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Business Valuations

What are you valuing?

Introduction

- Valuation is the process to determine the current worth of a company
- Estimates the price that prospective informed buyers and sellers would negotiate at arm's length for an entire business or a partial equity interest.
- **Examples of types of events that could lead to a valuation:**
    - Shareholders of a company decide to list the company on the stock exchange as the company now meets the requirements to list;
    - Selling the company;
    - Selling a division of the company off;
    - Applying for a loan;
    - Seeking investors for the company;
    - Breaking up a partnership;
    - Filing for bankruptcy.

What do we value?

- Components of the Balance Sheet
  - Assets
  - Debt (Bonds)
  - Equity
- Projects
  - Capital Budgeting
- Businesses
  - As a minority shareholder
  - As a majority shareholder

Basic ingredients needed

- Cash flows or future benefits
- Discount rate or rate of return

Risk – Return Relationship

- Impact of return on value
- Impact of risk on value
- Valuation by comparing rates of return

Required Rate of Return

- Valuation = PV of future CF’s
- Need rate to discount
- Cost of debt easy
- Cost of Equity – Harder

Assets

- What is our intention towards the asset?
  - To sell – look for a fair market price
  - To use – PV future benefits (cash flows)

Debt

- PV Cash Flows
  - Just regular payments (no final)
  - Annuity with final payment
  - Perpetuity

Bonds calculations

- General Valuation model
  - $V = \sum \frac{CF}{(1+k)^t}$
- Yield to Maturity = IRR
  - Interpolate
    - Vx = 12%
    - Vw = 15%
    - Vy = YTM
    - $\frac{12 - 15}{x - w} = \frac{12 - YTM}{x - y}$
    - Ie Where PV inflows = PV outflows

- YTM can also be expressed as follows:
- YTM = Current + Capital
  - Current Yield
    - $= \dfrac{\text{Annual Coupon Rate}}{P_0}$
  - Capital Gain
    - $\dfrac{V1 - Vo}{Vo}$
- Discount Value – inc over time to par
- Premium Value – dec. over time to par

- Interest rate risk
  - Long term bond has a greater price risk as Bond’s value diminishes over time.
- Re investment Risk
  - Short term greater because reinvest capital each year as well, unlike long term, just reinvesting interest
  - Interest rates decrease

- Beware of semi annual payments
- Perpetual Bond
    - Payment / rate
    - Highest interest rate risk

Debentures

- In Perpetuity
- Redeemable Debentures
- Redemption at a Premium or Discount

Preference Shares

- Cumulative Pref Shares
  - Perpetuity
- Cumulative Pref Shares (dividends in arrears)
- Non Cumulative Pref Shares
- Redeemable Pref Shares
- Participating Pref Shares
- Convertible Pref Shares (Read)

Equity

Equity

- Gordon's Constant Dividend Growth Model
  - Similar to NPV approach
  - Divs = portion of earnings, remainder used for growth
  - Growth = inc. earnings therefore inc. dividends
  - Assumes constant growth rate
  - Derived from the PV formula

- **$Vo = \frac{D_o(1+g)}{k - g}$**
- D = next periods dividend
- K = required rate of return (RRR)
- g = growth rate of future dividends
- K per CAPM vs k per GCG (notes)
- Dividend Yield + Cap Gain = Total Yield
- **Limitations**
  - return has to be higher than g
  - Constant growth (measuring g?)
  - G > k = negative valuation

- Non constant growth:
- Adapts Constant growth model
- 3 Steps:
  - Calc PV of divs. Until growth rate changes
  - Value shares using normal formula at date that g changes
  - Discount above value to PV

CAPM

- $K_e = K_{rf} + \beta(K_m - K_{rf})$

- Where:
  - K_e = cost of equity
  - K_{rf} = risk free rate of return
  - K_m = market rate of return
  - β = Beta for company

Valuation of a Business

Valuation of an Business

- Valuation is the process of arriving at a reasoned opinion about the value of an asset. (subjective)
- Types of Valuations
  - Dividend based valuation
  - Free cash flows – Equity
  - Free cash flows – Debt and equity
  - NPV technique
  - Excess of asset and liability valuation (intrinsic value)
  - Capitalisation of earnings – single source of income
  - Capitalisation of earnings – diversified sources of income

Discounted Cash Flow Models (DCF)

- Not going concern – liquidation values
- Has a terminal life – Free cash flows
- Information available about projects cash flows – FCF

- **Free cash flow model**
- ie: The max. div that could be paid out without affecting operations and that is not required due to commitments
- Use CFS format

- Operating profit before tax
  Adjust: Non Cash items
  Less: Tax paid
  Adjust: WC changes
  GIVES Cash available from operations
  Add: Proceeds from Disposals
  Less: Investment in PPE
  FREE CASH FLOWS

- **If financed all by EQUITY**
  - Use shareholders RRR
  - Gordon growth model adjusted if growth is not constant
- **If financed by EQUITY and DEBT**
  - Calculate FCF’s as if only Equity
  - Add after tax interest expense back
  - Equals Funds available to providers of Debt and Equity
  - Discount using WACC
  - Entity Value – Debt = Equity (OSH’s)

Intrinsic Value

- **Entity has**
  - Unilateral control
  - Does not have similar assets
  - Non income producing assets
- **Method:**
  - Value assets on a going concern basis
  - Value Pref Shares and Liabilities
    - Ignore tax (look at after tax interest and Kd)
  - Assets – Liabilities = OE (value of OS’s)

- Limitations
  - Very seldom is the value of an entity equal to the sum of it's components
  - Marketability of shares < Marketability of underlying assets
  - Umbrella Co. has different financial risk and less specific risk due to diversification
  - When valuing assets – ignoring corelation between assets.

Capitalisation of Earnings Model

- **Determine Expected Future Maintainable Earnings**
  - Adjust past income and expenses to current and realistic values
  - Adjust for abnormal items
  - Adjust for expenditure and income which is
    - No longer occurring
    - Will start occurring
  - Adjust for changes in accounting policies
  - Adjust for expenses and income not related to operations
  - Transfer provisions to correct year

- **Determine Expected Future Maintainable Earnings (cont)**
  - Assess Trends
    - No trend: apply weighting to more recent years
    - Trend increases : use last year
    - Trend decreases : use last year
    - Year abnormal : exclude
  - Note past earnings are used as a guide, therefore future earnings should be adjusted for inflation

- **Determine Fair Earnings Yield**
  - Ie EPS / Share Price or inverse of PE ratio

- **Increase Fair Earnings Yield:**
  - Limited transferability
  - Limited marketability
  - Loss of key management
  - Small size
  - Poor liquidity
  - High gearing
  - Low growth rate
- **Decrease Fair Earnings yield:**
  - Higher growth
  - Good liquidity ratios
  - Better Quality management

Framework in setting up your valuation

8 Part Framework to Presenting a Valuation Solution

- Determine the objective to be achieved
- Identify the rights and obligations attaching to ownership (control and significant influence)
- Choose an appropriate valuation method – justify
- Identify future benefits

- Determine the risk adjusted discount rate
- Arrive at the valuation by discounting the future benefits at the risk adjusted discount rate
- Reasonableness check – use alternative method
- Conclude

QUESTIONS

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THANK YOU FOR YOUR PARTICIPATION

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