

Announcement on the Revision of the Standard Full Rates for Earthquake Insurance

(GIROJ filed the revision of rates with the Commissioner of the Financial Services Agency on June 15, 2017.)

General Insurance Rating Organization of Japan (GIROJ) filed the revision of the Standard Full Rates, hereinafter referred to as “SFRs,” for earthquake insurance on June 15, 2017, in accordance with the provisions in the second sentence of Article 9-3, paragraph (1) of the Act on Non-Life Insurance Rating Organizations.

Outline of the revision

The base rates^{*1} of the SFRs for earthquake insurance are to be increased by a national average of +3.8%. The indicated rate changes vary by prefecture and construction type, with a maximum increase of +14.9% and a maximum decrease of -15.8%.

Lump-sum discount factors for long-term contracts^{*2} are also to be revised^{*3}.

*1 The rates before applying discounts and lump-sum discount factors for long-term contracts.

*2 Factors used to calculate a lump-sum premium for a long-term policy with two to five years policy period.

*3 The indicated rate changes by prefecture and construction type as well as filed lump-sum discount factors for long-term contract can be found on the next page.

The SFRs for earthquake insurance have been in the course of a three-phased revision process. The filed rates are for the second revision.

In the calculation of base rates, various underlying data were updated. Lump-sum discount factors for long-term contracts were revised based on the condition of interest rates in the recent years.

Please refer to the [Attachment](#) for details.

What are the SFRs for earthquake insurance?

In accordance with the Act on Non-Life Insurance Rating Organizations, GIROJ calculates the SFRs for earthquake insurance based on the estimated seismic risk.

As the earthquake insurance system, given its highly public nature, is jointly operated by the government and insurers, profit is not included in the SFRs.

Insurance companies set aside pure premiums paid by policyholders as reserves to prepare for future claim payments for earthquake disasters.

【Base rates (No discounts applied; One-year policy period; Per insured amount of ¥1,000)】

Construction Type* Prefecture	Construction type A			Construction type B		
	Current rate [¥]	Filed rate [¥]	Indicated rate change	Current rate [¥]	Filed rate [¥]	Indicated rate change
Hokkaido	0.81	0.78	▲ 3.7%	1.53	1.35	▲ 11.8%
Aomori	0.81	0.78	▲ 3.7%	1.53	1.35	▲ 11.8%
Iwate	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Miyagi	0.95	1.07	+12.6%	1.84	1.97	+7.1%
Akita	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Yamagata	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Fukushima	0.74	0.85	+14.9%	1.49	1.70	+14.1%
Ibaraki	1.35	1.55	+14.8%	2.79	3.20	+14.7%
Tochigi	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Gunma	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Saitama	1.56	1.78	+14.1%	2.79	3.20	+14.7%
Chiba	2.25	2.50	+11.1%	3.63	3.89	+7.2%
Tokyo	2.25	2.50	+11.1%	3.63	3.89	+7.2%
Kanagawa	2.25	2.50	+11.1%	3.63	3.89	+7.2%
Niigata	0.81	0.78	▲ 3.7%	1.53	1.35	▲ 11.8%
Toyama	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Ishikawa	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Fukui	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Yamanashi	0.95	1.07	+12.6%	1.84	1.97	+7.1%
Nagano	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Gifu	0.81	0.78	▲ 3.7%	1.53	1.35	▲ 11.8%
Shizuoka	2.25	2.50	+11.1%	3.63	3.89	+7.2%
Aichi	1.71	1.44	▲ 15.8%	2.89	2.47	▲ 14.5%
Mie	1.71	1.44	▲ 15.8%	2.89	2.47	▲ 14.5%
Shiga	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Kyoto	0.81	0.78	▲ 3.7%	1.53	1.35	▲ 11.8%
Osaka	1.32	1.26	▲ 4.5%	2.38	2.24	▲ 5.9%
Hyogo	0.81	0.78	▲ 3.7%	1.53	1.35	▲ 11.8%
Nara	0.81	0.78	▲ 3.7%	1.53	1.35	▲ 11.8%
Wakayama	1.71	1.44	▲ 15.8%	2.89	2.47	▲ 14.5%
Tottori	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Shimane	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Okayama	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Hiroshima	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Yamaguchi	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Tokushima	1.35	1.55	+14.8%	3.19	3.65	+14.4%
Kagawa	0.95	1.07	+12.6%	1.84	1.97	+7.1%
Ehime	1.20	1.20	0.0%	2.38	2.24	▲ 5.9%
Kochi	1.35	1.55	+14.8%	3.19	3.65	+14.4%
Fukuoka	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Saga	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Nagasaki	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Kumamoto	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Oita	0.95	1.07	+12.6%	1.84	1.97	+7.1%
Miyazaki	0.95	1.07	+12.6%	1.84	1.97	+7.1%
Kagoshima	0.68	0.71	+4.4%	1.14	1.16	+1.8%
Okinawa	0.95	1.07	+12.6%	1.84	1.97	+7.1%

* Construction type A: Mainly non-wooden buildings; Construction type B: Mainly wooden buildings.

【Lump-sum discount factors for long-term contracts】

Policy period		Two years	Three years	Four years	Five years
Lump-sum discount factors for long-term contracts	Current factors	1.90	2.75	3.60	4.45
	Filed factors	1.90	2.80	3.70	4.60

1. National average of indicated rate change in the base rates

(1) Three-phased revision approach

The previous filing for the revision of the SFRs was on September 30, 2015, and it indicated a massive increase in base rates due to a change of an event catalog^{*1}, which is one source of the underlying data used for the estimation of earthquake damage, following the 2011 off the Pacific coast of Tohoku Earthquake (Great East Japan Earthquake). A three-phased revision approach was therefore initiated with a filing of September 2015 as the first revision, in accordance with opinions expressed at the follow-up meeting of the “Project team for earthquake insurance system” organized by the Ministry of Finance.

In the previous filing, the SFRs were increased by a national average of +5.1% as the first revision, where the indicated rate change was a national average of +19.0% in an aggregate of three revisions^{*2}. At the time of previous filing, the second and third revisions were to be made based on effects of the updating of various underlying data, etc.

*1 In the previous filing, an event catalog of the “Probabilistic Seismic Hazard Map,” prepared by the Headquarters for Earthquake Research Promotion on December 19, 2014, was used for the estimation of earthquake damage.

*2 It was indicated that an average increase of +13.2% at the national level was required for the second and third revisions.

(2) Indicated rate change in this filing

Following recalculation of the SFRs by updating the underlying data such as an event catalog^{*3}, the results of the Housing and Land Survey, and policy data for earthquake insurance, the required indicated rate change for the remaining two revisions was decreased from a national average of +13.2% to +8.7%. The indicated rate change for the second revision, which is the subject of this filing, was calculated so as to equalize the changes by prefecture for the second and third revisions. The following is the national average of indicated rate change in this filing.

National average of indicated rate change (as the second revision)

Construction type A	Construction type B	Total
+5.5%	+2.2%	+3.8%

The third revision will be made based on effects of the future updating of various underlying data, etc.

*3 In the calculation of filed rates, an event catalog of the “Probabilistic Seismic Hazard Map,” prepared by the Headquarters for Earthquake Research Promotion on June 10, 2016, was used for the estimation of earthquake damage.

As described above, the SFRs for earthquake insurance have been in the course of a three-phased revision process, with an aim to avoid rapid increase in the SFRs; however, it has caused and will continue to cause a deficit in premium revenue.

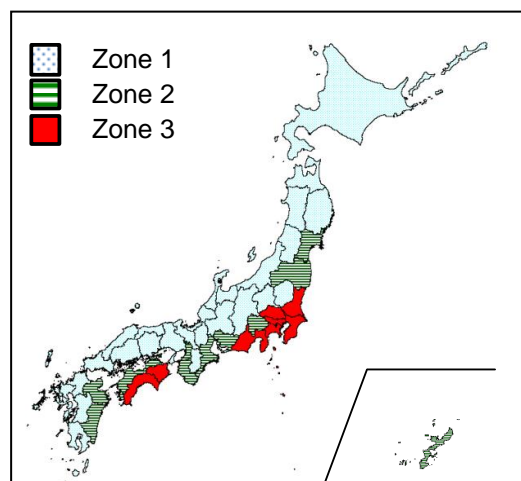
In order to ensure the equivalence of revenue and expenditure in the earthquake insurance system on a long-term basis, the deficit in premium revenue will be made up by a future revision, due to take place after the phased approach. This make-up is in accordance with opinions expressed at the follow-up meeting of the “Project team for earthquake insurance system” organized by the Ministry of Finance.

2. Base rates by prefecture

(1) Earthquake zone based on the estimated seismic risk

In accordance with the estimated seismic risk, the current earthquake insurance system classifies prefectures into three earthquake zones, in which zone 1 is at the lowest risk, and zone 3, at the highest. The seismic risk of each prefecture was reassessed in the filed rates, resulting in no changes to the current earthquake zones, which were filed on September 30, 2015 and implemented on January 1, 2017.

Earthquake zone	Prefecture
1	Hokkaido, Aomori, Iwate, Akita, Yamagata, Tochigi, Gunma, Niigata, Toyama, Ishikawa, Fukui, Nagano, Gifu, Shiga, Kyoto, Hyogo, Nara, Tottori, Shimane, Okayama, Hiroshima, Yamaguchi, Fukuoka, Saga, Nagasaki, Kumamoto, Kagoshima
2	Miyagi, Fukushima, Yamanashi, Aichi, Mie, Osaka, Wakayama, Kagawa, Ehime, Oita, Miyazaki, Okinawa
3	Ibaraki, Saitama, Chiba, Tokyo, Kanagawa, Shizuoka, Tokushima, Kochi



(2) Calculation of filed base rates by prefecture

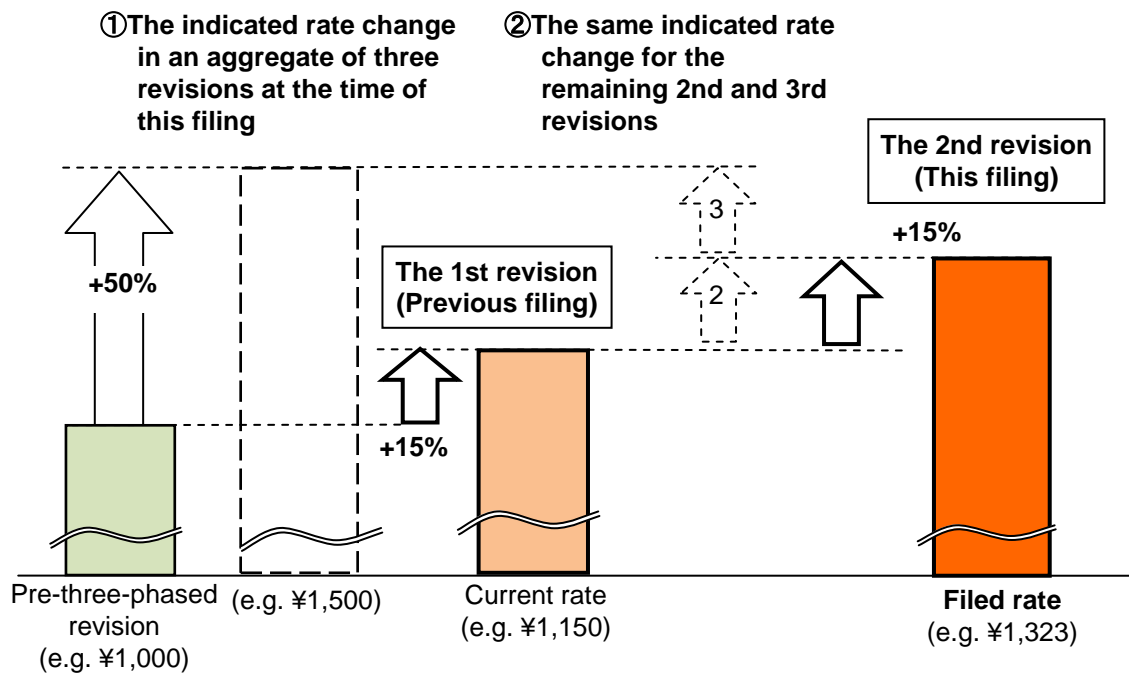
The base rates by prefecture were calculated based on the earthquake zones described in (1) above. On that basis, the SFRs were calculated through the following procedures, with a cap on increase in the SFRs of each prefecture to a maximum of +50% in an aggregate of three revisions:

- ① Calculates indicated rate change by prefecture in an aggregate of three revisions, with a maximum of +50%.
- ② Calculates indicated rate change by prefecture for the second revision so as to equalize the changes of the second and third revisions.

The following table shows the maximum increase and decrease in the indicated rate change of the filed base rates by prefecture.

	Construction type A	Construction type B
Maximum increase in the indicated rate change	+ 14.9%	+ 14.7%
Maximum decrease in the indicated rate change	▲ 15.8%	▲ 14.5%

Example of calculating base rates by prefecture, in the case of a prefecture with +50% rate increase in an aggregate of three revisions^{*1}



*1 The actual indicated rate change in an aggregate of three revisions may change depending on the future update of underlying data.

3. Revision of lump-sum discount factors for long-term contract

Lump-sum discount factors for long-term contracts are coefficients^{*2} used to calculate a lump-sum premium for a contract with two to five years policy period by taking into account the differences in the clerical cost and interest rate between those for the first year and the succeeding years.

In the calculation of filed lump-sum discount factors for long-term contract, assumed interest rate was changed from 1.5% to 0.5% by considering the condition of interest rates in the recent years.

The following table shows the current and filed lump-sum discount factors for long-term contracts^{*3}.

Policy period		Two years	Three years	Four years	Five years
Lump-sum discount factors for long-term contracts	Current factors	1.90	2.75	3.60	4.45
	Filed factors	1.90	2.80	3.70	4.60
	Indicated percent change	0.0%	+1.8%	+2.8%	+3.4%

*2 The actual premium to be applied to a policyholder will be a product of the base rate, discount rate, and lump-sum discount factor for long-term contracts.

*3 Return premium factors, that is, the return rate of an unearned premium in a lump-sum premium for a long-term policy in the case of modification or cancellations, are also calculated and filed.