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## 8. Cash flow

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### Learning targets:

- *Being able to define and explain the term "cash flow"*
- *Being able to calculate the cash flow using the basic formula (rule of thumb valuation)*

The term "cash flow" is indubitably one of the most frequently used technical terms in business management. It is often misunderstood, although the underlying concept is simple: The cash flow can be defined as **the surplus of actual income over actual expenses**.

Actual income

- Actual expenses (payments made)

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= **Cash flow**

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Actual expenses are expenses that triggered an outflow of funds (cash). These include, for instance, personnel expenses, rental fees, expenses for goods purchased, etc.

Not taken into account in the cash flow statement are expenses that are only booked through the profit and loss account and which did not give rise to an actual payment flow. The most important business transactions of this type are depreciation and allocations to provisions. The rationale behind this approach is that these expenses occur only on paper. They do not actually involve a cash flow and thus don't make the company poorer.

### Learning targets



- *Being able to define and explain the term "cash flow"*



Example

**Example:** *positive cash flow, positive annual result*

Profit and loss account	Expenses	Income
Sales revenues		300,000 euros
Actual expenses	200,000 euros	
Depreciation	20,000 euros	
Allocation to provisions	10,000 euros	

The **cash flow** can be calculated as follows:

Sales revenues	300,000
- Actual expenses	200,000
<b>= Cash flow</b>	<b>100,000</b>

The cash flow of 100,000 euros shows that inflows of funds exceeded the amount of cash spent by 100,000 euros.

A positive cash flow is definitely a reason to be happy. After all, it signals that the company was able to finance current expenses (e.g. for wages and salaries) from its income. The cash flow is therefore a ratio that is often taken to reflect a company's **financial strength**.

The cash flow, however, cannot be equated with profit. In calculating a company's profit, all transactions that occurred during the year, i.e. all transactions that made the company richer (= income) or poorer (= expenses) must be taken into account. These also include the loss in value of depreciable fixed assets (= depreciation) and prospective amounts payable but not yet invoiced (= provisions).

The **profit** is calculated as follows:

Sales revenues	300,000
- Actual expenses	200,000
<b>= Cash flow</b>	<b>100,000</b>
- Depreciation	20,000
- Provisions	10,000
<b>= Profit</b>	<b>70,000</b>

The profit represents the amount that actually made the company “richer” (the amount by which the company’s equity capital increased compared to the previous year).



Example

**Example:** positive cash flow, negative annual result

The following example is again based on a simplified set of figures which allow to calculate the cash flow and the annual result (loss):

Profit and loss account	Expenses	Income
Sales revenues		500,000 euros
Actual expenses	450,000 euros	
Depreciation	40,000 euros	
Allocation to provisions	80,000 euros	

Sales revenues	500,000
- Actual expenses	450,000
<b>= Cash flow</b>	<b>50,000</b>
- Depreciation	40,000
- Provisions	80,000
<b>= Loss</b>	<b>- 70,000</b>

This example yields a positive cash flow of 50,000 euros and a negative annual result (loss) of -70,000 euros. What conclusions can be drawn in this case?

The company has generated sufficient income to meet current expenses. Its future, however, is uncertain because it failed to earn enough money

- ➔ to cover the loss in value of fixed assets (set up reserves for purchasing new plant and equipment) and
- ➔ to cover the amount of expected invoices reflected in provisions.

Small and medium-sized enterprises (so-called SMEs), hotels for instance, often generate a positive cash flow while at the same time showing a loss in their annual financial statements. Some of these companies do well for a number of years. But the situation becomes critical when furniture and equipment must be replaced or back tax becomes due. At this point they lack the required money they should have set aside for these purposes.

In such a case we say that a company has been living off its substance. It earned enough money to pay current expenses, but failed to set up reserves for future investments. If it had actually put aside (saved) the amounts written off for depreciation, it would now be able to cover the necessary investments.



## Formula for calculating the cash flow (rule of thumb)

The most commonly used formula for calculating the cash flow is:

$$\begin{array}{r}
 \text{Profit} \\
 + \text{ Depreciation} \\
 +/- \text{ Allocation to/write-back of provisions} \\
 \hline
 = \text{Cash flow} \\
 \hline
 \hline
 \end{array}$$

➤ *Being able to calculate the cash flow using the basic formula (rule of thumb valuation)*

Hence, the basic approach to calculating the cash flow is to take the profit as shown in the P&L account and add depreciation and allocations to provisions (and/or, if applicable, deduct write-backs of provisions).

A company may use the cash flow generated for a number of different purposes, including

- ➔ distributing a profit
- ➔ making investments
- ➔ repaying loans or
- ➔ putting aside money for the future – also called "setting up reserves"

**External analysts** like to use the cash flow to obtain an accurate picture of the earning power of a company, because this figure excludes all transactions that only take place on paper and which therefore can be easily "manipulated" – namely depreciation and provisions.



### Notes on provisions

(not exam relevant)

When calculating the cash flow, only **provisions** that have been **newly set up** in the respective financial year are **added**. The item “provisions” shown on the right-hand side (equity and liabilities side) of the balance sheet usually also contains provisions set up in previous years. Therefore, not the entire amount shown in this item is added, but only the part allocated in the respective year (= allocations to provisions).

If a company writes back provisions (e.g. because a court case for which they had been set up has been won), this amount has to be subtracted from the respective annual profit (or loss) because this write-back increased the profit without actually triggering a cash flow.

### Different types of cash flow

(not exam relevant)

A detailed cash flow statement is divided into different segments which describe the changes in the company’s cash flows from operating, investing and financing activities. Calculating the different types of cash flow provides a more detailed picture of a company's earning power and financial strength (please consult the pertinent literature for further information).