

Article 32

The equation of discounted cash flow method reads as follows:

$$P = \sum_{k=1}^{n'} \frac{CF_k}{(1+Y)^k} + \frac{P_n}{(1+Y)^n}$$

where

P: income value

CF_k: net operating income of individual period under analysis

Y: discounted rate

n': periods of discounted cash flow analysis

k: respective period

P_n: property value at the end of analysis periods

Article 40-1

The recapture allowance of a building can be estimated using the following formulas

1. Equal depreciation type:

$$C \times (1-s) \times \frac{1}{N}$$

2. Sinking fund type:

$$C \times (1-s) \times \frac{i}{(1+i)^N - 1}$$

where

C: building total costs

s: ratio of salvage value

i: interest rate for own capital

N: building economic life

Estimation of the above building total costs, ratio of salvage value, interest rate for own capital, and building economic life shall follow the relevant rules specified in the cost approach.

Article 41

The future recapture rate as of the date of value opinion for a building can be inferred through the following formula:

1. Equal depreciation type:

$$d = \frac{(1-s)/N}{1 - (1-s)n/N}$$

2. Sinking fund type:

$$d = \frac{i}{(1+i)^n - 1}$$

where

d: The future recapture rate as of the date of value opinion for a building

$(1-s)\frac{1}{N}$: depreciation rate

n: the building age

n': the number of future years that the building remains revenue-generating

i: interest rate for own capital

The above depreciation rate is estimated according to relevant rules specified in cost approach.

Article 43

A capitalization rate or discount rate should be determined from a comprehensive review of the following methods:

1. Risk premium method: The fixed deposit interest rate, government bonds rate, real estate

investment risk, money supply-demand variation, the trend of real estate value and etc. should be taken into consideration to decide the likely rate of return on the most common investment as a basis in order to derive the capitalization rate or discount rate. The differences of individual characteristics between the above most common investment and the subject property should be compared in terms of their liquidity, risk, appreciation, and management.

2. Market extraction method: Selecting several comparable properties, which are identical with or similar to the subject property, followed by dividing their respective net operating income price and comparing the resulting to determine quotients the capitalization rate.

3. Weighted average capital cost method: The formula based upon weighted average capital cost is as follows:

Capitalization rate or discount rate

$$= \sum_{i=1}^n w_i k_i$$

where

W_i : the ratio of the i th capital source to the total capital cost

K_i : interest rate or required rate of return for the i th capital source

4. Debt coverage ratio method: The formula based upon debt coverage ratio is as follows:

Capitalization rate or discount rate = debt coverage ratio x mortgage constant x the ratio of mortgaged capital to property price

5. Effective gross income multiplier method: The formula based upon the due net operating income rate that is derived as the ratio of annual net operating income to annual effective total income for similar properties in the market, and based upon effective gross income multiplier that is derived as reasonable price divided by annual effective gross income is as follows:

Capitalization rate or discount rate = net operating income rate / effective gross income multiplier

Relevant details are required to be stated in the appraisal report shall a need arise to employ other methods than those specified in this Article to determine capitalization rate or discount rate.

Article 47

The income value over a certain period of time is estimated according to the following calculations:

$$P = a \times \frac{1 - \frac{1}{(1+r)^{n'}}}{r}$$

where

P: income value

a: average annual net operating income prior to consideration of recapture

r: capitalization rate

n' : the period of years that the property is able to generate income

Average annual net operating income prior to consideration of recapture could be derived by applying the above formula if the income value is known.

If a period-end value is present, when the period that generates income comes to an end, the discounted present period-end value can be added to the income value. In addition, costs relevant to the disposal of this property at the end of the period can be subtracted from the period-end value.