

# FINANCIAL FORMULAS - QUICK REFERENCE GUIDE

## INFLATION & RETURNS

$$FV = PV \times (1 + \text{Inflation Rate})^n$$

$$\text{Real Return} = \text{Inv. Return} - \text{Inflation Rate}$$

## MUTUAL FUNDS & EQUITY

$$NAV = (\text{Total Assets} - \text{Liab.}) / \text{Units}$$

$$\text{Market Cap} = \text{Market Price} \times \text{Total Shares}$$

$$\text{Brokerage} \leq 2.5\% \text{ of Trade Value}$$

$$\text{Bid Ask Spread} = \text{Best Bid} - \text{Best Ask}$$

## YIELD MEASURES

$$\text{Curr. Yield} = (\text{Annual Coupon} / \text{Market Price}) \times 100$$

$$\text{Annual Coupon} = \text{Coupon Rate} \times \text{Face Value (FV=100 unless mentioned)}$$

$$\text{Div. Yield} = (\text{Dividend} / \text{Share Price}) \times 100$$

## INTEREST & COMPOUNDING

### Simple Interest (SI)

$$SI = P \times n \times r$$
$$A = P(1 + nr)$$

### Compound Amount (CA)

$$A = P(1 + i)^n$$

## BALANCE SHEET BASICS

$$\text{Net Block} = \text{Gross} - \text{Depreciation}$$

$$\text{Net Working Capital} = \text{Curr. Assets} - \text{Curr. Liab.}$$

## TIME VALUE OF MONEY

### Future Value (Single Flow)

Discrete:

$$FV = PV \times (1 + r)^t$$

Continuous:

$$FV = PV \times e^{rt}$$

( $e \approx 2.7183$ )

### Future Value of Annuity

$$FVA = CF \times (1+r)^{t-1} + CF \times (1+r)^{t-2} + \dots + CF \times (1+r)^1 + CF$$
$$= CF \left( \frac{(1+r)^t - 1}{r} \right)$$

### Present Value (Single Flow)

Discrete:

$$PV = FV / (1 + r)^t$$

Continuous:

$$PV = FV \times e^{-rt}$$

### Present Value of Annuity

Discrete:

$$PVA = FV \left[ \frac{(1+r)^t - 1}{r(1+r)^t} \right]$$

Continuous:

$$PVA = FV \times \left[ (1 - e^{-rt}) / r \right]$$

## LIQUIDITY RATIOS

$$\text{Current Ratio} = CA / CL$$

$$\text{Acid Test} = \text{Quick Assets} / CL$$

Quick Assets = CA - (Inv. + Prepaid)

## LEVERAGE RATIOS

$$\text{Debt / Equity Ratio} = \text{Total Debt} / \text{Total Equity}$$

$$\text{Debt / Asset Ratio} = \text{Total Debt} / \text{Total Assets}$$

$$\text{Interest Coverage Ratio} = \text{EBIT} / \text{Interest}$$

$$\text{Debt Service Coverage Ratio} = (\text{PAT} + \text{Dep.} + \text{Non-cash} + \text{Int.}) / (\text{Int.} + \text{Loan Repayment})$$

## TURNOVER RATIOS

$$\text{Inv. Turnover} = \text{COGS} / \text{Avg Inv.}$$

COGS = Sales - Profit

$$\text{Avg Inv} = (\text{Open} + \text{Close}) / 2$$

$$\text{Debtors T/O} = \text{Net Credit Sales} / \text{Avg Debtors}$$

$$\text{Average Collection Period} = \text{Avg Debtors} / \text{Daily Credit Sales}$$

or ACP = 365 / Debtors Turnover

$$\text{Fixed Asset T/O} = \text{Net Sales} / \text{Net FA}$$

$$\text{Total Asset T/O} = \text{Net Sales} / \text{Avg Total Assets}$$

## PROFITABILITY RATIOS

$$\text{Gross Profit Ratio} = (\text{GP} / \text{Sales}) \times 100$$

$$\text{Net Profit Ratio} = (\text{NP} / \text{Sales}) \times 100$$

$$\text{Return On Total Asset} = \text{NPAT} / (\text{Fixed Assets} + \text{CA})$$

$$\text{Return On Capital Employed} = \text{NPAT} / \text{Capital Employed}$$

Cap Emp = Total Fixed Asset + Curr. Assets - Curr. Liab.

$$\text{Return On Equity} = \text{NPAT} / \text{Shareholders' Equity}$$

$$\text{Earnings Per Share} = \text{Profit Avail. to Equity} / \text{Shares}$$

$$P/E = \text{Market Price} / \text{EPS}$$