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 Investments + 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)
= Inventory + Net Accounts Receivable - Accounts Payable - Accrued Expenses

Liquidity

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

Current Ratio = Total Current Assets / Total Current Liabilities → [aka Liquidity 2. degree]

Quick Ratio = (Cash + Short Term Investments + Accounts Receivable) / Total Current Liabilities
= (Total Current Assets - Inventory) / Total Current Liabilities → [aka Liquidity 3. degree]

Defensive Interval = (Cash + Short Term Investments + Accounts Receivable) / Capital Expenditure = (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 = Total Assets / Shareholder's Equity

Leverage Ratio = Shareholder's Equity / Total Assets

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 Amortization = Accumulated Amorization / 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 (NOTATION) true or false ? this if true : that if false

Return On Ø Equity = Net Income / [(Shareholder's Equity_previous + Shareholder's Equity_current) / 2]

Return On Ø Assets = (Net Income + Interest Expenses) / [(Total Assets_previous + Total Assets_current) / 2]

Return On Ø Investment = (Net Income + Interest Expenses) / [(Investment_previous + Investment_current) / 2]

Return On Ø Net Operating Assets = NOPLAT / [(Net Operating Assets_previous + Net Operating_current) / 2]

Return On Ø Invested Capital = (Net Income + Interest Expenses) / [(Invested Capital_previous + Invested Capital_current) / 2]

Return On Ø Capital Employed = NOPLAT / [(Capital Employed_previous + Capital Employed_current) / 2]

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

Equity Burn Rate_t = Net Income_t < 0 ? Shareholder's Equity_(t-1) / |Net Income_t | : "-" (NOTATION) true or false ? this if true : that if false

Covenants

Debt-to-EBITDA = Total Liabilities / EBITDA

NetDebt-to-EBITDA = (Total Liabilities - Cash - Short Term Investments) / EBITDA

EBITDA-to-DebtPayments = EBITDA / (Net Interest Expenses + Debt Repayments)

EBITDA-to-Interest = EBITDA / Net Interest Expenses

Efficiency

Ø Working Capital Turnover = Revenue / [(Working Capital_previous + Working Capital_current) / 2]

Ø Working Capital Intensity = 1 / Ø Working Capital Turnover

Ø Total Asset Turnover = Revenue / [(Total Assets_previous + Total Assets_current) / 2]

Ø Total Asset Intensity = 1 / Ø Total Asset Turnover

Ø Net Operating Asset Turnover = Revenue / [(Net Operating Assets_previous + Net Operating Assets_current) / 2]

Ø Fixed Asset Turnover = Revenue / [(Fixed Assets_previous + Fixed Assets_current) / 2]

Receivables Turnover = Revenue / [(Accounts Receivable_previous + Accounts Receivable_current) / 2]

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

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

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

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

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

DuPont RoE = … x … x … x … x …

RoE = Net Income / Ø Equity = Net Income / EBIT × EBIT / Revenue × Revenue / Ø Net Operating Assets
× Ø Net Operating Assets / Ø Total Assets × Ø Total Assets / Ø Equity

Growth

EBITDA YoY = (EBITDA_current - EBITDA_previous) / EBITDA_previous

EBIT YoY = (EBIT_current - EBIT_previous) / EBIT_previous

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

EBITDA YoY = (EBITDA_current - EBITDA_previous) / EBITDA_previous

CASH FLOW & BALANCE SHEET

Cash from Sales € = Revenue + (Net Accounts Receivable_previous - Net Accounts Receivable_current)

CapEx € = (PPE_current - PPE_previous) + (Intangible Assets_current - Intangible Assets_previous)

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 = Free Cash Flow / Sales

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

Market Capitalization = Shares Outstanding × Share Prices

Equity Value = Shares Outstanding × Price per Share

Enterprise Value = Equity Value + Total Liabilities - Cash - Short Term Investments

Investment Yields

Earnings per Share = Net Income / Shares Outstanding

Price/Earnings = Equity Value / Net Income = Price per Share / Earnings per Share

Price/Book = Equity Value / Book Value of Shareholder's Eqity

Price/Sales = Equity Value / Revenue

Price/Cash Flow = Equity Value / Cash Flow from Operations

Dividend Yield = Dividends Paid / Equity Value

Multiples

EqV / EBITDA = Equity Value / EBITDA

EqV / Ebit = Equity Value / EBIT

EqV / Sales = Equity Value / Revenue

EV / EBITDA = Enterprise Value / EBITDA

EV / Ebit = Enterprise Value / EBIT

EV / Sales = Enterprise Value / Revenue

Shares

Shares Issued = All the shares of the company. They add to Common & Preferred Stock.

Shares Outstanding = Shares Issued - Shares bought back [i.e. Treasury Stock]

Shares Floating = Percentage of Shares Outstanding that are publicly traded on a stock exchange.

TERMINOLOGY

Asset Swap = Value in one asset position is exchanged with value in a different asset position. The B/S total stays the same.

Balance Sheet Expansion = 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.

Equity or Liability Swap = Value in one equity or liability position is exchanged with a value in a different equity or liability position. The B/S total stays the same.

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.

DOUPLE 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