Financial Formulas

FINANCIAL STATEMENTS AND CASH FLOW

* Assets≡Liabilities + Stockholders’ Equity
* Net working capital=Current Assets – Current Liabilities
* Revenue−Expenses≡Income

FINANCIAL STATEMENT ANALYSIS

* Current ratio = Current assets

Current liabilities

* Quick ratio = Cash +Marketable securities +Accounts receivable

Current liabilities

* Cash ratio = Cash and cash equivalents

Current liabilities

* Operating cash flow ratio = Cash flow from operations

current liabilities

* Total Debt Ratio = Total assets –Total stockholders’ equity

Total assets

* Equity Multiplier = Total assets

Total stockholders’ equity

* Interest coverage ratio= EBIT

Interest expense

* Inventory Turnover = Cost of Goods Sold / Inventory
* Days’ sales in inventory (DSI) = 365 days

Inventory turnover

* Total asset turnover = Total revenues

Total assets

* Gross profit margin = Gross Profit

Total Revenues

* Net profit margin = Net income

Total revenue

* Return on Assets (ROA) = Net income

Total assets

* Return on Equity (ROE) = Net income

Total equity

* ROE = Net Profit Margin × Total Asset Turnover × Equity Multiplier
* Price to earnings ratio (P/E ratio) = Current share price/Earnings per share
* Market capitalization (market cap) = Current price per share × Shares outstanding

TIME VALUE OF MONEY

* Future value: 𝐹𝑉 = 𝑃𝑉 × (1 + 𝑟)𝑇
* Present value: 𝑃𝑉 = 𝐹𝑉

𝑇

(1+𝑟)

* Net present value: 𝑁𝑃𝑉 = 𝐶

+ ∑𝑇

𝐶𝑡

0 𝑡=1 (1+𝑟)𝑡

* The internal rate of return (IRR) has to satisfy the following equation:

0 = 𝐶0

+ 𝐶1

1 + 𝐼𝑅𝑅

+ 𝐶2

(1 + 𝐼𝑅𝑅)2

+ 𝐶3

(1 + 𝐼𝑅𝑅)3

+ ⋯ + 𝐶𝑇

(1 + 𝐼𝑅𝑅)𝑇

* Effective annual rate:

𝐸𝐴𝑅 = (1 +

𝑟 )𝑚 − 1

𝑚

* Future value based on continuous compounding: 𝐹𝑉 = 𝑃𝑉 × 𝑒𝑟𝑇
* Perpetuity: 𝑃𝑉 = 𝐶

𝑟

* Growing perpetuity: 𝑃𝑉 = 𝐶

𝑟−𝑔

* Annuity: 𝐶 1 ]

𝑃𝑉 = 𝑟 [1 − (1+𝑟)𝑡

* Growing annuity: 𝑃𝑉 = 𝐶

𝑟−𝑔

[1 − (1+𝑔)𝑡]

1+𝑟