



Introduction to Company Finance & Controlling

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AGENDA: FINANCE BASICS FOR ENGINEERS

➔ Measuring the company performance in annual **financial statements: Cashflow, EBIT, RoI, and more...**

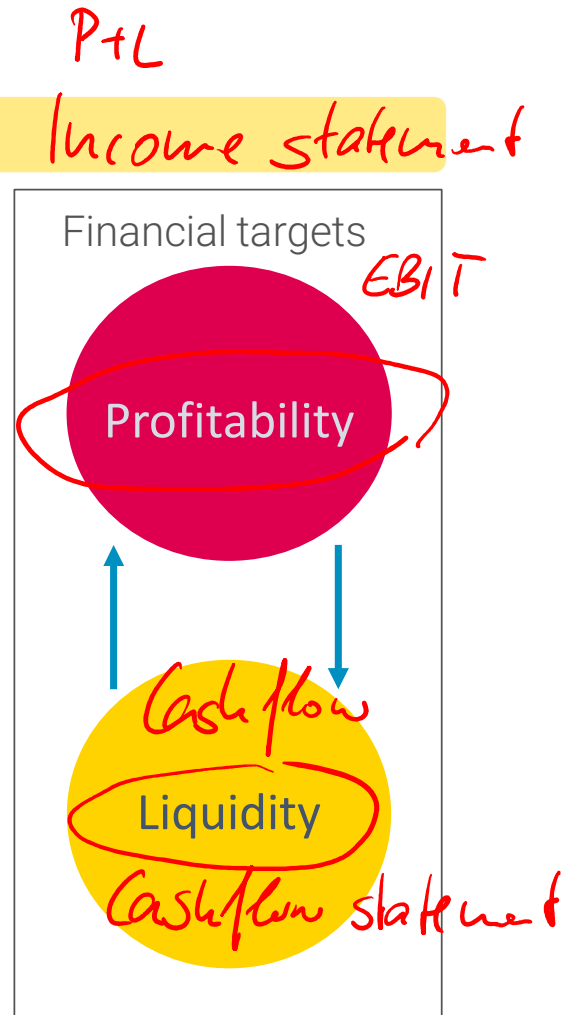
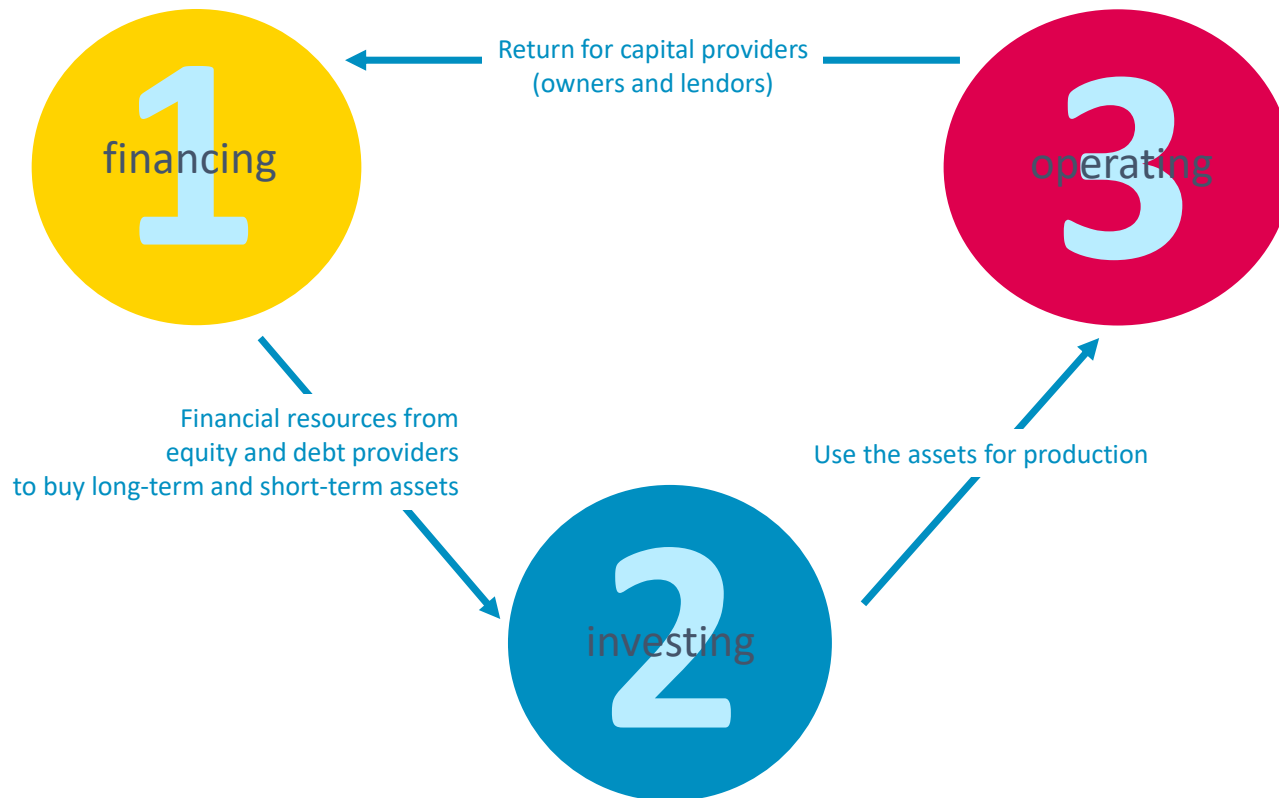
➔ Taking a look at the **Mercedes annual report**

➔ Controlling profitability with the **ROI value driver tree**

➔ Summary and outlook: **The drivers for sustainable success**

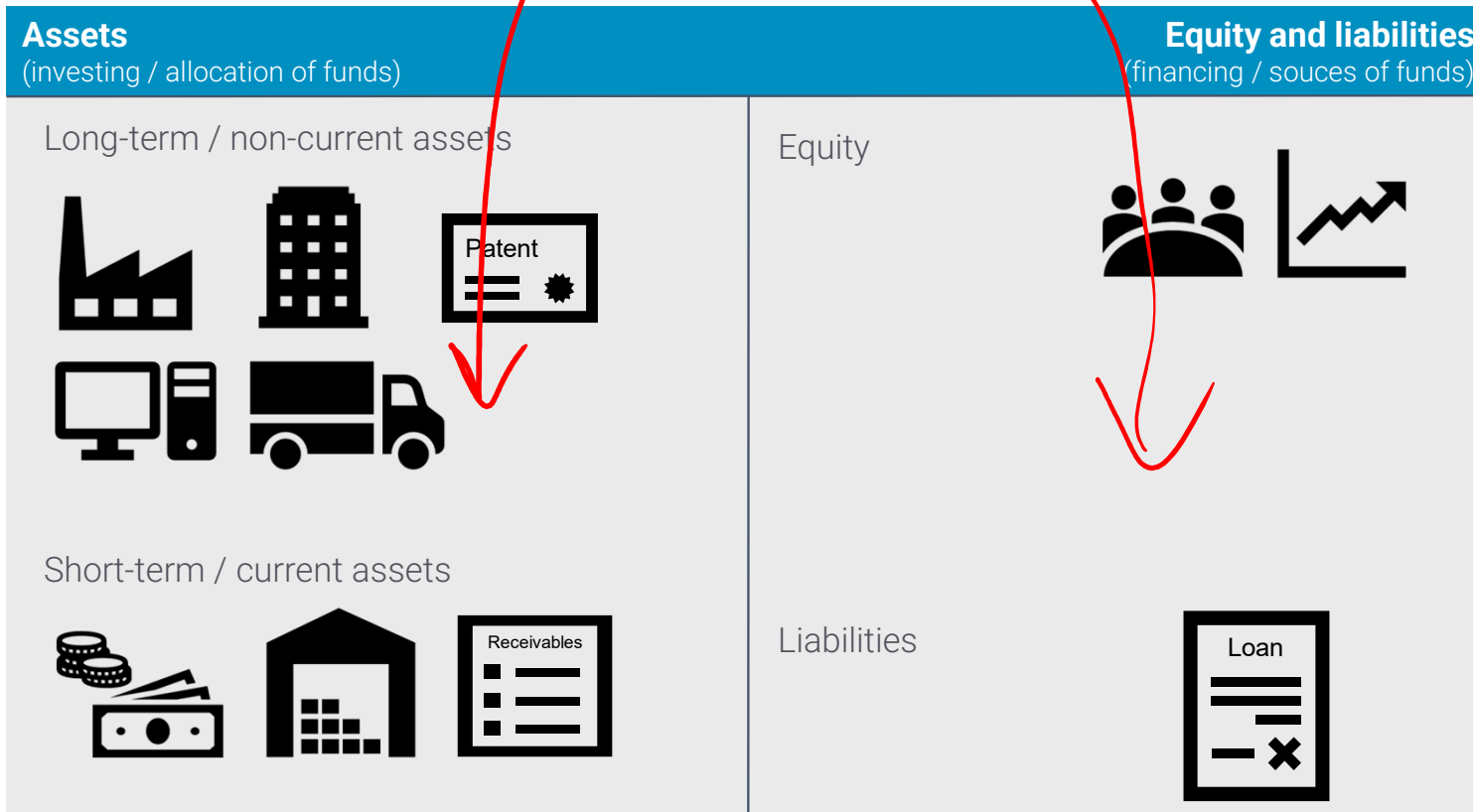
THE COMPANY ROADMAP

Corporate action is an **ongoing cycle** of financing, investing and operating.



THE BALANCE SHEET

The balance sheet comprises all **financing activities** (sources of funds) and all **investing activities** (allocation of funds).



Σxxx

Σxxx

COMPANY TRANSACTIONS

Starting a company: How are the following transactions mapped in the balance sheet?

	1. Financing the company with equity	50
	2. Financing the company with a credit loan	100
	3. Purchasing a production machine	40
	4. Purchasing raw material	35
	5. Beginning of production: Employing the raw material („Cost of Sales“)	30
	6. Paying production employees salaries („Cost of Sales“)	25
	7. Paying for sales activities („Selling expenses“)	10
	8. Paying for R&D activities („R&D expenses“)	10
	9. Paying administration employees' wages („Administration expenses“)	5
	10. Selling products (20 units to the price of 5) (2 products will be paid next year only)	100 10)
	11. Machine depreciation („Cost of Sales“)	10
	12. Paying interest to the bank (7%)	7
	13. Paying <u>taxes</u> , tax rate 33 %	?

THE TESTIMONIAL OF THE COMPANY

Assets		Equity and liabilities	
Property plant and equipment	40	Equity	50
Inventories	35	P&L	
Trade receivables	10	Sales revenues	100
Cash + Bank	50	Cost of Sales (raw material)	-30
Cashflow financing activities	100	Cost of Sales (salaries)	-25
Cashflow investing activities	-40	Selling expenses	-10
Operating cashflow	-3	R&D expenses	-10
		Admin expenses	-5
		Cost of Sales (depreciation)	-10
		Interest expenses	-7
		Earnings before tax	3
		Tax expenses (33%)	-1
		Earnings after tax	2
		Liabilities	100
			(150) 152

10% EBIT margin

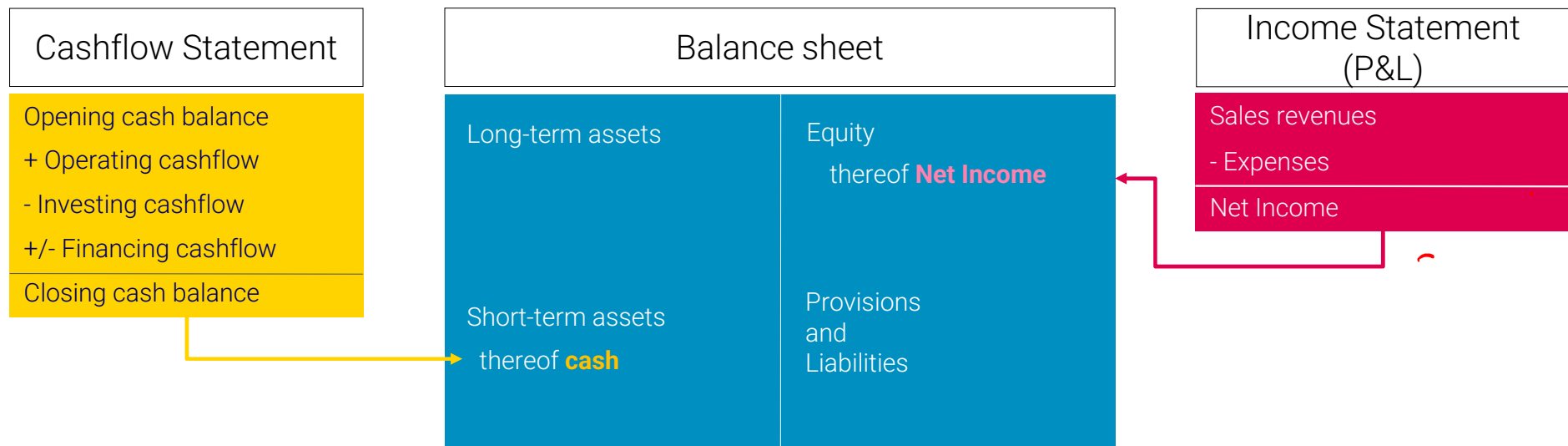
EBITDA 20

EBIT 10

ROI = $\frac{10}{150} = 6,7\%$

THE TESTIMONIAL OF THE COMPANY

The Annual reports summarize the **status of the company** in the past period.



➤ The **Balance sheet** shows the current status of assets, liabilities and equity.

➤ The **Income statement (also: Profit & Loss account)** shows how **profitabel** the company operated.

➤ The **Cashflow statement** explains the change in **cash**.

THE MERCEDES INCOME STATEMENT

	2023	2022
In millions of euros		
Revenue	153,218	150,017
Cost of sales	-118,839	-115,997
Gross profit	34,379	34,020
Selling expenses	-9,728	-9,482
General administrative expenses	-2,688	-2,584
Research and non-capitalized development costs	-6,230	-5,602
Other operating income	2,206	3,323
Other operating expense	-516	-1,289
Gains/losses on equity-method investments	2,129	1,732
Other financial income/expense	108	340
Earnings before interest and taxes (EBIT)	19,660	20,458
Interest income	678	273
Interest expense	-254	-427
Profit before taxes	20,084	20,304
Income taxes	-5,553	-5,495
Net profit	14,531	14,809

13%

THE MERCEDES BALANCE SHEET

	Note	At 31 December			At 31 December	
		2023	2022		2023	2022
In millions of euros						
Assets						
Intangible assets	10	17,593	15,869			
Property, plant and equipment	11	26,090	27,250			
Equipment on operating leases	12	41,712	41,552			
Equity-method investments	13	13,104	13,530			
Receivables from financial services	14	49,742	48,237			
Marketable debt securities and similar investments	15	699	823			
Other financial assets	16	4,340	4,478			
Deferred tax assets	9	4,127	3,725			
Other assets	17	1,583	1,677			
Total non-current assets		158,990	157,141			
Inventories	18	27,294	25,621			
Trade receivables	19	7,281	8,100			
Receivables from financial services	14	38,469	37,312			
Cash and cash equivalents		15,962	17,679			
Marketable debt securities and similar investments	15	6,159	6,237			
Other financial assets	16	3,599	3,453			
Other assets	17	4,473	4,472			
Assets held for sale	3	795	-			
Total current assets		104,032	102,874			
Total assets		263,022	260,015			
In millions of euros						
Equity and liabilities						
Share capital		3,070	3,070			
Capital reserves		11,718	11,718			
Retained earnings		76,670	67,695			
Other reserves		2,571	2,932			
Treasury shares		-2,256	-			
Equity attributable to shareholders of Mercedes-Benz Group AG		91,773	85,415			
Non-controlling interests		1,043	1,125			
Total equity	20	92,816	86,540			
Provisions for pensions and similar obligations	22	1,090	1,021			
Provisions for other risks	23	7,345	6,438			
Financing liabilities	24	63,724	62,051			
Other financial liabilities	25	1,642	2,524			
Deferred tax liabilities	9	7,714	6,910			
Deferred income	26	1,223	1,234			
Contract and refund liabilities	27	3,514	3,656			
Other liabilities	28	1,520	1,238			
Total non-current liabilities		87,772	85,072			
Trade payables		12,828	12,204			
Provisions for other risks	23	7,955	9,585			
Financing liabilities	24	44,914	49,786			
Other financial liabilities	25	5,476	5,404			
Deferred income	26	1,478	1,391			
Contract and refund liabilities	27	6,877	6,898			
Other liabilities	28	2,682	3,135			
Liabilities held for sale	3	224	-			
Total current liabilities		82,434	88,403			
Total equity and liabilities		263,022	260,015			

THE MERCEDES CASHFLOW STATEMENT

Profit before income taxes	20,084	20,304
Depreciation and amortization/impairments	6,663	6,521
Other non-cash expense and income	-2,369	-1,296
Gains (-)/losses (+) from disposals of assets	-92	-990
Change in operating assets and liabilities		
Inventories	-2,733	-4,111
Trade receivables and trade payables	1,310	1,029
Receivables from financial services	-5,812	-5,327
Vehicles on operating leases	-640	3,810
Other operating assets and liabilities	1,624	358
Dividends received from equity-method investments	2,056	1,605
Income taxes paid	-5,621	-5,009
Cash flow from operating activities	14,470	16,894
Additions to property, plant and equipment	-3,745	-3,481
Additions to intangible assets	-4,468	-3,418
Proceeds from disposals of property, plant and equipment and intangible assets	285	469
Investments in shareholdings	-334	-849
Proceeds from disposals of shareholdings and other business operations	612	3,337
Acquisition of marketable debt securities and similar investments	-4,714	-2,622
Proceeds from sales of marketable debt securities and similar investments	5,021	3,084
Other cash flows	28	27
Cash flow from investing activities	-7,315	-3,453
Change in short-term financing liabilities	-512	172
Additions to long-term financing liabilities	39,288	38,429
Repayment of long-term financing liabilities	-39,473	-51,945
Dividend paid to shareholders of Mercedes-Benz Group AG	-5,556	-5,349
Dividends paid to non-controlling interests	-324	-320
Acquisition of treasury shares	-1,941	-48
Other cash flows	127	29
Cash flow from financing activities	-8,391	-19,032

ANALYSING ANNUAL REPORTS

The **five levels of analysis** capture the company's situation.

Sales revenues

- How much were **the company's sales revenues** last year and how much have they changed from the year before?

Profitability

- What is the percentage of **earnings before interest and taxes (EBIT)** on sales revenues?
- How much is the ratio of **earnings before interest and taxes (EBIT)** over the assets of the company?

EBIT margin

RoI

Asset structure

- With which **assets** has this profit been generated?
Which are the four **largest assets**?

Financing

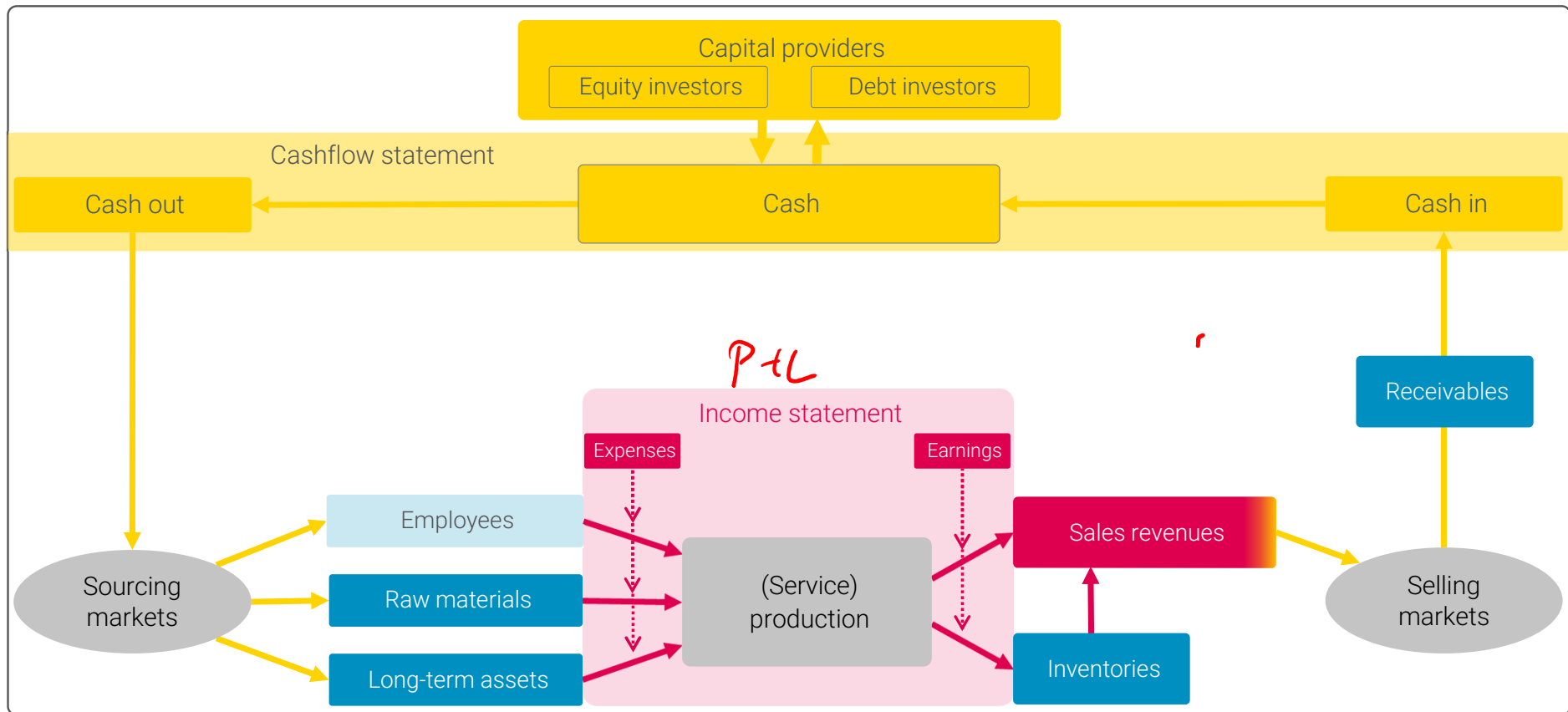
- How are the company's assets financed?
- How much is the **percentage of equity** on the total capital?

Liquidity / cashflow

- How much cash has the company **generated out of its operations**?
- Can the company **finance itself out of its operations**? (Does the cashflow from operations exceed the investing cashflow?)

LIQUIDITY AND PROFITABILITY

In the long run capital providers expect the die **cashback** of their investment in us.
The yearly recording of expenses and earnings is to **predetermine this long-term company goal**.



CONTROLLING PROFITABILITY

Key performance indicators for the company's overall performance

Return on investment
for the capital providers

- Shows the earning power for the investors

$$\text{ROI} = \frac{\text{EBIT}}{\text{Total assets}} = \frac{10}{150} = 6,7\%$$

EBIT margin

(sometimes called: Return on Sales ROS)

- How much profit is left out of sales (margin of the business)

$$\text{EBIT margin} = \frac{\text{EBIT}}{\text{Sales revenues}} = \frac{10}{100} = 10\%$$

Asset turnover

- How much sales can be generated out of the assets?
- How many assets do we need for the sales volume?

$$\text{Asset turnover} = \frac{\text{Sales revenues}}{\text{Total assets}}$$

Return on investment = EBIT margin x Asset turnover

CONTROLLING PROFITABILITY

What is the connection between EBIT margin und ROI?

$$ROI = \frac{EBIT}{Sales} \times \frac{Sales}{Assets}$$

$$= EBIT \text{ margin} \times \text{Asset turnover}$$

$$10\% = 10\% \times 1$$

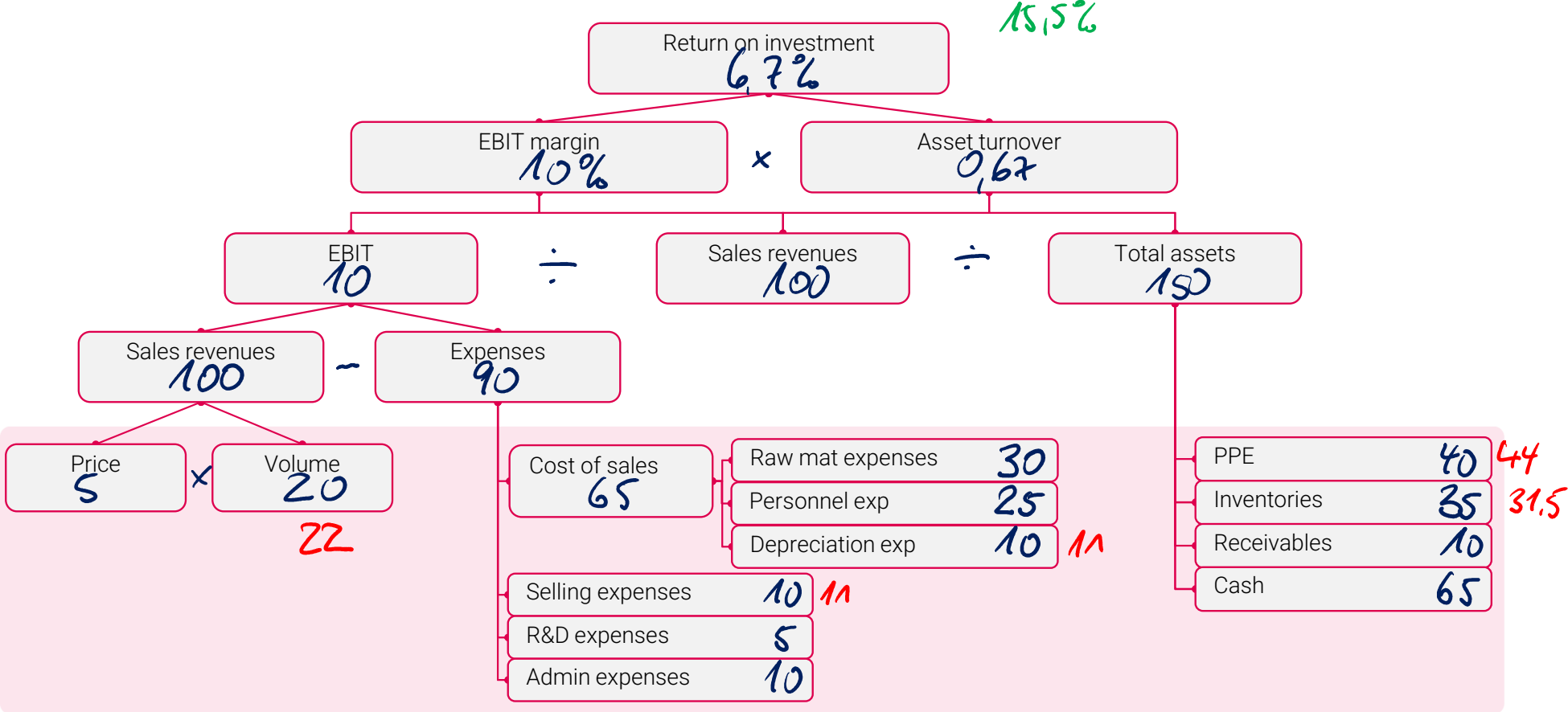
$$10\% = 30\% \times 0,33$$

$$10\% = 2\% \times 5$$

Return on Investment = EBIT margin x Asset turnover

CONTROLLING PROFITABILITY: THE VALUE DRIVERS

The ROI pyramid of value drivers shows the influence of operating parameters on performance.



CONTROLLING PROFITABILITY: EXERCISE

Be your **controller**. How can you **improve ROI**?

1. **Increase price** by 10%
2. **Increase volume** by 10%
(Assumption: We have to increase selling costs by 10% and we consume 10% more raw material. Personnel and machine capacity stays the same.)
3. Process efficiency:
Reduce personnel costs by 10%
4. Working capital management:
Reduce the raw material purchase to the amount we need right now (not more).

Can we improve **ROI to 10%**?

CONTROLLING INITIATIVES

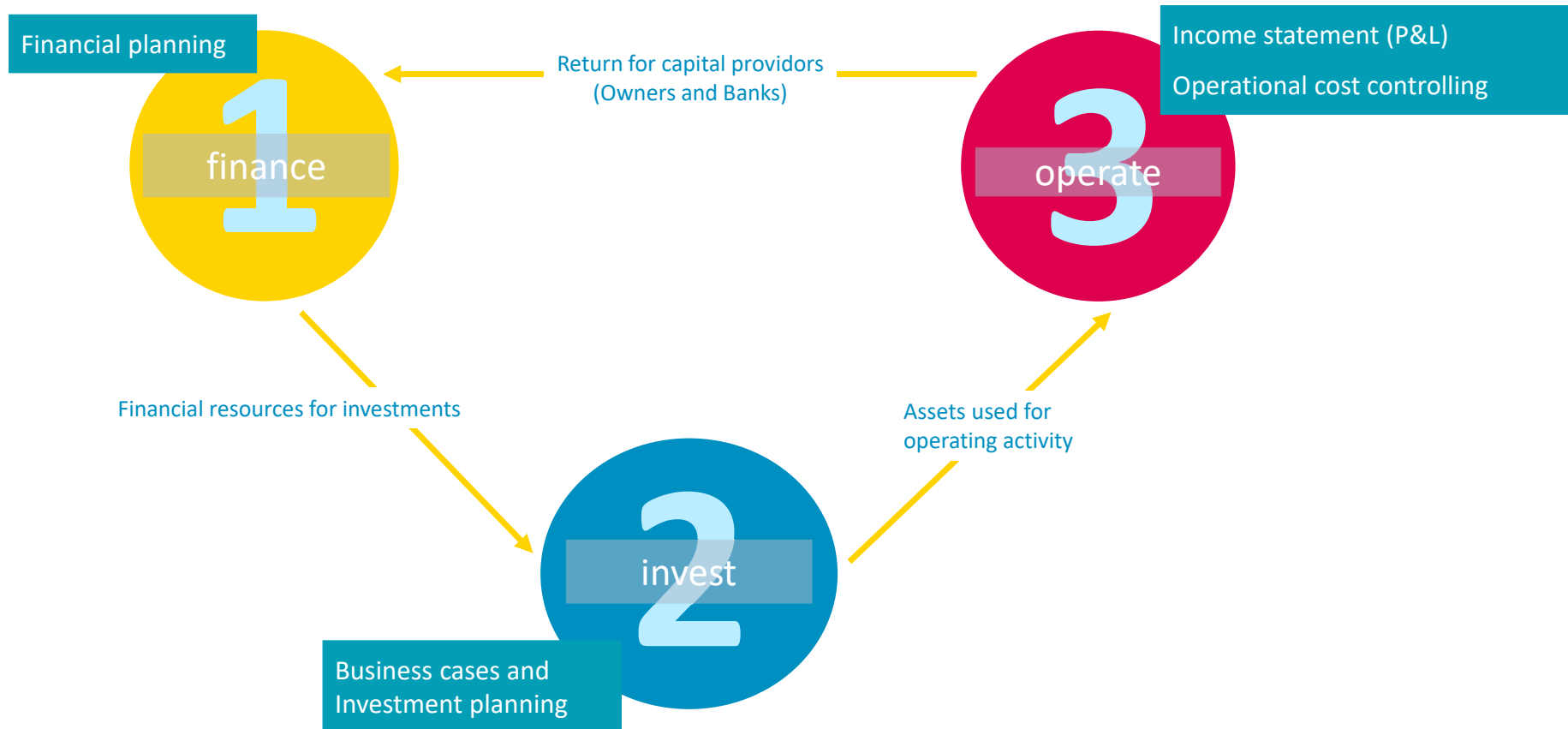
The most important operating controlling targets are **EBIT** and **Working capital management**.

➔ An **EBIT increase** controls prices, volume and costs (expenses) and **improves ROI and cashflow**.

➔ **Working capital management** reduces inventories and receivables and **improves ROI and cashflow**.

THE CONTROLLING ROADMAP

The essential **controlling instruments** to keep the cycle going.



STAKEHOLDER MANAGEMENT

The value growth challenge:

Company values can only increase if the **interests** of employees, customers, and investors **are balanced**.

