



IPD Indices in Japan

There are currently two direct property indices published by IPD in Japan:

- The IPD Japan Annual Index. This includes all the properties in the IPD Japan databank, including properties owned by Private Funds, JREITs and Insurance Companies, and reports significantly in arrears. The earliest the year-end figures can be published is the following August.
- The IPD Japan Monthly Indicator. This index is based on a subset of the portfolios in the full annual Universe whose assets are valued twice a year. It is designed to provide an early indication of trends in the Japanese real estate market.

Data issues unique to Japan

In most countries where IPD operates an index, there is at least one date in each year on which the majority of property portfolios appraise all of their assets. The calendar year-end, 31 December is the most common date. Valuations synchronised on a quarterly basis at the quarter-ends is also increasingly common. The performance of assets appraised on these dates, and portfolios comprised of these assets, can be fairly compared on a like-for-like basis.

In Japan, there is no single date on which most portfolio valuations are synchronised. 31 December is probably the most common, but a majority of portfolios will be valued on other dates. This makes it difficult to compare the performance of different funds on a consistent basis.

The fairest approach is to estimate the value of all the properties on a single reporting date. This can easily and reliably be done by interpolating between actual valuations. However, this can only be done when the next valuation after the reporting date is available. Thus, true like-for-like comparison is only possible in arrears.

The appraisals of the Japanese REITs are also spread right across the year. Every month sees a different crop of portfolio appraisals. The good news is that the JREITs appraise their assets twice a year, six months apart. This means that there is never too long to wait until the next actual valuation becomes available. Some other portfolios are also starting to value their assets more than once a year.

What does the monthly publication show?

The IPD Japan Monthly Indicator is calculated in exactly the same way as all other IPD indices around the world, except that it uses partial data for the four most recent months. Two sorts of data are presented in each edition, and the difference is the completeness of the data on which the statistics are based.

- Figures calculated using data from all the portfolios in the Monthly Databank are stable and directly comparable with all other IPD indices. However, the freshest numbers on this basis will be published even and a half months after the nominal reporting date.
- Figures calculated for the most recent months are based on incomplete data. These provide an early indication of the eventual return, but they are subject to restatement.

Where does the data for come from?

Currently, the Monthly Indicator is based exclusively on information made available to the public by the Japanese REITs. The JREITs value their assets twice a year and publish this information within a couple of months of the valuation date. Each month, IPD collates this data into a common structure using a consistent set of assumptions. The investment return calculated by IPD on the direct property assets should not be confused with the return received by investors in the JREITs, which is based on their share price and distribution.

How are the returns calculated?

The total return shown in the Monthly Indicator is a time-weighted return on the capital employed, calculated on standing investment properties. The computation is identical to all other IPD Indices around the world. The following calculation is applied to every property in every month. The annual return for a property or segment is achieved by compounding twelve monthly returns.

$$\frac{\text{Capital appreciation} + \text{Capital expenditure and capital receipts} + \text{Net income}}{\text{Starting capital value} + \text{Capital expenditure}}$$

The diagram illustrates the calculation of the monthly return. The numerator consists of three components: Capital appreciation (blue oval), Capital expenditure and capital receipts (green oval), and Net income (red oval). The denominator consists of two components: Starting capital value (red oval) and Capital expenditure (blue oval). The formula is presented as a fraction with these components circled and color-coded to match the labels.

For more detail on the construction of IPD indices, you should refer to the IPD Index Guide, which can be downloaded from the IPD website: www.ipd.com/indexguide

How does IPD get a capital value for every month?

In the constructions of the index, IPD excludes properties from the calculation on reporting dates after their most recent appraisal. This is because there is not an up-to-date capital value to go into the return formula. This affects the four most recent months. When appraisal information becomes available at a later reporting date, interpolated values are added for the missing months. 100% coverage is achieved when every asset has an actual or interpolated value. In simple cases, interpolation is on a straight line basis between the actual valuations, but in more complicated cases capital sales and part transactions would be taken into account.

How should I read the Monthly Indicator?

A table like this appears in every edition of the Monthly Indicator. The column labelled “Funds Appraised” indicates the completeness of the data.

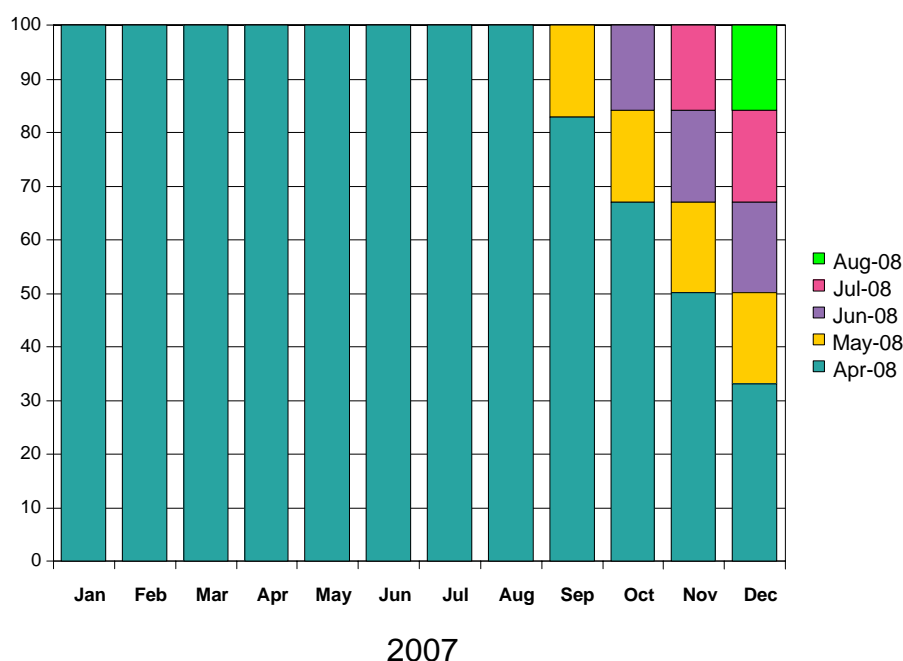
Index – no longer subject to systematic restatement

	Total Return	Income Return	Capital Return	Capital Value	Fund Count	Funds Appraised	TR Index
06-07	13.6	5.3	8.0	6.89	41	100%	150.9
07-07	13.5	5.2	7.9	7.02	41	100%	152.4
08-07	13.3	5.2	7.8	7.09	41	100%	153.8

Indicator – all values provisional

09-07	13.2	5.2	7.7	7.16	41	77%	155.2
10-07	13.0	5.1	7.5	7.32	42	63%	156.6
11-07	12.8	5.1	7.4	7.44	42	48%	158.0
12-07	12.6	5.0	7.3	7.45	42	33%	159.4

The final row of the table above shows the first return (12.6%) that IPD published for December 2007, as they were released in April 2007. The most recent month's return is based on the smallest proportion of actual valuations, and this result is always the most tentative. In this case, the monthly return is based on just 33% of the properties that will eventually be available.





The graph above illustrates the way the December return is constructed. The return for the year is the result of compounding twelve separate monthly returns. The first estimate of the December return is published in April based on data represented by the turquoise bars. The monthly returns are based on complete appraisal data for the first eight months of the year, but each subsequent month is based on less than 100%. Approximately one-sixth of properties are excluded from the September return, two-thirds from the October return, half from the November return, and so on. August is the last month for which all properties are appraised, and the table shows that the return for the year to August 2007 (13.3%) is no longer subject to systematic restatement.

The graph also shows how proportion of properties included in the calculation of the December 2007 return builds up over the following months until the return published in August 2008 is based on complete appraisal data.

How close is the first estimate to the final index result?

Historically, the average gap between the first estimate of the annual return for a given month and the final index return for that month is less than plus or minus 24 basis points (0.24%). As the proportion of assets with an actual or interpolated value in the final month approaches 100%, the gap between the estimate and the final result tends to reduce. The average gap between the second restatement and the final result is +/- 16bp, +/- 12bp for the third restatement, and +/- 6bp for the fourth. However, there can be no guarantee that the gap might not be larger during periods of rapid market movement.

More information?

In addition to the information IPD puts into the public domain each month, we have prepared a special spreadsheet containing historical data series, additional measures and the a more detailed segmentation. The following 28 segments are included each month. Contact taku.ito@ipd.com if you are interested in receiving this.

Retail	Office	Residential	Other
Retail – Tokyo Retail – RoJ	Office – Tokyo Office – RoJ	Resi – Tokyo Resi – RoJ	Industrial Rest of Other
Big Box Retail Shopping Centres Other Retail – Tokyo Other Retail – Osaka Other Retail – RoJ	Office – 5 wards Office – RoT Office – Kawa/Yoko Office – Nagoya Office – Osaka Office – Fukuoka Office – RoJ	Resi – 5 wards Resi – RoT Resi – Osaka Resi – RoJ	

Important Disclaimer

IPD's monthly databank includes information made available to the public by the J-REITs. IPD had endeavoured to interpret this data in a logical and consistent manner. However, we can offer no warranty that the data from the original provider is either accurate or complete, or that the assumptions we have made are correct. IPD cannot accept responsibility for any error or omission and IPD has no liability for any losses, damages, costs or expenses suffered by any person as a result of any reliance on this data.