M E T A D A T A

BASIC INFORMATION

1	Data Category	:	Commercial Property Price Index
2	Statistics Disseminator	:	Statistics Department, Bank Indonesia
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DATA DEFINITION

Commercial Property Price Index provides information about movement in commercial property prices that can be used as an indicator to estimate asset price inflation in Indonesia.

DATA COVERAGE

Coverage:

Commercial Property Price Index is obtained from commercial property data at the Greater Jakarta area (Jakarta, Bogor, Depok, and Bekasi), Banten, Bandung, Makassar, Surabaya, Semarang and Medan. Since 2017, Bank Indonesia has expanded its coverage area of survey to 11 cities i.e. Jakarta, Bodebek area (Bogor, Depok, and Bekasi), Banten, Bandung, Makassar, Medan, Semarang, Surabaya, Balikpapan, Denpasar, and Palembang.

The survey covers several type of property i.e. office buildings, shopping centers, apartments, hotels (3,4,5 stars), industrial estates, convention halls and warehouse complexes. In addition to the Commercial Property Price Index, this survey also provides Commercial Property Supply Index and Commercial Property Demand Index.

Unit:

All data is stated in index, unless otherwise noted.

Currency:

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PERIODICITY OF PUBLICATION
Quarterly

TIMELINESS
Six weeks after the end of the survey period (website).

ADVANCE RELEASE CALENDAR (ARC)
Advance Release Calendar (attached) is issued every December, annually.

SOURCE OF DATA
Bank Indonesia (BI) : Commercial Property Price Index Survey

METHODOLOGY

Starting in the second quarter of 2019, Bank Indonesia has made the following improvement in terms of scope and methodology:

1. Change the coverage of property type, by excluding apartment for sale.
2. Change in the weighting method from "market capitalization" into "value of stock".
3. Change in the calculation method from Laspeyres to Irving Fisher method.
4. Change in base year from 2012=100 to 2017=100.

Commercial Property Price Index is a composite price index which calculated with the following formula by using value of stock as the weight:

*Value of Stock = stock (supply) * price*

$$IP_n = \frac{\sum(IW_n \times W_{wn})}{\sum W_{wn}}$$

Whereas :

$$IW_n = \frac{\sum(IS_n \times W_{sn})}{\sum W_{sn}}; \; IS_n = \frac{\sum(IH_{n(F)} \times W_{kn})}{\sum W_{kn}} \; ; \; IK_{n(F)} = \sqrt{IK_{n(L)} \times IK_{n(P)}} \; ;$$

$$IK_{n(L)} = \sum \frac{p_n \times q_0}{p_0 \times q_0} \times 100 \; ; \; IK_{n(P)} = \sum \frac{p_n \times q_n}{p_0 \times q_n} \times 100$$

With :

IP_n = Commercial property price index in period n

IW_n = Commercial property price index per region in period n

W_{wn} = Weight value of stock per region in period n

IS_n = Commercial property price index per segment in period n

W_{sn} = Weight value of stock per segment in period n

$IK_{n(F)}$ = Commercial property price per category Fisher method

$IK_{n(L)}$ = Commercial property price per category Laspeyres method

$IK_{n(P)}$ = Commercial property price per category Paasche method

W_{kn} = Market capitalization per category in period n

Commercial Property Supply Index is a composite supply index which calculated from the lowest unit of each segment using Fisher method. At a higher level of stratification, supply index is formed as a composite index derived from weighted average calculation of the index value from the narrower scope with value of stock as the weight. Moving weight has been used with the following formula:

$$IQs_n = \frac{\sum(IWs_n \times W_{wn})}{\sum W_{wn}}$$

Whereas :

$$IWs_n = \frac{\sum(ISs_n \times W_{sn})}{\sum W_{sn}} ; ISs_n = \frac{\sum(IKs_{n(F)} \times W_{kn})}{\sum W_{kn}} ; IKs_{n(F)} = \sqrt{IKs_{n(L)} \times IKs_{n(P)}} ;$$

$$IKs_{n(L)} = \sum \frac{p_0 \times q_n}{p_0 \times q_0} \times 100 ; \ IKs_{n(P)} = \sum \frac{p_n \times q_n}{p_n \times q_0} \times 100$$

With :

IQs_n = Commercial property supply index in period n

IWs_n = Commercial property supply index per region in period n

W_{wn} = Weight value of stock per region in period n

ISs_n = Commercial property supply index per segment in period n

W_{sn} = Weight value of stock per segment in period n

$IKS_{n(F)}$= Commercial property supply index per category Fisher method

$IKS_{n(L)}$= Commercial property supply index per category Laspeyres method

$IKS_{n(P)}$= Commercial property supply index per category Paasche method

W_{kn} = Weight value of stock per segment in period n

Commercial Property Demand Index is a composite demand index formed based on the information of units occupied or sold using Fisher Method. At a higher level of stratification, demand index formed as the composite index derived from the calculation of weighted average of index value from the lower level of stratification with number of value of stock as the weight. Moving weight has been used with the following formula:

$$IQd_n = \frac{\sum(IWd_n \times W_{wn})}{\sum W_{wn}}$$

Whereas :

$$IWd_n = \frac{\sum(ISs_n \times W_{sn})}{\sum W_{sn}}; \ ISd_n = \frac{\sum(IKd_{n(F)} \times W_{kn})}{\sum W_{kn}} ; \ IKd_{n(F)} = \sqrt{IKd_{n(L)} \times IKd_{n(P)}} ;$$

$$IKd_{n(L)} = \sum \frac{p_0 \times Qd_n}{p_0 \times Qd_0} \times 100; \ \ IKd_{n(P)} = \sum \frac{p_n \times Qd_n}{p_n \times Qd_0} \times 100;$$

$$Qd_n = q_n \times r_n; Qd_0 = q_0 \times r_0$$

With :

IQd_n = Commercial property demand index in period n

IWd_n = Commercial property demand index per region in period n

W_{wn} = Weight value of stock per region in period n

ISd_n = Commercial property demand index per segment in period n

W_{sn} = Weight value of stock per segment in period n

$IKd_{n(F)}$ = Commercial property demand index per category Fisher method

$IKd_{n(L)}$ = Commercial property demand index per category Laspeyres method

$IKd_{n(P)}$ = Commercial property demand index per category Paasche method

W_{kn} = Weight value of stock per segment in period n

Qd_n = Property stock sold / leased in period n

Qd_o = property stock sold / leased in base year period

q_n = total property stock in period n

r_n = sales/occupancy rate period n

q_o = total property stock in base year period

r_o = sales/occupancy rate in base year period

DATA INTEGRITY

Should there be any method changes, new data and methods will be disseminated along with new data publication.
PUBLIC ACCESS TO DATA
Data are disseminated on: • Bank Indonesia Website (http://www.bi.go.id/)