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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)*

### Learning targets



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**.

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

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.



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).

## CASH FLOW

1) Despite an obviously good business year, your tax consultant disappoints you presenting a loss in your financial statements. How do you react?

You file for bankruptcy.

You look for another tax consultant.

You calculate the cash flow your company has achieved.

None of the answers is correct.



2) The cash flow ...

... corresponds to a company's total sales revenues.

... tells you by how much inflows of funds exceeded outflows of funds.

... is a term used for profit after taxes.

... serves as a key figure for evaluating the earning power of a company.

None of the answers is correct.



3) Which items are added to the profit in order to calculate the cash flow?

Personnel costs

Depreciation

Repayments of loans

Provisions

None of the answers is correct



4) Why are depreciation and provisions added to the profit when calculating the cash flow?

To exclude possible errors in calculation.

They have not yet caused an outflow of funds.

None of the answers is correct.



5) The profit and loss account shows a profit of 50,000 euros. It also shows that annual depreciation amounted to 8,000 euros and that 10,000 euros were allocated to provisions in the respective year.

What is the cash flow of this company?

50,000 euros

68,000 euros

58,000 euros

48,000 euros

None of the answers is correct



6) A company's cash flow amounts to 180,000 euros. The annual result is clearly negative, amounting to a loss of -70,000 euros.

What conclusions can be drawn from these figures?

The company ...

... is on the brink of bankruptcy.



... has not earned enough to be able to cover expenses that have to be expected in the future.



... was able to meet all payments falling due from revenues earned.



... has been living off its substance in the past year.



None of the answers is correct.



7) External balance sheet analysts have little faith in the profit shown in the P&L account and prefer to use the cash flow to evaluate a company's performance. Why?

Because annual depreciation shown in the balance sheet may be too high.



Because the amount allocated to provisions may be disproportionately high.



Because the cash flow is usually lower than the profit.



None of the answers is correct.

