

DEFINITIONS FOR FINANCIAL ANALYSIS

ON BALANCE SHEET

Net Operating Assets = Net PP&E + Net Intangibles

Funded by Equity of LT Debt

Invested Capital = Shareholder's Equity + Capital Leases + Long-term Debt + Short-term Debt [e.g. Notes Payable]

Investment = Short Term Debt + Total Non-Current Assets

Capital Employed = Net Operating Assets + Net Working Capital

Working Capital = Total Current Assets - Total Current Liabilities

Net Working Capital = (Total Current Assets - Cash - ST Investments) - (Total Current Liabilities - Short Term Debt)

Liquidity

Cash Ratio = (Cash + Short Term Investments) / Total Current Liabilities [aka as Liquidity 1. degree]

Current Ratio = Total Current Assets / Total Current Liabilities

Quick Ratio = (Total Current Assets - Inventory) / Total Current Liabilities

Defensive Interval = (Total Current Assets - Inventory) / Capital Expenditure

Equity Utilization

Gearing = (Financial Liabilities - Cash - Short Term Investments) / Shareholder's Equity

Equity-Asset-Ratio = Shareholder's Equity / Total Assets

Debt-Asset-Ratio = Total Liabilities / Total Assets

Long-term Debt Ratio = Long-term Debt / (Long-term Debt + Shareholder's Equity)

Debt-Equity-Ratio = Total Liabilities / Shareholder's Equity

Leverage Ratio = Total Assets / Shareholder's Equity

Goodwill Ratio = Goodwill / Shareholder's Equity

Intensity

Current-Total-Asset-Ratio = Current Assets / Total Assets

Non-Current-Total-Asset-Ratio = Non-Current Assets / Total Assets

NC Asset cover degree I = Shareholder's Equity / Non-current Assets

NC Asset cover degree II = (Shareholder's Equity + Long-term Debt) / Non-current Assets

Investment-Ratio = Invested Capital / Total Assets

Capital Employment-Ratio = Capital Employed / Total Assets

Wear and Tear

Degree of Tangible Assets Depreciation = (Accumulated Depreciation of PPE + Accumulated Depreciation of Lease Object) / (PPE + Lease Object)

Degree of Intangible Assets Depreciation = Accumulated Amortization / Intangibles

ON INCOME STATEMENT

Absolute Performance of Operating Activities

EBITDA (Earnings Before Income, Tax, Depreciations & Amortizations)
= Earnings Before Interest & Tax (EBIT) + Depreciations & Amortizations

NOPLAT (Net Operating Profit Less Adjusted Tax) = Operating Income x (100% - Tax Rate%)

ON INCOME STATEMENT & BALANCE SHEET

Sustainability

Investment Rate = CapEx / NOPLAT

Profitability

Tax Rate = EBT > 0 ? Taxes / EBT : 0

Return On \emptyset Equity = Net Income / [(Shareholder's Equity_last + Shareholder's Equity_current) / 2]

Return On \emptyset Assets = (Net Income + Interest Expenses) / [(Total Assets_last + Total Assets_current) / 2]

Return On \emptyset Investment = (Net Income + Interest Expenses) / [(Total Assets_last + Total Assets_current) / 2]

Return On \emptyset Net Operating Assets = NOPLAT / [(Net Operating Assets_last + Net Operating_current) / 2]

Return On \emptyset Invested Capital = (Net Income + Interest Expenses) / [(Invested Capital_last + Invested Capital_current) / 2]

Return On \emptyset Capital Employed = NOPLAT / [(Capital Employed_last + Capital Employed_current) / 2]

Times Interest Earned (Interest Coverage) = Operating Income / Net Interest Expenses

Equity Burn Rate = Net Income < 0 ? Shareholder's Equity / -Net Income : "-"

Efficiency

\emptyset Working Capital Turnover = Revenue / [(Working Capital_last + Working Capital_current) / 2]

\emptyset Working Capital Intensity = 1 / \emptyset Working Capital Turnover

\emptyset Total Asset Turnover = Revenue / [(Total Assets_last + Total Assets_current) / 2]

\emptyset Total Asset Intensity = 1 / \emptyset Total Asset Turnover

Fixed \emptyset Asset Turnover = Revenue / [(Fixed Assets_last + Fixed Assets_current) / 2]

Receivables Turnover = Revenue / [(Accounts Receivables_last + Accounts Receivables_current) / 2]

Days Sales Outstanding = [(Accounts Receivable_last + Accounts Receivable_current) / 2] / (Revenue / 365)

Inventory Turnover = Costs of Goods Sold (COGS) / [(Inventory_last + Inventory_current) / 2]

Days Inventory = [(Inventory_last + Inventory_current) / 2] / (COGS / 365)

Payables Period = [(Accounts Payable_last + Accounts Payable_current) / 2] / (COGS / 365)

Cash Conversion Cycle = Days Sales Outstanding + Days Inventory - Payables Period

DuPont RoE = ... x ... x ...

Net Income / Sales = Net Income / Sales

Sales / \emptyset Total Assets = Sales / \emptyset Total Assets

\emptyset Total Assets / \emptyset Equity = \emptyset Total Assets / \emptyset Equity

Growth

EBITDA YoY = (EBITDA_current - EBITDA_last) / EBITDA_last

EBIT YoY = (EBIT_current - EBIT_last) / EBIT_last

Net Income YoY = (Net Income_current - Net Income_last) / Net Income_last

EBITDA YoY = (EBITDA_current - EBITDA_last) / EBITDA_last

CASH FLOW & BALANCE SHEET

Cash from Sales € = Revenue + (Account Receivables_current - Accounts Receivables_last)

CapEx € = (PPE_current - PPE_last) + (Intangible Assets_current - Intangible Assets_last)

Cash Flow Sufficiency

Fixed Charges Coverage = Operating Income / Fixed Charges

Cash Flow Ratio = Cash from Operations / Current Liabilities

Cash Flow Operations / Capital Expenditure = Cash from Operations / CapEx

Free Cash Flow = Cash from Operations - Capital Expenditure

Payout Ratio = Dividends Paid / Net Income

Free Cash Flow Generation

Free Cash Flow / Sales = Cash from Operations / EBITDA

Free Cash Flow / Net Income = Free Cash Flow / Net Income

Cash Flow Operations / OI = Cash from Operations / Operating Income

VALUE & VALUATION

Economic Value Added = NOPLAT - WACC * Capital Employed

Economic Value Added % = ROCE - WACC

Earnings per Share = Earnings / Number of Shares

Market Capitalization = Floating Shares × Share Prices

Price/Earnings = Market Capitalization / Net Income = Price per Share / Earnings per Share

Price/Book = Market Capitalization / Book Value of Shareholder's Equity

Price/Sales = Market Capitalization / EBITDA

Price/Cash Flow = Market Capitalization / Cash Flow from Operation

Dividend Yield = Dividends Paid / Market Capitalization

Enterprise Value = Market Capitalization + Total Liabilities - Cash - Short Term Investments - Non Operating Assets (e.g. Long Term Investments)

EV / EBITDA = Enterprise Value / EBITDA

EV / Ebit = Enterprise Value / EBIT

EV / Sales = Enterprise Value / Revenue

TERMINOLOGY

Asset Swap = Value in one asset position is exchanged with value in a different asset position

Balance Sheet Extension = Assets and liabilities simultaneously increase by the same amount.
This is neutral to the Income Statement

Balance Sheet Contraction = Assets and liabilities simultaneously decrease by the same amount.
This is neutral to the Income Statement.

EXPLANATIONS

WACC = Weighted Average Cost of Capital (after Tax)

SG&A = Sales, General & Administrative expense, e.g. payroll, sales and marketing, rent, office supplies, legal costs, insurance costs, utilities

COGS = Costs Of Goods Sold, e.g. labor directly tied to production, direct materials needed for the production of goods and services, utilities of the facilities tied to production

Expenses are _Costs_ that are matched with _Revenues_ on the income statement. Thus, all _Expenses_ are _Costs_ , but not vice versa.

Thus, _Costs_ can either be an _Expense_ or an _Investment_ . In the latter case, they are turned into an _Asset_ and end up on the B/S. Depreciation of the _Asset_ will then be an _Expense_ .

Expenses associated with the main activity of the business are referred to as operating expenses. Expenses associated with a peripheral activity are nonoperating or other expenses.

DOUBLE ENTRY BOOKKEEPING

T-ACCOUNT				
DATE	DESCRIPTION	DEBIT (left side)	CREDIT (right side)	BALANCE
		Assets ↑	Assets ↓	
		Liabilities ↓	Liabilities ↑	
		Equity ↓	Equity ↑	
		Expenses ↑	Revenues ↑	
		Dividends ↑	Owners contrib. ↑	

Every position on the B/S, Income Statement, Cash-Flow Statement or Shareholder's Equity has its own T-Account.

Bookkeeping: from Debit (left side) to Credit (right side)

debited = increased what I own, gained, expended or lost OR decreased what I owe

credited = decreased what I own, gained, expended or lost OR increased what I owe