

(Translation from Original Japanese Version)

Japan Real Estate Institute Home Price Indices Calculation Methodology

Revised on JANUARY 27th, 2015

Table of Contents

1. Introduction	2
2 . Synopsis	3
(1) Overview	3
(2) JREI Home Price Indices Series	3
(3) Data Used for Calculating JREI Home Price Indices	3
3. Calculation Method	4
(1) Calculation of Index Values	4
(2) Calculation of Composite Index of Tokyo Metro Area	
4. Other Notes	5
(1) Publication	5
(2) Reminder	5
(3) Contact	

1. Introduction

- The Japan Real Estate Institute ("JREI") calculates and publishes the JREI Home Price Indices based on sales price data compiled by the Real Estate Information Network for East Japan in accordance with the methodology described in this document. However, when an event that is not specified in this document occurs, or if JREI judges that it is difficult to use the methodology described in this document, JREI may use an alternative method of index calculation that is deemed appropriate.
- The copyright of this document is owned by JREI. Any copies, reprints and reproductions of the whole or any part of this document are prohibited in any forms without the prior approval of JREI. This document was prepared solely for the understanding of indices calculated and published by JREI. Information expressed in this document is subject to change without notice and in those cases JREI shall assume no obligation to update any recipients of this document. JREI shall accept no liability or responsibility for any loss or damage arising from the use of all or part of this document.
- This translation may be used only for reference purposes. This English version is not an official translation of the original Japanese document. In cases where any differences occur between this translation and the original Japanese version, the Japanese version shall prevail.

2. Synopsis

(1) Overview

- The JREI Home Price Indices are calculated based on the analysis of price changes in the repeated transactions of pairs of similar condominium units¹. Transaction data of existing condominium units in Tokyo Metro Area that were compiled by Real Estate Information Network for East Japan are used for the index calculation.
- The base index date is January 2000 and the base index value is 100.0. The index value of each month is calculated based on repeat sales data up to the end of the month and is published two months later (e.g., the index value of March 2011 was published in May 2011.).
- Index values could be revised when the information of sample data was corrected by the Real Estate Information Network for East Japan. However, such revision is limited to index values in the last two years (e.g., when the index value was calculated in May 2011, index values between April 2009 and February 2011 were examined for possible revision while those before March 2009 were left as they were.)

(2) JREI Home Price Indices Series

The following five indices are calculated as the JREI Home Price Indices:

```
JREI Home Price Index (Existing Condominium, Composite of Tokyo Metro Area)
JREI Home Price Index (Existing Condominium, Tokyo Prefecture)
JREI Home Price Index (Existing Condominium, Saitama Prefecture)
JREI Home Price Index (Existing Condominium, Kanagawa Prefecture)
JREI Home Price Index (Existing Condominium, Chiba Prefecture)
```

• JREI Home Price Index (Existing Condominiums, Composite of Tokyo Metro Area) is a weighted average of the four prefectures.

(3) Data Used for Calculating JREI Home Price Indices

- Sample Assets: Existing Condominium (Newly built condominium data are not used for index calculation.)
- Survey Areas: Tokyo, Saitama, Kanagawa, and Chiba Prefectures
- · Data Items: Sales Date, Sales Price, Location, Completion Date, etc.

¹ JREI determines whether or not two condominium units are similar enough to be included as samples in terms grade and size by looking at their location, completion date and so on. Repeat sales data of the same condominium unit are excluded from samples in the following two cases: (i) the unit was extended or renovated before the second sale; and (ii) the two transactions took place in a short period of time.

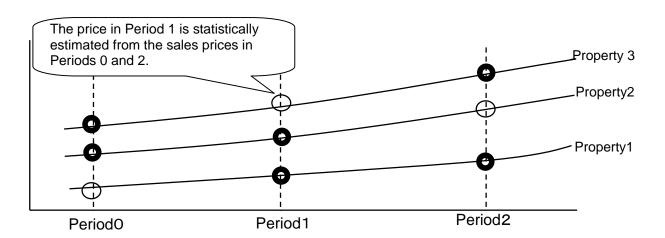
3. Calculation Method

(1) Calculation of Index Values

The JREI Home Price indices are calculated by the repeat-sales method, which estimates index values from the repeated sales of two similar condominium units. The price of a condominium unit is conjectured by a regression model when there is not a transaction of the property in a certain time period. An example for the calculation using this method is as follows:

<Sales Price>

100.001										
	Period 0	Period 1	Period 2			Period 0	Period 1	Period 2		
Property 1	N/A	20	22		Property 1	18	20	22		
Property 2	40	42	N/A		Property 2	40	42	49		
Property 3	50	N/A	62		Property 3	50	55	62		
				_	Total	108	116	132		
					Index Value		107.4	122.2		
					(Period 0 =	100	(=100×1	(=100×13		
					100)		16/108)	2/108)		



When calculating index values, the time interval of repeat sales is taken into account as the weight for the property. Specifically, the weight of repeat sales with a longer interval should be lower because the property price is more likely to be affected by physical and environmental changes during the interval.

(2) Calculation of Composite Index of Tokyo Metro Area

- The JREI Home Price Index (Existing Condominium, Composite of Tokyo Metro Area) is a
 weighted average of the JREI Home Price Indices of Tokyo, Kanagawa, Chiba, and Saitama
 Prefectures. The aggregate value of all existing condominium units of each prefecture is used as
 the weight.
- The aggregate value of all existing condominium units is calculated by multiplying the number of existing condominium units by their average price.
- The number of existing condominium units is taken from the Housing and Land Survey by the Ministry of Internal Affairs and Communications. This survey is conducted every five years. The most recent survey was undertaken for FY 2008. The average price of existing condominium units is the average price of sales data collected by the Real Estate Information Network for East Japan.

4. Other Notes

(1) Publication

- The JREI Home Price Indices are posted on the JREI website on the last Tuesday of each month.
- The indices are published every month for the period from June 1993 to two months prior to the month.

(2) Reminder

- The JREI Home Price Indices are intellectual properties of JREI, which holds all the rights regarding the indices including calculation methodology, publication, and usage. Reproduction, editing, and translation of the indices are prohibited.
- For quoting or reprinting all or part of the indices, please obtain the permission of the Japan Real Estate Institute in advance.
- While the contents of the indices have been rigorously checked, we shall accept no responsibility for any damage or loss suffered as a result of any inadvertent inaccuracy of the indices.

(3) Contact

Research Division, Japan Real Estate Institute E-mail: jrei-homepriceindex@imail.jrei.jp