



CASH FLOW STATEMENT

(for a financial year – formulated with the help of the opening and ending balance plus income statement)

EBITDA
+ Working capital beginning of financial y.
– Working capital end of financial year
– Interests
– Taxes
= **OPERATING CASH FLOW**

FIXED ASSETS BEGINNING OF F.Y.
– Fixed assets end of financial year
– Depreciations
= **CASH FLOW FOR INVESTMENTS**
(i.e. investments during the financial year)

SHAREHOLDER'S CAPITAL BEG. F.Y.
– Shareholder's capital end of financial y.
– Dividends paid out during financial year
+ Loans outstanding end of period
– Loans outstanding beginning of period
= **CASH FLOW FOR FINANCING**

OPERATING CASH FLOW
+ CASH FLOW FOR INVESTMENTS
+ CASH FLOW FOR FINANCING
= **CHANGE IN CASH AND EQUIVAL.**
+ Cash and equiv. in the beginning of f.y.
= Cash and equiv. in the end of financ. year

FREE CASH FLOW AND THE PROFITABILITY OF AN INVESTMENT

(Free cash flow is calculated for each period – the net present value of an investment is determined by discounting the free cash flows using the weighted average cost of capital as rate)

EBIT × (1 – τ) [i.e. Unlevered Net Income]
+ Depreciations
+ Working capital beginning of financial y.
– Working capital end of financial year
+ Cash flow for investments
= **FREE CASH FLOW (FCF_i)**

$$NPV = \sum_{i=0}^{\infty} \frac{FCF_i}{(1 + WACC)^i}, \text{ where}$$

NPV = **NET PRESENT VALUE OF
THE FREE CASH FLOWS**

WACC = Weighted Average Cost of Capital,
that is defined as follows:

$$WACC = \left[\frac{E_{TOTi}}{A_{TOTi}} \cdot r_E + \frac{D_{TOTi}}{A_{TOTi}} \cdot r_D \cdot (1 - \tau) \right] \cdot 100\%$$

where A_{TOTi} = Total Assets,

D_{TOTi} = Total Liabilities (Debts),

E_{TOTi} = Total Equity,

τ = corporate tax rate,

r_E = required yield for equity and

r_D = average interest rate for debts.

COST-PROFIT-VOLYME-ANALYSIS

On a certain time perspective, costs are either variable or fixed. This relation can be analysed.

CRITICAL SALES PRICE (P_k)

(as the volyme (i.e. quantity) remains constant)

$$P_k = \frac{F}{Q} + C$$

CRITICAL SALES QUANTITY (Q_k)

(as the sales price remains constant)

$$Q_k = \frac{F}{P - C}, \text{ where}$$

P = Sales price per unit

C = Variable cost per unit

F = Total fixed costs.



FORMULAS

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BALANCE EQUATION: ASSETS = EQUITY + LIABILITIES

(Balance sheet describes the moment between financial years. The balance ending f.y. *i* opens the f.y. *i+1*)

ASSETS

NON-CURRENT ASSETS

Fixed assets

NON-CURRENT ASSETS TOTAL

CURRENT ASSETS

Inventories

Raw materials and consumables

Work in progress (WIP)

Finished goods for sale

Total inventories

Current financial assets

Accounts receivables

Cash and equivalents

Current financial assets total

CURRENT ASSETS TOTAL

ASSETS TOTAL

EQUITY AND LIABILITIES

EQUITY

Shareholder's capital

Retained earnings

Profit for the financial year

TOTAL EQUITY

LIABILITIES

Non-current liabilities

Loans from fin. inst. (long-term)

Non-current liabilities total

Current liabilities

Loans from fin. inst. (short-term)

Accounts payable

Current liabilities total

LIABILITIES TOTAL

EQUITY AND LIABILITIES TOTAL

WORKING CAPITAL (on a single moment)

TOTAL INVENTORIES

+ Accounts receivables

- Accounts payable

= WORKING CAPITAL TOTAL

RETAINED EARNINGS AND DIVIDENDS

(Profit for f.y. *i-1* is added to retained earnings f.y. *i*)

RETAINED EARNINGS on opening balan.

+ Profit for previous f.y. on opening balance

- Dividends paid out during financial year

= RETAINED EARNINGS on ending balan.

INCOME STATEMENT (for a financial year)

REVENUE

- Cost of Goods Sold (CoGS)

GROSS MARGIN

- Other operating expenses

EBITDA

- Depreciations

EBIT

- Interests

EBT

- Taxes

PROFIT FOR THE FINANCIAL YEAR

$$\text{Gross margin-\%} = \frac{\text{GROSS MARGIN}}{\text{REVENUE}}$$

$$\text{EBITDA-\%} = \frac{\text{EBITDA}}{\text{REVENUE}}$$

Balance sheet items (e.g. accounts payable) and also both Revenue and pure cost items (e.g. depreciations) are always considered as absolute values. Should there be a "-" sign before such an item in a calculation, it means that the item in question is indeed negative. An item combined by subtracting one of the previously mentioned items from another such item, can become negative in itself. When such a