by a discount rate set according to the earthquake-resistance capability (for which certain confirmation documents are required).

\* *Limit of total amount of insurance claims to be paid*

The Law concerning Earthquake Insurance stipulates that the limit to the total insurance claims payable by the government and private insurance company per earthquake, etc.. For details, see page 22 Insurance liabilities held by JER, non-life insurance companies and the government.

\*\* *Non-Life Insurance Rating Organization of Japan*

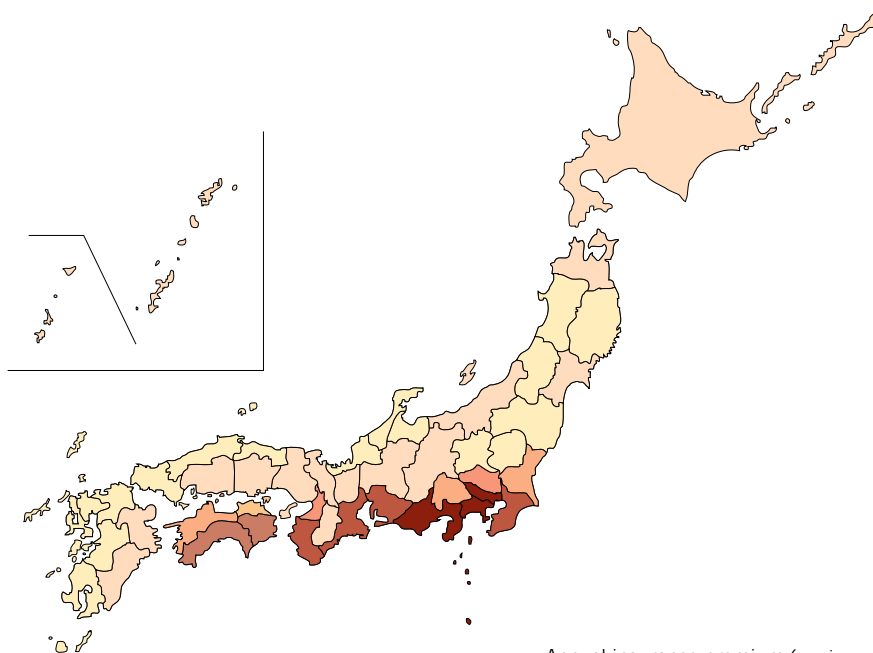
An organization established in accordance with the Law concerning Non-Life Insurance Rating Organizations, which aims to provide a fair basis premium rate applicable to non-life insurance.

\*\*\* *The Headquarters for Earthquake Research Promotion*

Following on the lessons learned from the Great Hanshin-Awaji Earthquake Disaster, the Special Measure Law on Earthquake Disaster Prevention was enacted to develop a system to facilitate research and study on earthquakes, and based on this Law, the Headquarters for Earthquake Research Promotion was founded in July 1995. In March 2005, the Headquarters for Earthquake Research Promotion published two kinds of maps as the National Seismic Hazard Maps for Japan: the Probabilistic Seismic Hazard Map and the Scenario Earthquake Shaking Map. The Probabilistic Seismic Hazard Map was revised in July 2010.

## BASIC RATE (APPLICABLE TO BUILDINGS AND PERSONAL PROPERTY)

The basic rate is set according to the structure of the residential building and the residential building to accommodate personal property that are subject to insurance and the building location.



Annual insurance premium (per insurance year)/  
amount insured (thousand yen of earthquake insurance)

(Unit: yen)

Non-wooden	Wooden	With cost easing measures	Prefecture
0.5	1.00	0.65	Iwate-ken, Akita-ken, Yamagata-ken, Fukushima-ken, Tochigi-ken, Gunma-ken, Toyama-ken, Ishikawa-ken, Fukui-ken, Tottori-ken, Shimane-ken, Yamaguchi-ken, Fukuoka-ken, Saga-ken, Nagasaki-ken, Kumamoto-ken, Kagoshima-ken
0.65	1.27	0.84	Hokkaido, Aomori-ken, Miyagi-ken, Niigata-ken, Nagano-ken, Gifu-ken, Shiga-ken, Kyoto-fu, Hyogo-ken, Nara-ken, Okayama-ken, Hiroshima-ken, Oita-ken, Miyazaki-ken, Okinawa-ken
0.65	1.56	0.84	Kagawa-ken
0.91	1.88	1.18	Ibaraki-ken, Yamanashi-ken, Ehime-ken
1.05		1.36	Saitama-ken, Osaka-fu
0.91	2.15	1.18	Tokushima-ken, Kochi-ken
1.69	3.06	2.19	Chiba-ken, Aichi-ken, Mie-ken, Wakayama-ken
	3.13		Tokyo-to, Kanagawa-ken, Shizuoka-ken



## DISCOUNT RATE

Either discount rate will apply to the foregoing basic premiums rate when the building and personal property come under any of the following:

- Discounts cannot be claimed more than once.

### (a) Seismic isolated building\* discount

When the building is a seismic isolated building constructed in accordance with related laws and accommodated personal property

Discount rate	30%
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### (b) Earthquake-resistance class\*\* discount rate

When the building corresponds to the earthquake-resistance class as provided for by law and accommodated personal property

Earthquake-resistance class	1	2	3
Discount rate	10%	20%	30%

#### \* Seismic isolated building

A seismic isolated building is a building that is assessed to be a seismic isolated building in accordance with the related indicators in the Japanese Housing Performance Designation Standards under the Housing Quality Guarantee Law.

#### \*\* Earthquake-resistance class

The earthquake-resistance class of a residential building is an indicator of earthquake resistance as stipulated in the Japanese Housing Performance Designation Standards based on the Housing Quality Guarantee Law. It is also used to evaluate a building for earthquake resistance as provided for in the assessment guidelines for earthquake-resistance diagnosis based on the earthquake-resistance class (as to the body of the building) established by the Ministry of Land, Infrastructure and Transport. A description of the classes is as follows.

#### Earthquake-Resistance Class 3

A class suggesting that the building will not topple or collapse against a force that is 1.5 times stronger than the force of an earthquake (as provided for in Paragraph 3, Article 88, Enforcement Order of the Construction Standard Act) that occurs very rarely (once every some hundred years)

#### Earthquake-Resistance Class 2

Class suggesting that the building will not topple or collapse against a force 1.25 times stronger than the force of an earthquake that occurs very rarely

#### Earthquake-Resistance Class 1

Class suggesting that the building will not topple or collapse against that force of earthquake that occurs very rarely



**(c) Earthquake-resistance diagnosis discount**

When the building was assessed as having an earthquake-resistance capacity\* equivalent to that stipulated by related laws as a result of an earthquake-resistance diagnosis or an earthquake-resistance refurbishment, and accommodated personal property

Discount rate	10%
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**(d) Building age discount rate**

When the building was constructed during or after June 1981 and accommodated personal property

Discount rate	10%
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**PREMIUM RATE OF A LONG-TERM CONTRACT**

Premium rate of a long-term contract (a two-to-five year contract with special conditions for premiums) is calculated as follows:

Contract period	2 years	3 years	4 years	5 years
Coefficient	1.90	2.75	3.60	4.45

\* *Earthquake-resistance capacity*

Earthquake-resistance capacity is a seismic capacity that conforms to the current earthquake-resistance standards set out in the Building Standards Law.



### An example of insurance premiums calculated

A wooden residential building constructed in January 2000 in Hyogo-ken:

Fire insurance (principal contract) amount insured: Building 20 million yen; personal property 6 million yen

1. Setting the amount insured of earthquake insurance: In this case, the proportion insured (\*) will be 50%.  
 Residential building: 20 million yen x 50% = 10 million yen  
 Personal property: 6 million yen x 50% = 3 million yen
2. Confirming the premium rate applicable: Hyogo-ken, wooden → 1.27
3. Confirming the discount rate applicable: Building constructed in and after June 1981 → 10%

$$\begin{array}{rcccl}
 \text{Earthquake insurance premium} & & \text{Earthquake amount insured} & \text{Earthquake insurance} & \text{Discount rate} \\
 \text{on residential building} & = & 10,000 & \text{premium rate} & \\
 & & \text{(1,000 yen)} & & \\
 & & & \times \underbrace{1.27 \times (100\% - 10\%)}_{1.14} & = 11,400 \text{ (yen)}
 \end{array}$$

$$\begin{array}{rcccl}
 \text{Earthquake insurance premium} & & \text{Earthquake amount insured} & \text{Earthquake insurance} & \text{Discount rate} \\
 \text{on personal property} & = & 3,000 & \text{premium rate} & \\
 & & \text{(1,000 yen)} & & \\
 & & & \times \underbrace{1.27 \times (100\% - 10\%)}_{1.14} & = 3,420 \text{ (yen)}
 \end{array}$$

\* Proportion Insured

The insured earthquake amount as a percentage of the insured fire amount. The insured earthquake amount should be 30-50% of the insured fire amount.

### INCOME TAX CREDIT SYSTEM FOR EARTHQUAKE INSURANCE

In the tax system revision in fiscal 2006, the old income tax credit for non-life insurance was revised, and an income tax credit for earthquake insurance was established to support self-help efforts of the public in preparation for earthquake damages. As the revision enables deductions of up to 50,000 yen and 25,000 yen from the gross income, etc. for the purposes of income tax and the local inhabitant tax, respectively, the purchase of an earthquake insurance policy became easier.