Income Approach to Value
Part A

2020 Level I Tutorials

Income Approach

- The income approach is based on the principal that the value of an investment property reflects the quality and quantity of the income it is expected to generate over its life.

Income Approach

- Estimating the value of an income-producing property is done by capitalization.
- In simple terms, capitalization is the division of a present income by an appropriate rate of return to estimate the value of the income stream.

Income Approach

- The model used to estimate the value today of income expected in the future is known as the IRV formula.

- Value = Income/Rate
- V=I/R

Income Approach

- The income approach is a means of converting future benefits to present value.
- Essential to the approach is the idea that income to be received in the future is less valuable than income received today.

Income Approach

- Let’s look at several principles that are related to this idea.

- <u>Supply and Demand</u> – supply is the quantity of goods available at a given price schedule; demand the quantity of goods desired at that price schedule.

Income Approach

- Supply and demand interact to establish prices in the marketplace.
- In general, markets that are more competitive generate sales prices that reflect true market value.
- Less competitive markets may produce prices that reflect investment value or value in use.

Income Approach

- Anticipation – the idea that present value is determined by future benefits.
- Because a dollar to be received in the future has less value than a dollar held now, the value of future dollars anticipated from the ownership of real estate should be adjusted to present value according to the time they are expected to be received.

Income Approach

- Substitution – A property's maximum value is set by the lowest cost or price at which another property of equivalent utility can be acquired.
- The price of substitutes also determines demand.

Income Approach

- Competition – The attempt by two or more buyers or sellers to buy or sell similar commodities influences the rate of return on invested capital.
- The rate of return, reciprocally, influences both supply and demand in a particular market.

Income Approach

- Capitalization is the conversion of a single income stream or a series of income streams into a lump-sum value.
- A capitalization rate converts net operating income into an estimate of value.
- The capitalization rate is made up of several components – a discount rate, a recapture rate and an effective tax rate.

Income Approach

- The <u>Discount Rate</u> = required rate of return on investment.
  - The discount rate is made up of an interest rate and a yield rate and reflects the compensation necessary to attract investors to give up liquidity, defer consumption, and assume the risks of investing. It is the required return on total property investment to meet investment requirements. In short, this is what an investor will expect to receive back from the amount he/she put up for the investment. This will be in the form of periodic income such as rent, dividends etc. and/or possible capital gains at the end of the investment period.
  - Interest rate = required rate of return on borrowed funds
  - Yield = required rate of return on equity.

Income Approach

- Recapture rate = rate of return of investment
- It is the annual dollar requirement for returning to the investor a sum equal to the property value (improvements only) at the end of a given period of time.
- Provides for the recovery of capital on an annual basis and applies only to that part of the investment that will waste away during the investment period. You can think of this as depreciation.

Income Approach

- Effective tax rate is the property tax rate expressed as a percentage of the market value
- It is the proportion of tax dollars to market value, and the only way to compare the effect of property taxes across jurisdictions.

Income Approach

- For example, a property with a market value of $1,000,000 and a total property tax of $27,000 has an effective tax rate of 0.027 or 2.7 percent.
  - ($27,000 / $1,000,000 = 0.027)

Income Approach

- Let’s take a look now at how buyers see the risks and benefits of real estate investment.
- Why do investors choose income-producing real estate from a wide array of investment opportunities? Because they plan to receive a larger sum in the future than the amount invested now.

Income Approach

- Investors also try to choose the highest yield with the lowest risk.

- In determining where to invest dollars, the investor analyzes the opportunities available and asks, “Should I make this investment?”

Income Approach

- To answer that question, the investor asks more questions:
  - How much will it cost?
  - How much will I get back?
  - When will I get it back?
  - What are the risks?
  - What is the return on investments of similar risk?

Income Approach

- Overall objectives that an investor wants:
  - A return **of** the investment = recapture

  - A return **on** the investment = discount
    - Periodic Income (dividends, interest, rent)
    - Growth income (capital gain upon the sale of an investment)
  - A combination of both periodic and growth income

Income Approach

- The income approach looks at factors that influence the behavior of investors
  - Safety/Risk
  - Liquidity
  - Size of the investment
  - Use as collateral
  - Leverage
  - Holding period
  - Amount of management required
  - Potential for appreciation
  - Income tax advantages

Income Approach

- Safety/Risk
  - Risk is relative and no investment is risk free.
  - The more safe an investment is, the less return (discount) an investor expects
  - Conversely, the more risk involved in an investment, the higher the return (discount) an investor expects.

Income Approach

- Liquidity
  - Refers to the ease of converting the investment into cash
  - Highly liquid investments convert into cash easily, and, therefore, the investors expect a lower return (discount) than he/she would for an investment that takes longer, or is harder, to convert to cash

Income Approach

- Size of investment
  - Some investments require a large sum of money to get into; others do not.
  - Usually, the greater the amount of cash required to be invested, the greater the return (discount) expected by the investor.

Income Approach

- Use as collateral
  - Collateral refers to pledging the investment as security for a loan; in the case of real estate investments, this is done through the use of mortgages
  - This is one way to make the investment more liquid and to minimize the cash required to purchase the investment.

Income Approach

- Leverage
  - Refers to the borrowing of funds to purchase an investment in the hope of earning a greater return on the investment than the cost of borrowing the funds.
  - The lender takes on part of the risk in return for the interest they charge the borrower.

Income Approach

- Holding Period
  - The holding period is the amount of time the investor must keep the investment in order to attain his/her investment objective.
  - Usually, the longer the holding period, the higher the return (discount) the investor expects.

Income Approach

- Amount of management required
  - Investments require time on the part of the investor, or a professional manager they hire, to keep track of the investment.
  - The more time required to manage the investment, the higher the return (discount) expected by the investor.

Income Approach

- <u>Potential for appreciation</u>
  - Some investments have the potential to increase in value (capital gain) over the holding period, others do not.
  - An investor who expects the property to appreciate over time may accept a lower return (discount) during the holding period because they are willing to wait until the end of the holding period and get it in a lump sum (capital gain).

Income Approach

- Income tax advantages
  - Some investments offer income tax advantages, others do not.
  - May be in the form of a lower effective rate of taxation on capital gains, depreciation allowance to offset income, and/or the investor is allowed to subtract interest on a loan taken out to purchase the investment.

Income Approach

- It is important to understand the terminology used in the Income Approach.

- On the following slides are common terms and their definitions.

Income Approach

- Amortize – process of repaying a loan by means of a series of scheduled payments; typically the scheduled payments include interest charges and principal repayment.
- Annuity – right to receive money in (usually) fixed amounts and at regular intervals for a definite or indefinite period of time.

Income Approach

- Capital Gain – profit realized upon sale of a property if the sale price exceeds the cost of acquisition and the cost of any improvements the seller has added.

Income Approach

- Capitalization – mathematical process used to convert income into value.
  - Direct Capitalization – a method which uses one year's income
  - Yield Capitalization – a method which uses a series of future incomes

Income Approach

- Cash Flow – amount of income remaining after subtracting debt service and/or income taxes from net operating income
  - Before-tax Cash Flow – Amount of income remaining after subtracting debt service from net operating income
  - After-tax Cash Flow – Amount of income remaining after subtracting income taxes from before-tax cash flow.

Income Approach

- <u>Contract Rent</u> – actual amount of rent that a tenant pays a landlord as specified in the lease.
- <u>Debt Service</u> – payments of principal and interest on a mortgage.
- <u>Discounting</u> – process of estimating the present worth (value) of an anticipated future income stream.

Income Approach

- Discount Rate – rate of return on an investment; expressed as a percentage
- Effective Gross Income (EGI) – potential gross income, less vacancy and collection loss, plus miscellaneous income
- Effective Tax Rate – annual property tax burden expressed as a percent of the property's market value

Income Approach

- Equity – net value of property after liens, mortgages, and other charges are deducted; amount of capital (dollars) the titleholder has invested in a property. At the date of purchase, equity is equal to the cash down payment required.
- Equity Yield Rate – required rate of return on equity capital

Income Approach

- Expense – a cost which is chargeable against income (rent)
- Expense Ratio – ratio of expenses to effective gross income: expenses divided by effective gross income
- Factor – reciprocal of a rate; one (1) divided by a rate

Income Approach

- <u>Fixed Expenses</u> – expenses that do not vary with occupancy and have to be paid whether the property is occupied or not (property taxes, mortgage payments, etc.)

Income Approach

- Gross Income Multiplier (GIM) – a simple capitalization technique that uses the relationship between a property's effective gross income and its market value. GIM is calculated by dividing a property's market value by its annual effective gross income.

Income Approach

- Gross Rent Multiplier – same as GIM except the GRM is calculated by dividing a property's market value by its monthly effective gross income.
- Gross Lease – a lease which calls for the landlord to pay all the expenses of operating the property.

Income Approach

- <u>Ground Rent</u> – amount of money paid by a tenant to a landlord to use vacant land.
- <u>Holding Period</u> – length of time an investor must keep an investment in order to achieve his/her investment objectives.

Income Approach

- <u>Improper Expenses</u> – expenses incurred in the ownership of income-producing property that are <u>not used</u> to calculate value in the income approach
- <u>Income</u> – payments to its owner (landlord) that a property is able to produce from charging rent to a tenant.

Income Approach

- <u>Income Stream</u> – series of payments received from an investment during the holding period of the investment.
- <u>Interest (Interest Rate</u>) – cost of borrowing money; percentage charged to borrow money.
- <u>Investment Value</u> – value of an investment property to a particular investor; may not equal market value.

Income Approach

- IRV – notation for the basic capitalization formula used in the income approach where: Income divided by Rate equals Value

The formula for the Income Approach to Value is:

$V = I \div R$

Income Approach

- Lease – a written contract by which the landlord (lessor) transfers the rights to occupy and use property to a tenant (lessee) for a specified period of time in return for a specified payment (rent).
  - Gross Lease – a lease which calls for the landlord to pay all the expenses of operating the property.
  - Net Lease – a lease which calls for the tenant to pay all the expenses of operating the property.

Income Approach

- <u>Leased Fee Estate</u> – landlord's (lessor's) interest/rights in a property.
- <u>Leasehold Estate</u> – tenant's (lessee's) interest/rights in a property.
- <u>Lessee (Tenant)</u> – person receiving a possessory interest in property under the terms of a lease.

Income Approach

- Lessor (Landlord) – person who holds title to a property but has granted the use of the property to another (tenant/lessee)
- Leverage – process of borrowing funds to purchase an investment in the hope of earning a greater return on the investment than the cost of borrowing the funds.

Income Approach

- <u>Liquidity</u> – ease by which an investment can be converted into cash.
- <u>Loan-to-Value Ratio</u> – percentage of a property's market value a lender (mortgagee) will loan a borrower (mortgagor).

Income Approach

- <u>Market Rent</u> – the rent prevailing in the market on the date of appraisal; the rent a prospective tenant would pay to occupy the property if it were vacant.
- <u>Mortgage</u> – contract in which a borrower (mortgagor) pledges title to a property as security for a loan from a lender (mortgagee)