

# Non-profit company vs. cash flow

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Case Apotti - 9 years from  
the cash flow point of view

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# To be noted

**This document has been prepared for training and example purposes to describe what Argon Pro Ltd offers in the area of analyzes and valuations of companies and/or individual businesses. In this document, the project and technology consulting company Oy Apotti Ab (later the Company, or Apotti Oy) has been chosen as the Target Company for the analysis. Although Apotti Oy is not a real growth company, it is an excellent example to illustrate the relationship of a non-profit company and its cash flow. Although the goal of the Company is not to make actual profit presented in the income statement, the cash flow can be something completely different. Since the entire Apotti program is significantly larger entity than the Company, only the Oy Apotti Ab legal entity is included in this review and analysis.**

**However, Oy Apotti Ab has not been involved in the implementation of this document.**

**Argon Pro will continue to implement similar public sample reports and documents on significant Finnish growth and SME companies, or companies with some other interesting angles. Similar analyzes can also be ordered as paid, non-public commissions.**

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## Agenda

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- Oy Apotti Ab
- Information available
- Financial history 2015 - 2023
- Other point of views
- Key findings and considerations
- Background, formulas and reference values to the various financial indicators





## Oy Apotti Ab

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Nine years old non-profit  
limited liability company

# Oy Apotti Ab

- Reg. number: 2699989-5
  - Main industry: Computer consultancy activities
- The Apotti program was launched in 2012. The Company Oy Apotti Ab was born out of a shared will among the stake-holder municipalities and HUS Helsinki University Hospital to create the first electronic client and patient record and ERP system in the world combining both health and social care.
- With the shared system, health and social care can be measured, developed and managed as a single entity - this also helps to manage the ever-increasing costs.
- **The purpose of the Company is not to generate profit for the shareholders, and it does not distribute any dividends.** Any profit must be used to support and develop the Company's own operations.
- The Epic system was selected for the implementation of the Apotti project. Among other things Epic system was evaluated as the best option in terms of functional quality.
  - The system supplier has experience in more than 350 deployments.
- Oy Apotti Ab is a key player in the Apotti program. Its role is related to system development, implementation and maintenance

- The Company's income and financing consists mainly of turnover invoiced to the owners and external loans.
- The owners of the Company also act as guarantors of the loans
- In 2023, the Maisa customer portal broke the threshold of 1,000,000 users.
- Today the Apotti system affects the lives of 1,7 million Finns in the Uusimaa region.
- Read more: [apotti.fi](https://apotti.fi)

Owners	Shares	Ownership
HUS Helsinki University Hospital (HUS-yhtymä)	460	43,23 %
City of Helsinki	380	35,71 %
Vantaa-Kerava wellbeing services county	152	14,29 %
Western Uusimaa wellbeing services county	37	3,48 %
Central Uusimaa wellbeing services county	24	2,26 %
East Uusimaa wellbeing services county	11	1,03 %
<b>Total</b>	<b>1.064</b>	<b>100 %</b>

The ownership structure of Oy Apotti Ab 31.12.2023. The number of shares is based on 2013 population figures.



# Information available

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- Financial statements of Oy Apotti Ab for 2015 - 2023
- [www.apotti.fi](http://www.apotti.fi)
- Other public material



# Financial history 2014 - 2023

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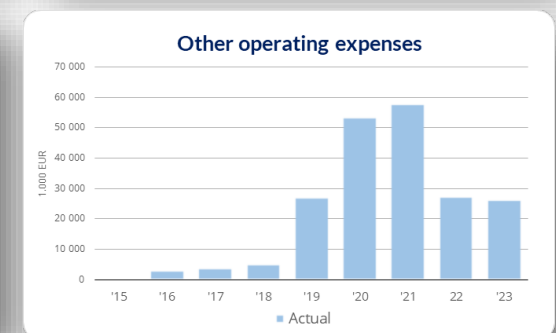
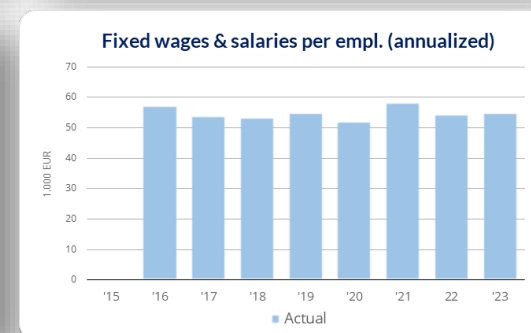
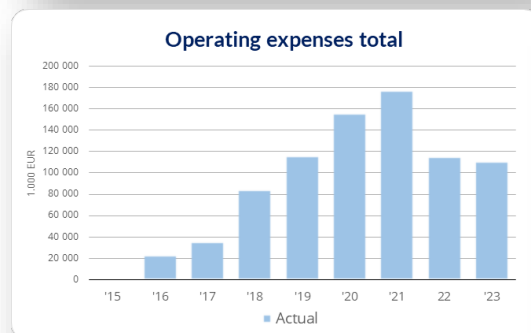
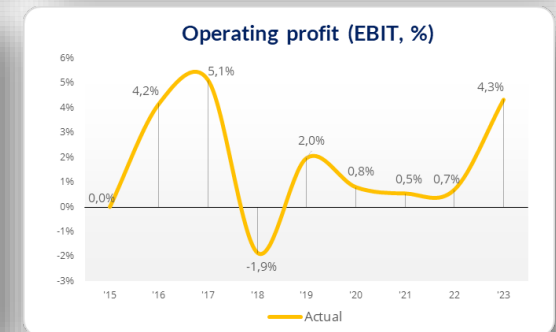
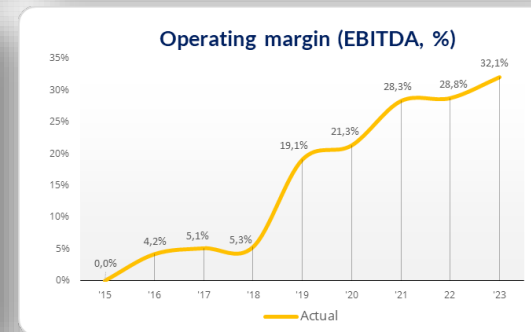
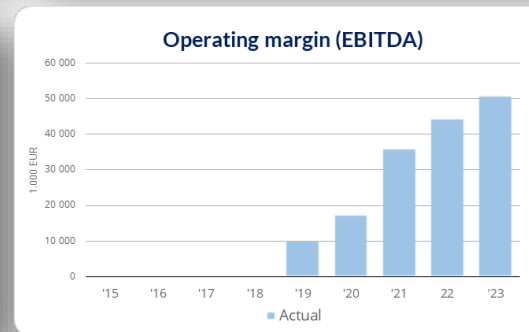
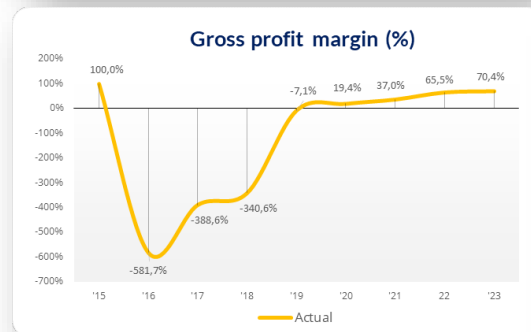
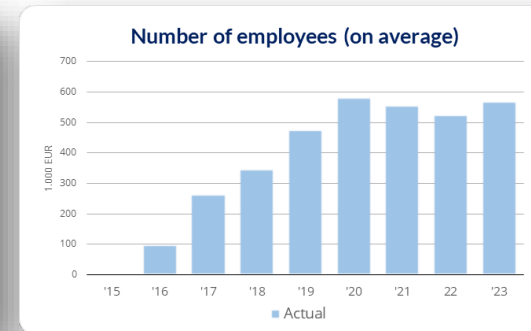
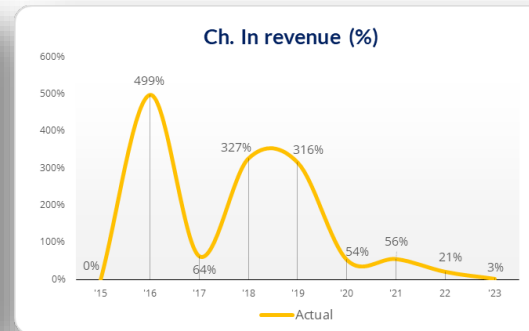
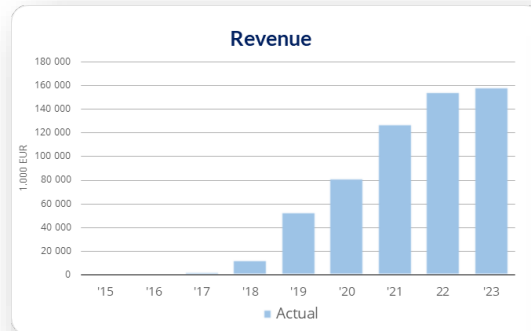
The history of Oy Apotti Ab  
from the finance point of view

# Oy Apotti Ab - Financial background

- The fiscal year of the Company is a calendar year
  - First fiscal year (2015) 6 months
- This Document include the whole financial history of Oy Apotti Ab until the Fiscal Year 2023
- Forecast for 2024 (and beyond) is not available and it is not separately constructed here
- As a result of the change negotiations that ended in December 2023, 2 employment relationships was ended
- In history, Gross profit margin (%) of the Company has varied between -582 % and +100 %
  - Three-year average Gross profit margin for 2021 - 2023 is 57,6 %
- The wellbeing services counties of East, West and Central Uusimaa have announced that they will leave Apotti program
  - The date of withdrawal has not yet been confirmed
  - According to the plans, the departing owners would pay a total of approx. 33 million euros in severance payment (amounts not yet confirmed)
- The guarantee responsibilities of the departing owners will be transferred to the remaining shareholders
- A CFO has been appointed to the Company since April 22, 2024
  - the position is new
  - The CFO was appointed nine years after the Company was founded

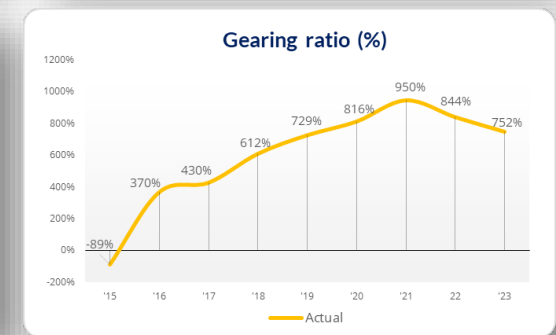
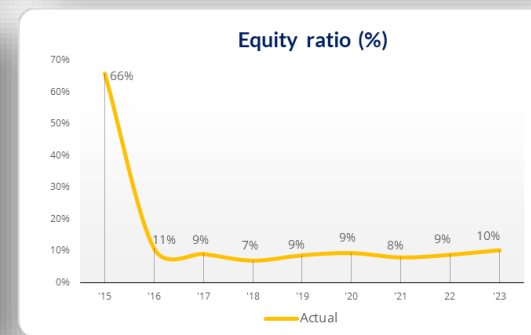
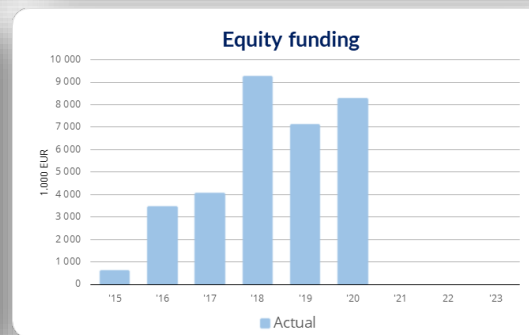
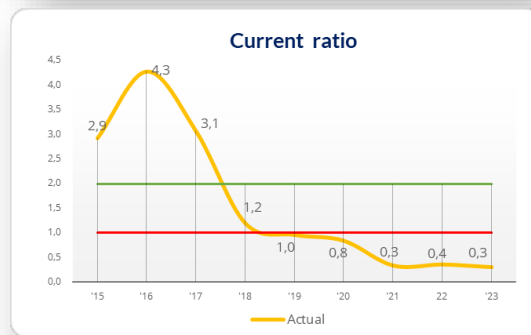
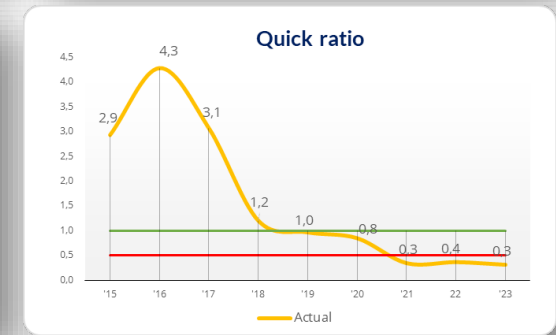
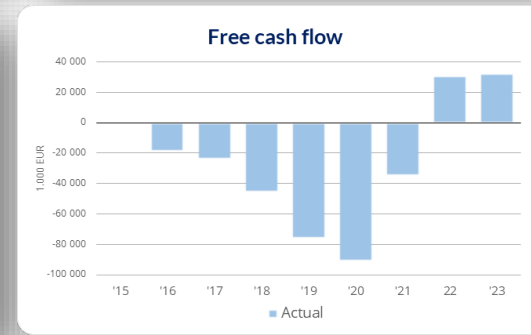
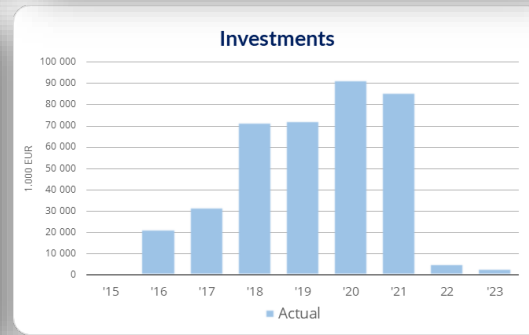
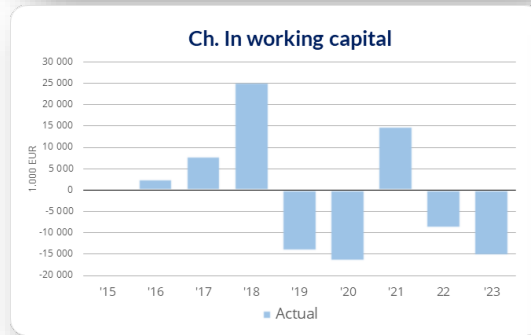
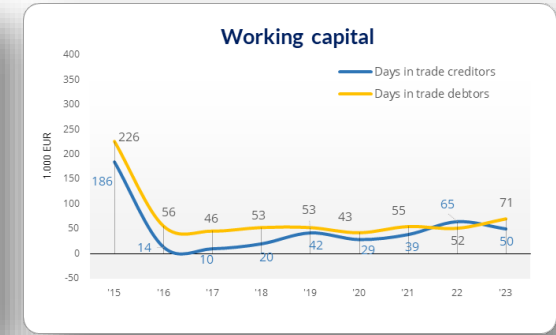
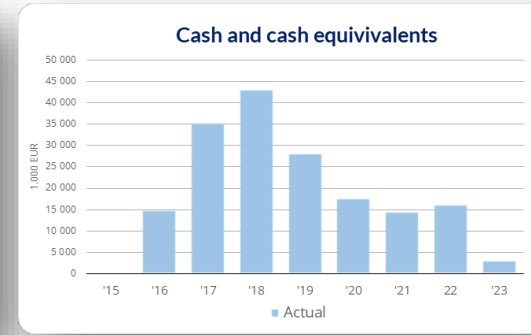
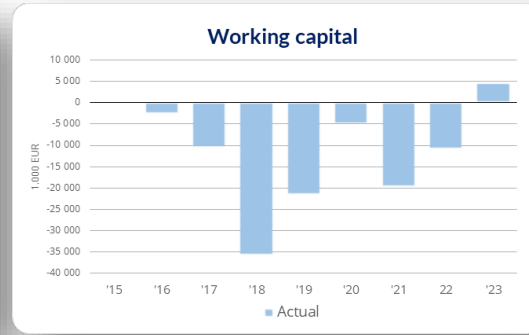
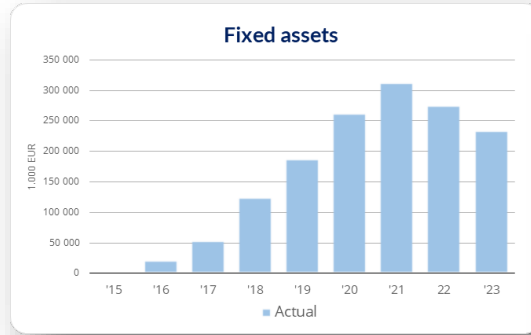


# Oy Apotti Ab - Financial history



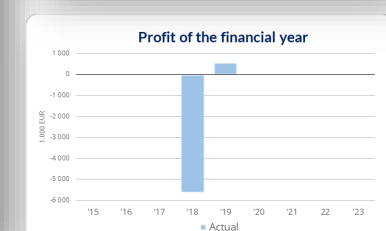
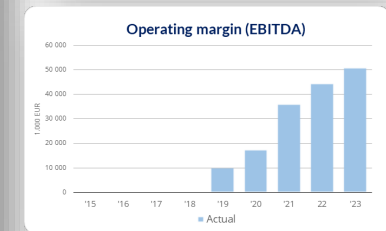
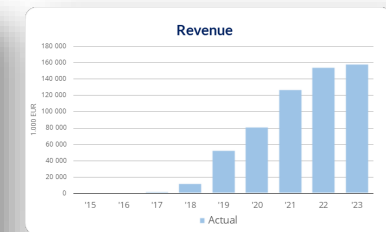
<sup>1)</sup> The significant change in operational costs is mainly due to the significant reduction of user right, license and royalty fees included in other business expenses from approx. 51 million euros to approx. 19 million euros (2023)

# Oy Apotti Ab - Financial history



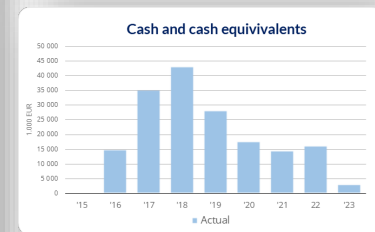
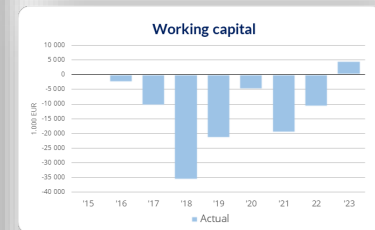
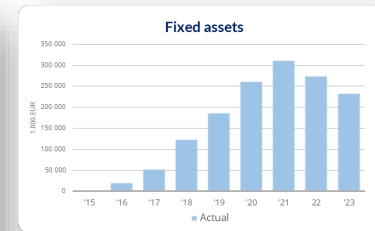
# Oy Apotti Ab - Financial history

INCOME STATEMENT 1.000 EUR	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Revenue</b>	<b>304</b>	<b>1 822</b>	<b>2 984</b>	<b>12 748</b>	<b>53 071</b>	<b>81 508</b>	<b>127 218</b>	<b>154 549</b>	<b>158 705</b>
<i>Ch. In revenue (%)</i>	-	498,9 %	63,8 %	327,2 %	316,3 %	53,6 %	56,1 %	21,5 %	2,7 %
Manufacturing for enterprise's own use (+)	-	20 693	32 747	71 663	72 548	91 759	85 813	5 147	3 118
Other operating income	-	-	-	-	-	-	-	-	-
<b>Operating expenses total</b>	<b>304</b>	<b>22 438</b>	<b>35 578</b>	<b>83 735</b>	<b>115 493</b>	<b>155 881</b>	<b>176 987</b>	<b>115 199</b>	<b>110 885</b>
<b>GROSS PROFIT</b>	<b>304</b>	<b>-10 596</b>	<b>-11 597</b>	<b>-43 417</b>	<b>-3 782</b>	<b>15 778</b>	<b>47 009</b>	<b>101 209</b>	<b>111 699</b>
<i>Gross profit margin (%)</i>	100,0 %	-581,7 %	-388,6 %	-340,6 %	-7,1 %	19,4 %	37,0 %	65,5 %	70,4 %
<b>OPERATING MARGIN (EBITDA)</b>	<b>0</b>	<b>76</b>	<b>153</b>	<b>675</b>	<b>10 126</b>	<b>17 386</b>	<b>36 044</b>	<b>44 496</b>	<b>50 938</b>
<i>Operating margin (EBITDA, %)</i>	0,0 %	4,2 %	5,1 %	5,3 %	19,1 %	21,3 %	28,3 %	28,8 %	32,1 %
Depreciation and reduction in value	-	-	-	912	9 074	16 734	35 348	43 415	44 048
<b>OPERATING PROFIT (EBIT)</b>	<b>0</b>	<b>76</b>	<b>153</b>	<b>-237</b>	<b>1 052</b>	<b>652</b>	<b>695</b>	<b>1 081</b>	<b>6 890</b>
<i>Operating profit (EBIT, %)</i>	0,0 %	4,2 %	5,1 %	-1,9 %	2,0 %	0,8 %	0,5 %	0,7 %	4,3 %
<b>Financial income and expenses</b>	<b>0</b>	<b>-76</b>	<b>-153</b>	<b>-332</b>	<b>-483</b>	<b>-652</b>	<b>-695</b>	<b>-1 081</b>	<b>-6 890</b>
Extraordinary income/expenses	-	-	-	-	-	-	-	-	-
Taxes	-	-	0	0	-	-	-	-	0
<b>Profit of the financial year</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-5 645</b>	<b>569</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Purchases (% of Revenue)	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
External services (% of Revenue)	0 %	682 %	489 %	441 %	107 %	81 %	63 %	35 %	30 %
Other operating expenses (% of Revenue)	48 %	168 %	124,3 %	40 %	51 %	66 %	45 %	17,7 %	16,5 %
Number of employees (on average)	-	99	264	347	477	583	557	526	570
<i>Ch. In number of employees (%)</i>	-	-	166 %	31 %	37 %	22 %	-4 %	-6 %	8 %
Revenue per employee (annualized)	-	18	11	37	111	140	228	294	278
<i>Ch. In revenue per employee (%)</i>	-	-	-38 %	225 %	203 %	26 %	63 %	29 %	-5 %
Staff expenses per employee (annualized)	-	70	65	65	66	63	70	66	66
<i>Ch. In staff expenses per employee (%)</i>	-	-	-7 %	-1 %	2 %	-5 %	12 %	-6 %	1 %



# Oy Apotti Ab - Financial history

<b>BALANCE SHEET - ASSETS 1.000 EUR</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Non-current assets</b>									
Intangible assets	-	-	-	58 962	108 810	156 762	294 556	256 037	214 876
Tangible assets	-	21 593	53 439	65 228	78 581	105 654	18 325	18 575	18 806
Investments	-	-	-	-	-	-	-	-	-
<b>Current assets</b>									
Inventory/Stocks	-	-	25	-	-	-	-	-	-
<b>Debtors</b>									
Long-term debtors	-	-	-	-	276	1 337	2 770	2 770	2 770
Short-term debtors	377	1 252	1 447	2 347	9 920	16 354	19 913	22 791	31 638
Short-term investments	-	-	-	-	-	-	-	-	-
Cash in hand and at banks	534	15 009	35 125	43 200	28 303	17 712	14 635	16 250	3 064
<b>ASSETS</b>	<b>911</b>	<b>37 853</b>	<b>90 036</b>	<b>169 738</b>	<b>225 891</b>	<b>297 819</b>	<b>350 199</b>	<b>316 424</b>	<b>271 153</b>
<b>BALANCE SHEET - EQUITY AND LIABILITIES 1.000 EUR</b>									
<b>Equity</b>									
Equity	600	4 057	8 115	11 728	19 426	27 695	27 695	27 695	27 695
<b>Minority interests</b>	-	-	-	-	-	-	-	-	-
<b>Appropriations</b>	-	-	-	5 076	5 076	5 076	5 076	5 076	5 076
<b>Provisions</b>	-	-	-	-	-	-	-	-	-
<b>Creditors</b>									
<b>Long-term creditors</b>									
Long-term creditors	-	30 000	70 000	115 000	161 765	224 779	216 461	176 209	126 374
<b>Short-term creditors</b>									
Short-term (interest-bearing) debt	-	-	-	-	8 235	18 985	61 319	73 835	84 935
Short-term creditors	311	3 797	11 921	37 934	31 389	21 283	39 649	33 608	27 073
<b>EQUITY AND LIABILITIES</b>	<b>911</b>	<b>37 853</b>	<b>90 036</b>	<b>169 738</b>	<b>225 891</b>	<b>297 819</b>	<b>350 199</b>	<b>316 424</b>	<b>271 153</b>





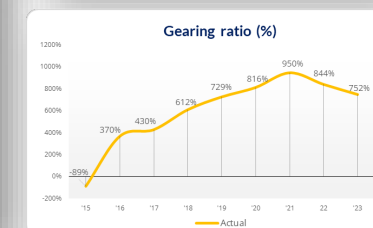
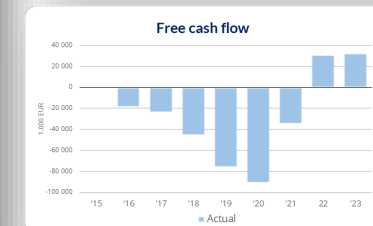
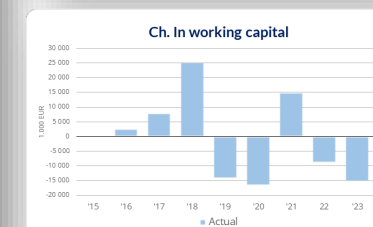
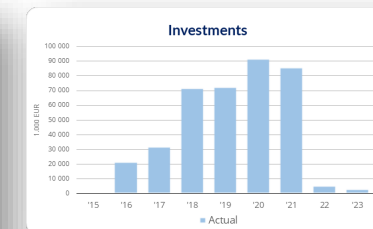
# Oy Apotti Ab - Financial history

## FREE CASH FLOW 1.000 EUR

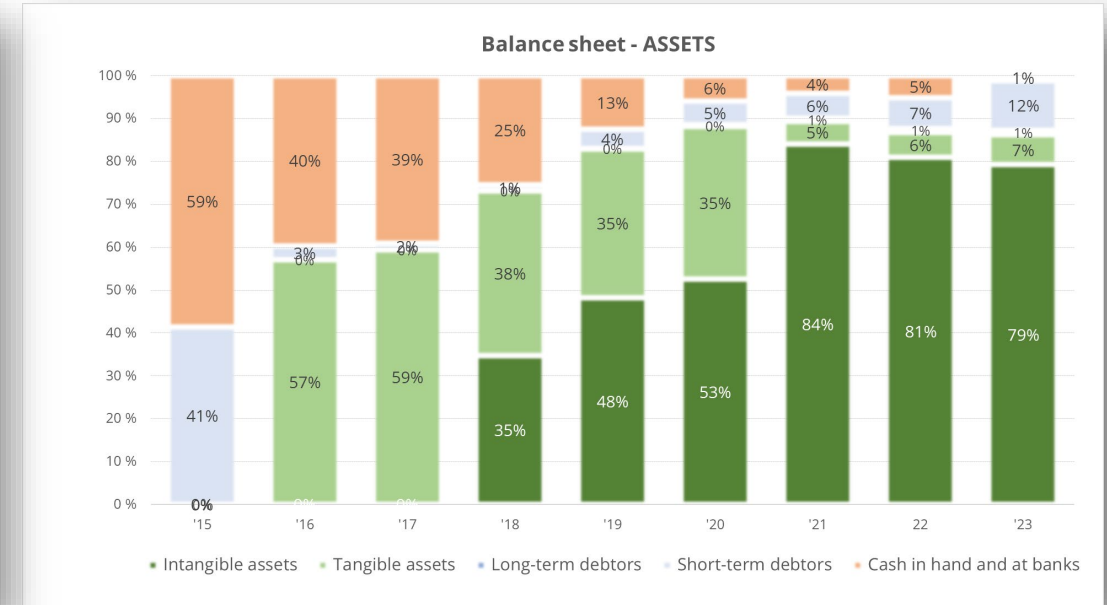
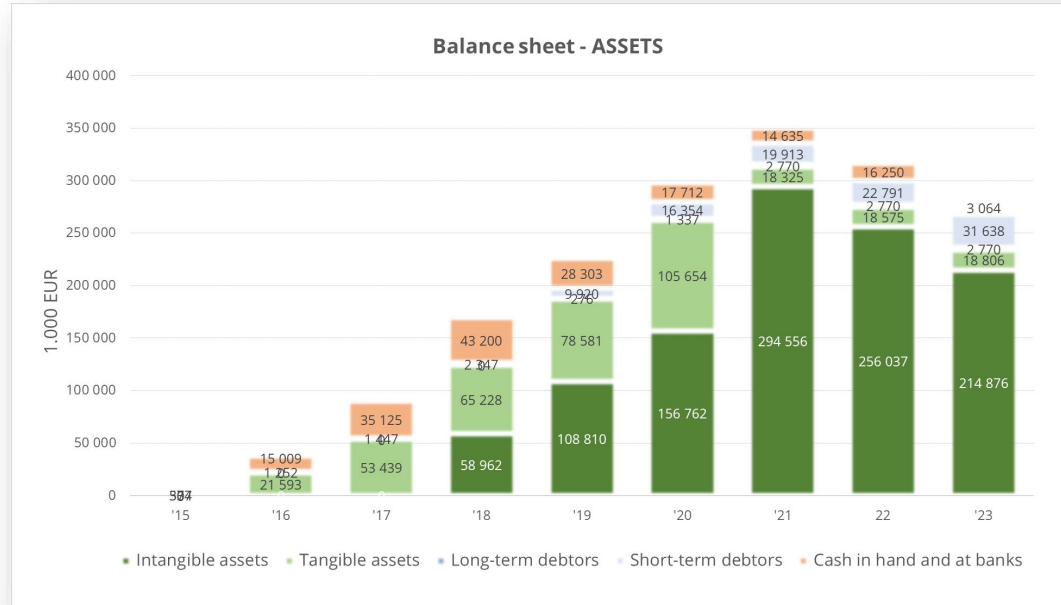
	2015	2016	2017	2018	2019	2020	2021	2022	2023
OPERATING PROFIT (EBIT)	0	76	153	-237	1 052	652	695	1 081	6 890
<i>Operating profit (EBIT, %)</i>	<i>0,0 %</i>	<i>4,2 %</i>	<i>5,1 %</i>	<i>-1,9 %</i>	<i>2,0 %</i>	<i>0,8 %</i>	<i>0,5 %</i>	<i>0,7 %</i>	<i>4,3 %</i>
Taxes	-	-	0	0	-	-	-	-	0
Net Operating Profit Less Taxes (NOPLAT)	0	76	153	-237	1 052	652	695	1 081	6 890
Depreciation and reduction in value	0	0	0	912	9 074	16 734	35 348	43 415	44 048
Ch. In working capital	-66	2 611	7 905	25 137	-14 118	-16 540	14 806	-8 918	-15 382
Cash flow from operations	-66	2 687	8 058	25 812	-3 992	846	50 849	35 578	35 556
Net investments	-	21 593	31 847	71 663	72 275	91 759	85 813	5 147	3 118
<b>FREE CASH FLOW</b>	<b>-66</b>	<b>-18 906</b>	<b>-23 789</b>	<b>-45 851</b>	<b>-76 266</b>	<b>-90 913</b>	<b>-34 963</b>	<b>30 431</b>	<b>32 438</b>

## FINANCING 1.000 EUR

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Ch. In long-term (interest-bearing) debt	-	30 000	40 000	45 000	46 765	63 015	-8 319	-40 252	-49 835
Ch. In short-term (interest-bearing) debt	-	-	-	-	8 235	10 750	42 333	12 517	11 100
Ch. In long-term debtors	-	-	-	-	-276	-1 061	-1 433	-	-
Financial income and expenses	0	-76	-153	-332	-483	-652	-695	-1 081	-6 890
Proceeds from share issue and other restricted equity	100	-	-	-	-	-	-	-	-
Ch. In other non-restricted equity reserves	500	3 457	4 058	9 258	7 128	8 269	-	-	-
Other financing items/adjustments	-	-	-	-	-	-	-	-	-
Financing items, Total	600	33 381	43 905	53 926	61 369	80 322	31 886	-28 816	-45 625
Ch. In liquid assets	534	14 475	20 116	8 075	-14 897	-10 591	-3 077	1 615	-13 187
Cash and bank accounts at the beginning of the period	-	534	15 009	35 125	43 200	28 303	17 712	14 635	16 250
Cash and bank accounts at period end	534	15 009	35 125	43 200	28 303	17 712	14 635	16 250	3 064
<b>Ch. In liquid assets</b>	<b>534</b>	<b>14 475</b>	<b>20 116</b>	<b>8 075</b>	<b>-14 897</b>	<b>-10 591</b>	<b>-3 077</b>	<b>1 615</b>	<b>-13 187</b>

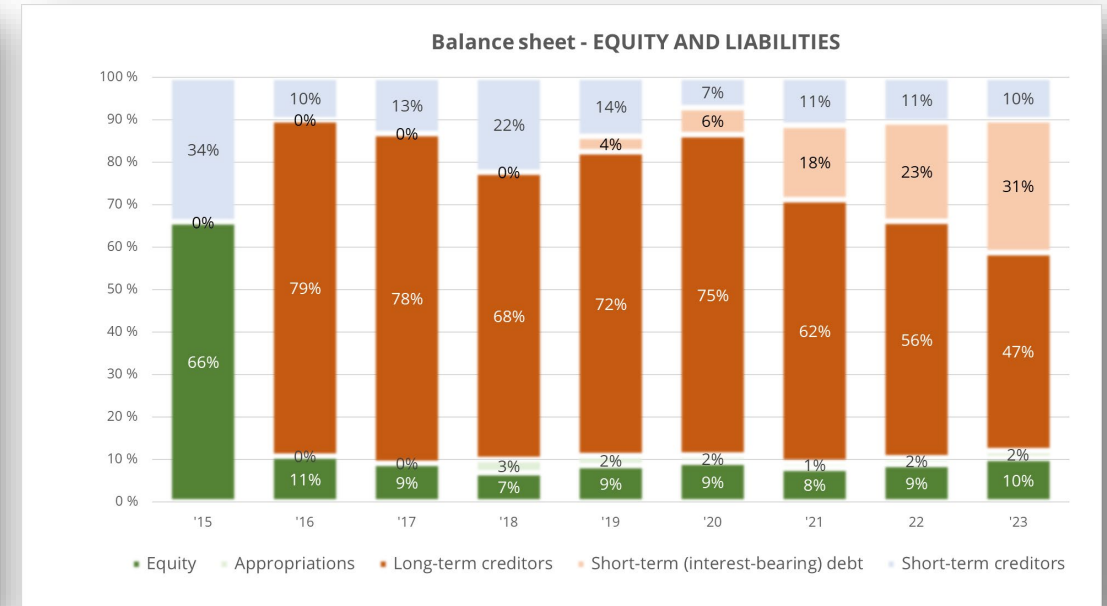
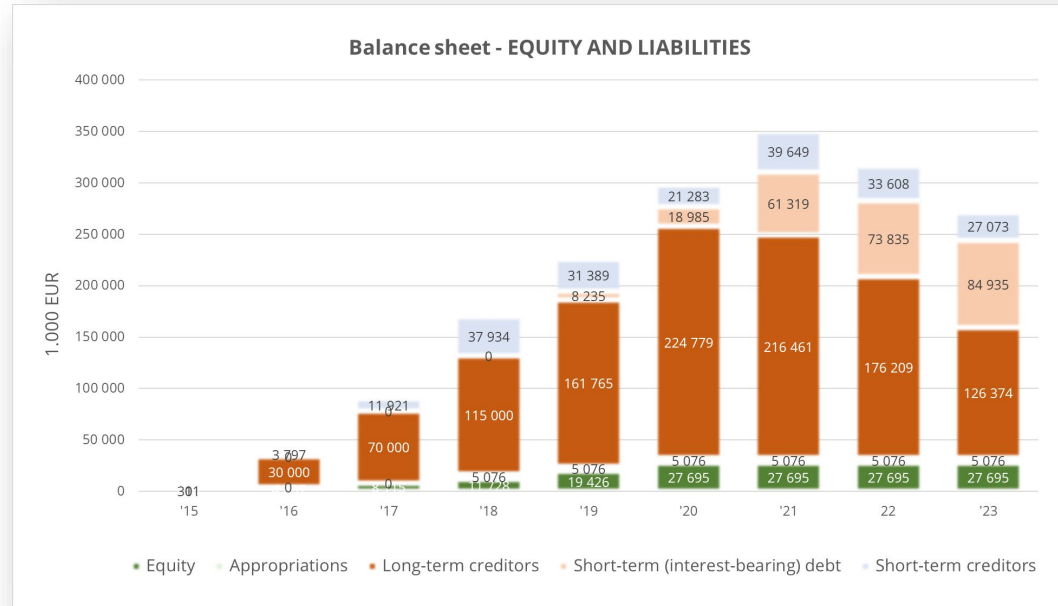


# Oy Apotti Ab - Balance sheet / Assets



- The assets side of the balance sheet include approx. 79 % of capitalized development costs
- In long-term receivables, there is approx. 2,5 me in disputed accounts receivables
- Cash is only approx. 1 % (n. 3,1 me) of the balance sheet

# Oy Apotti Ab - Balance sheet / Equity and liabilities



- The equity and liabilities side of the balance sheet include approx. 78 % of interest-bearing liabilities
  - Gearing ratio is approx. 752 % !
- Equity is only 10 % of the abalance sheet
  - Equity ratio is approx. 10 %
- Off-balance sheet liabilities are approx. 36,4 me
  - They include e.g., commitments related to the system delivery, rental commitments and leasing commitments



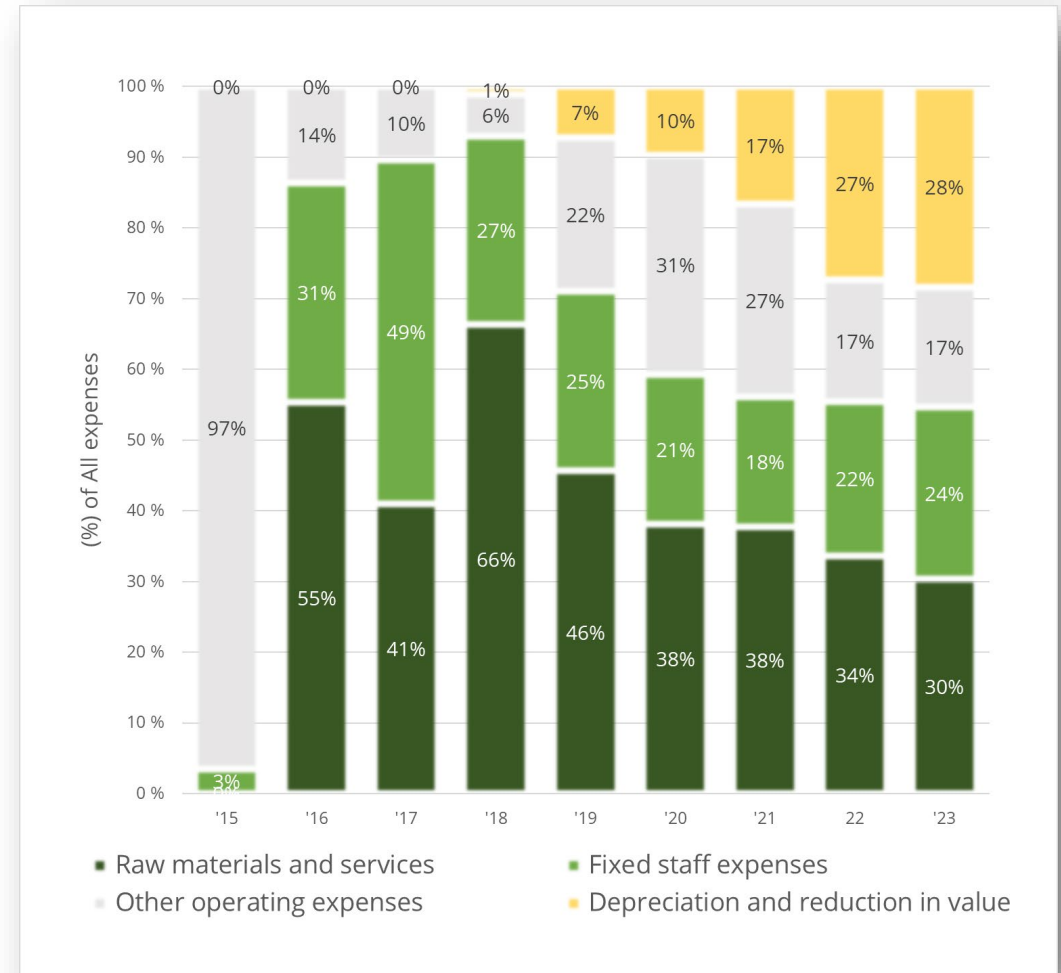
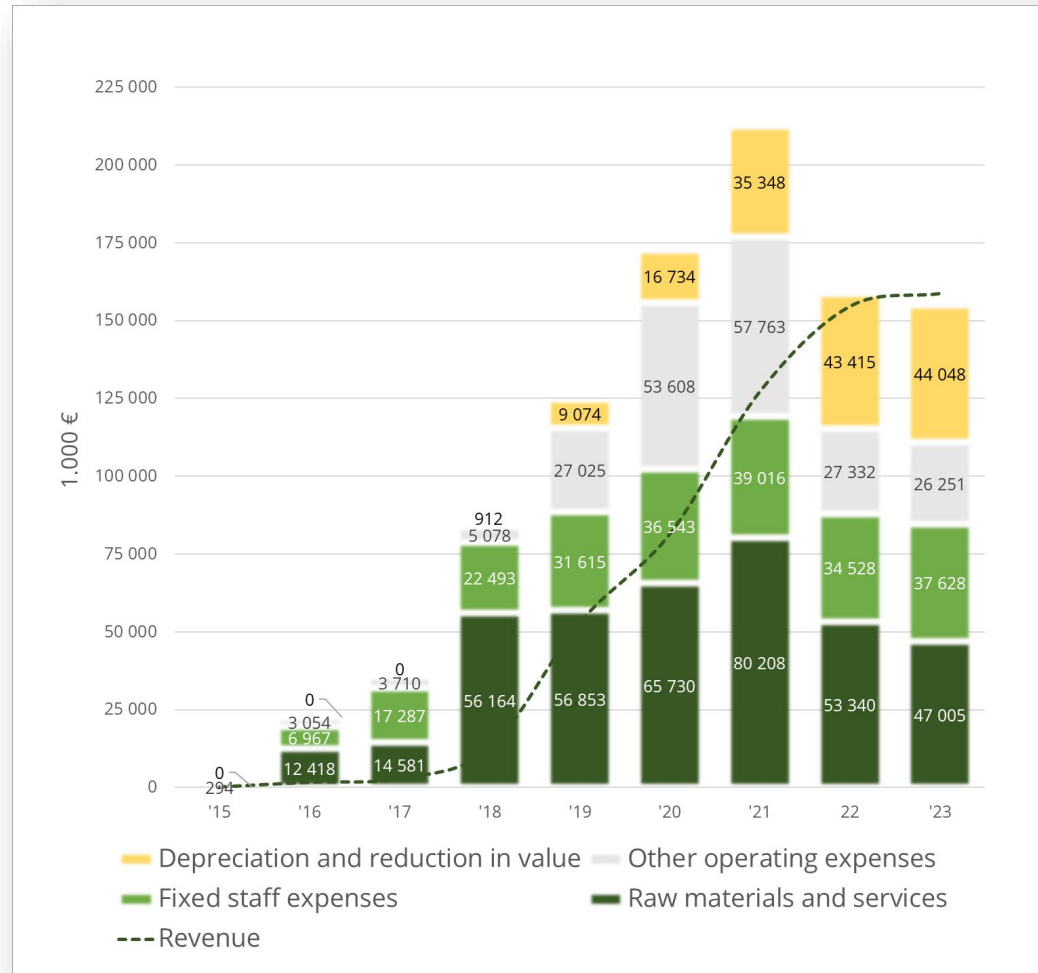
# Case Apotti

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Other point of views

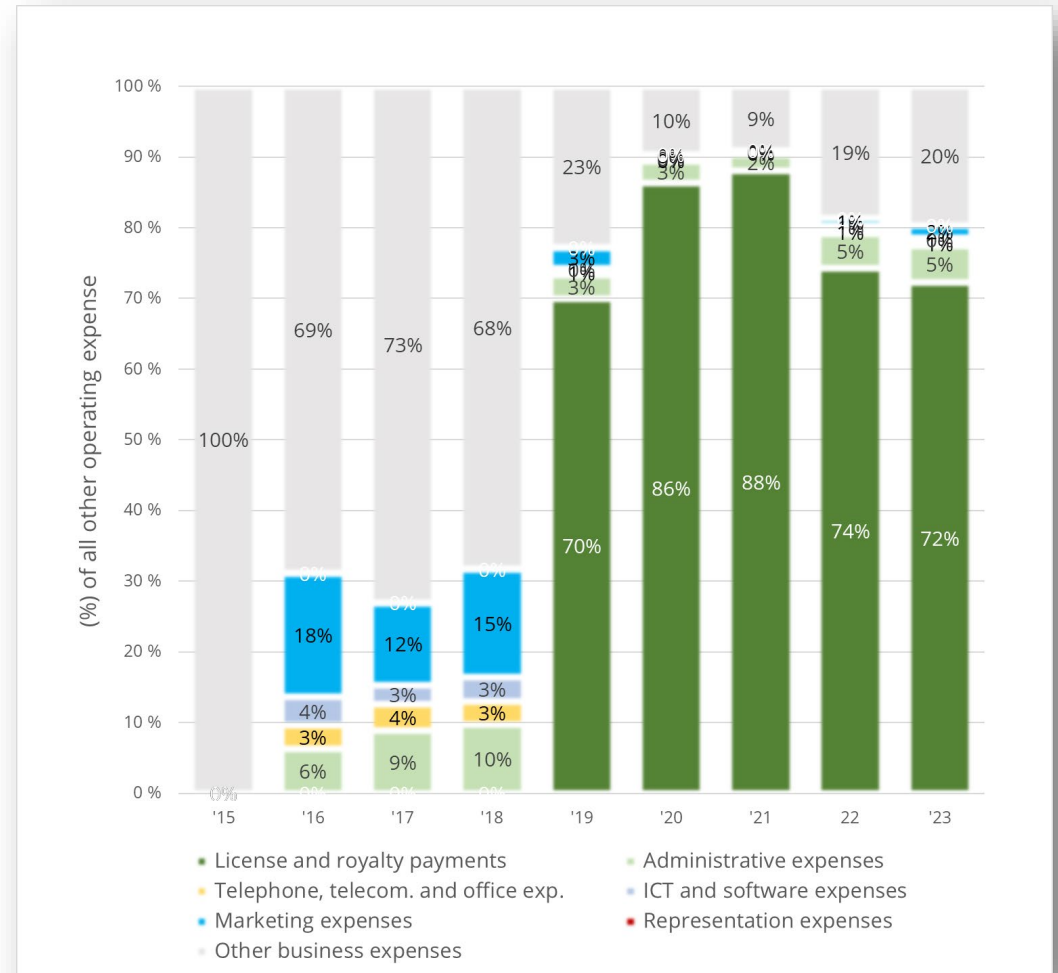
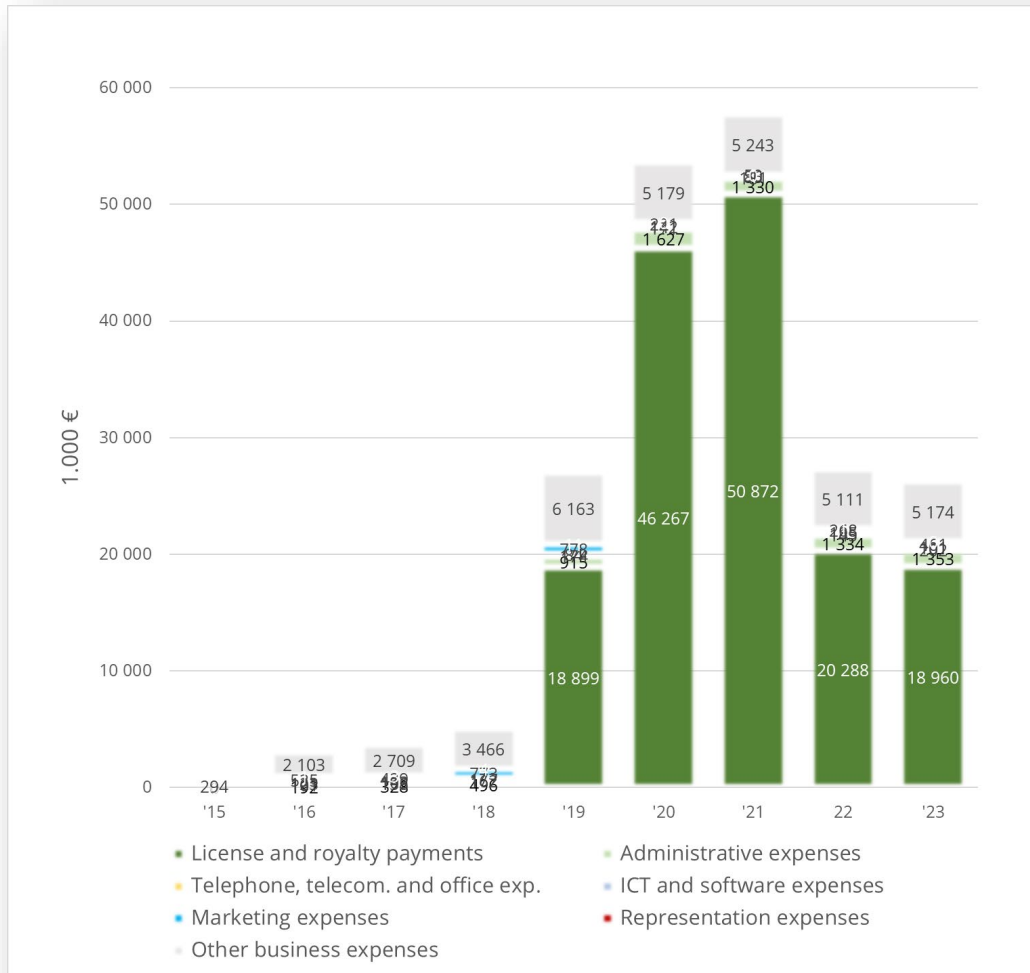


# Oy Apotti Ab - Cost structure



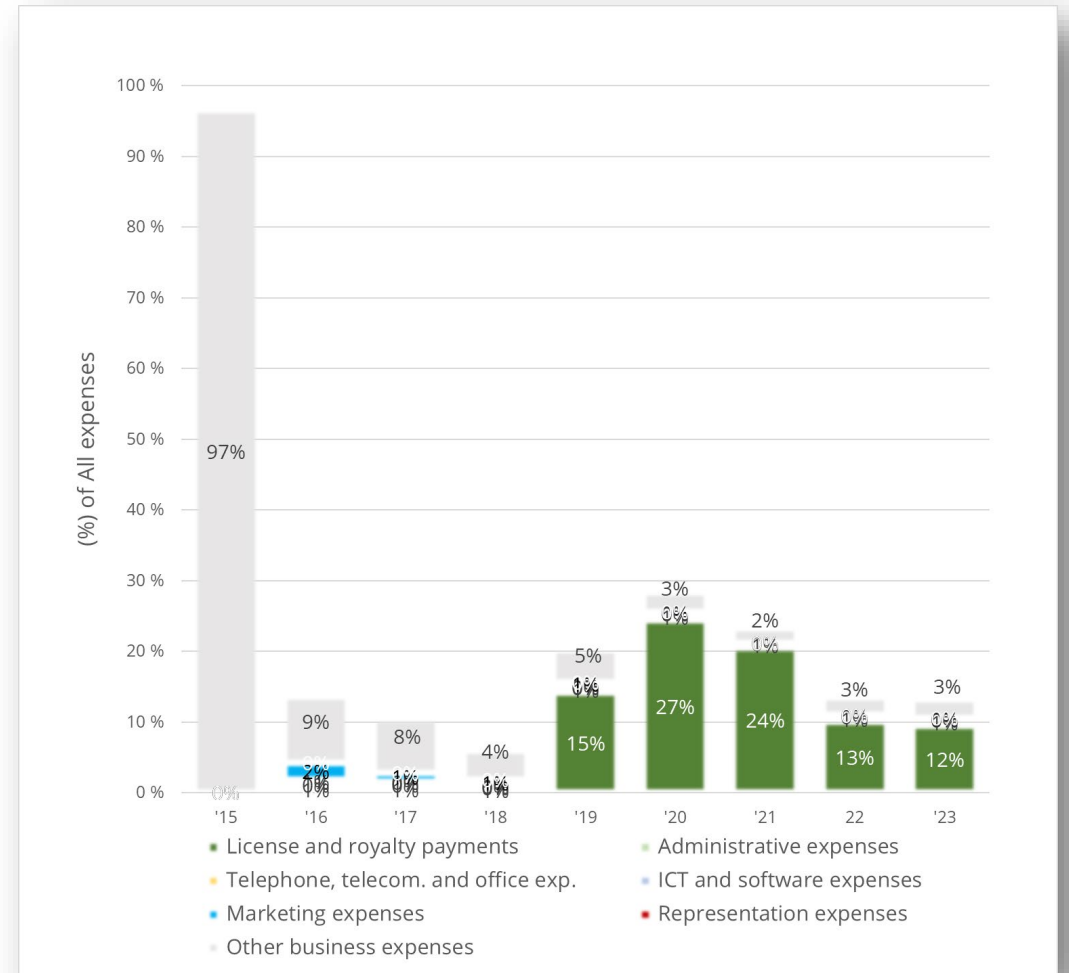
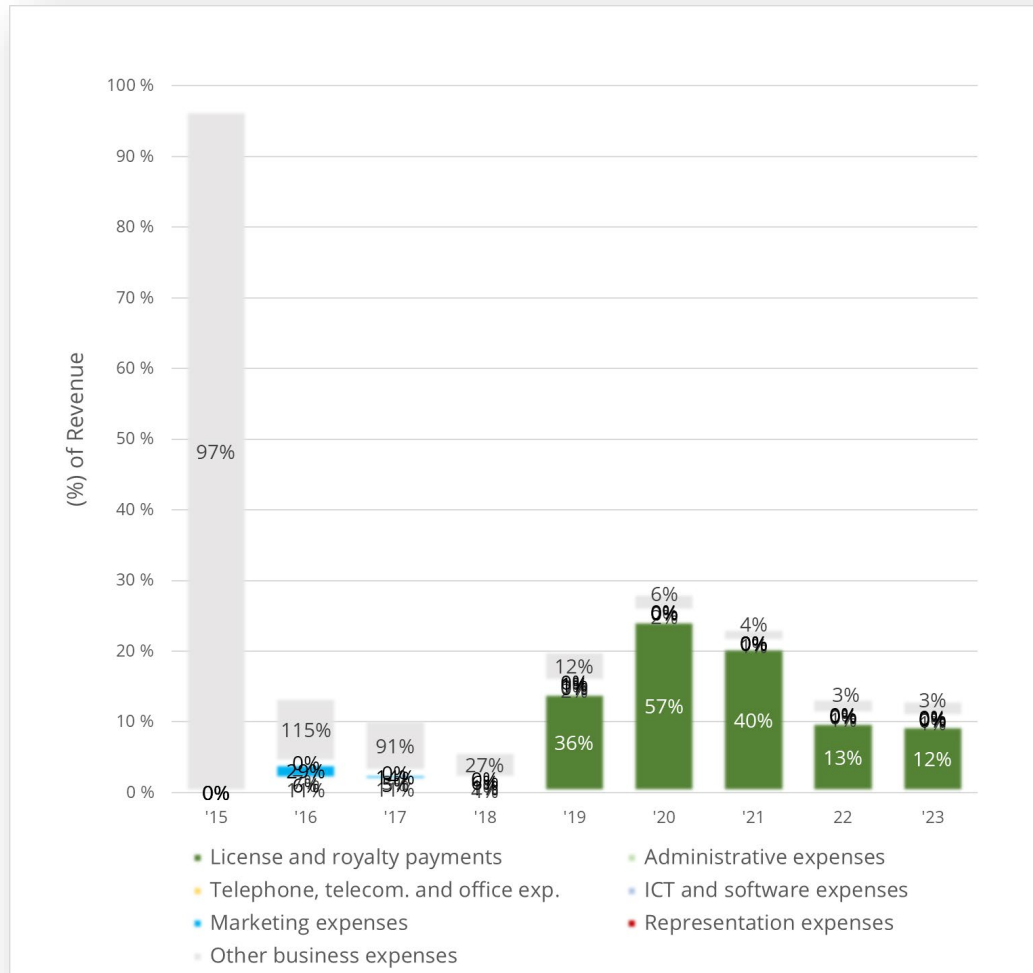
- Revenue and operational expenses are “crossing” only in 2022/2023
- License and royalty fees for other business expenses approx. 12% of all fixed costs (2023)

# Oy Apotti Ab - Cost structure / Other operating costs

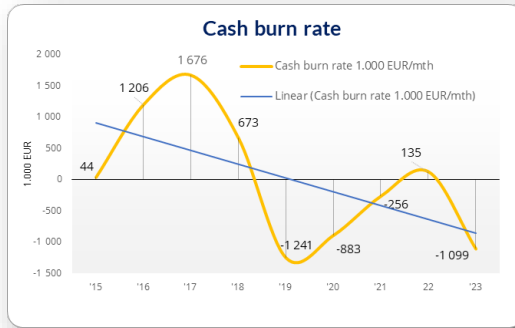


- User rights, license and royalty fees for other business expenses approx. 19 million euros (2023)

# Oy Apotti Ab - Cost structure / Other operating costs

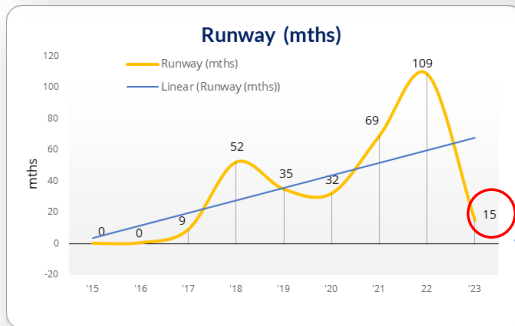


# Oy Apotti Ab - Cash burn and cash flow



## Cash burn rate (1.000 EUR/mth)

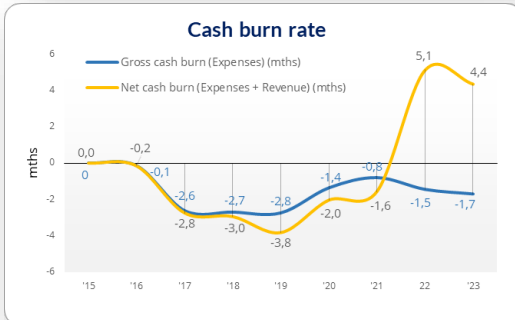
= Cash burn rate measures how quickly a company is using up its cash reserves.  
Formula: Opening cash less ending cash divided by 12



## Cash runway (mths)

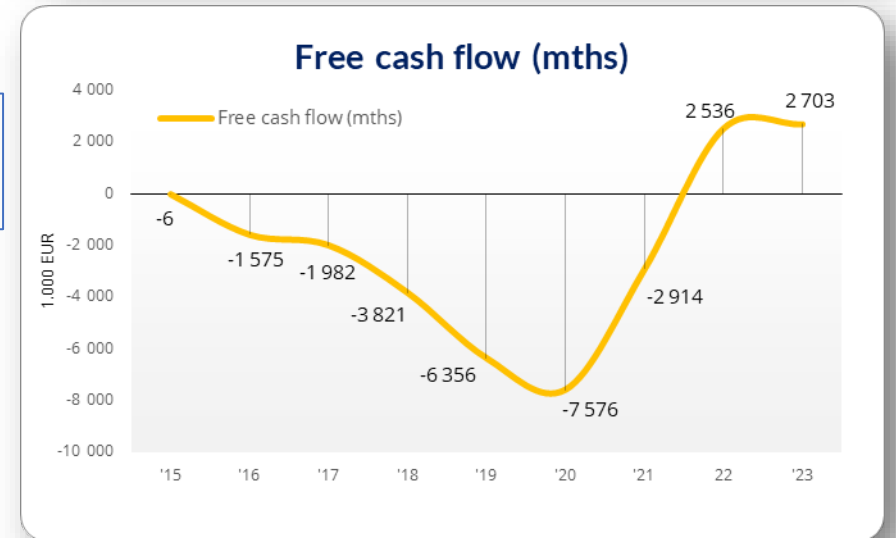
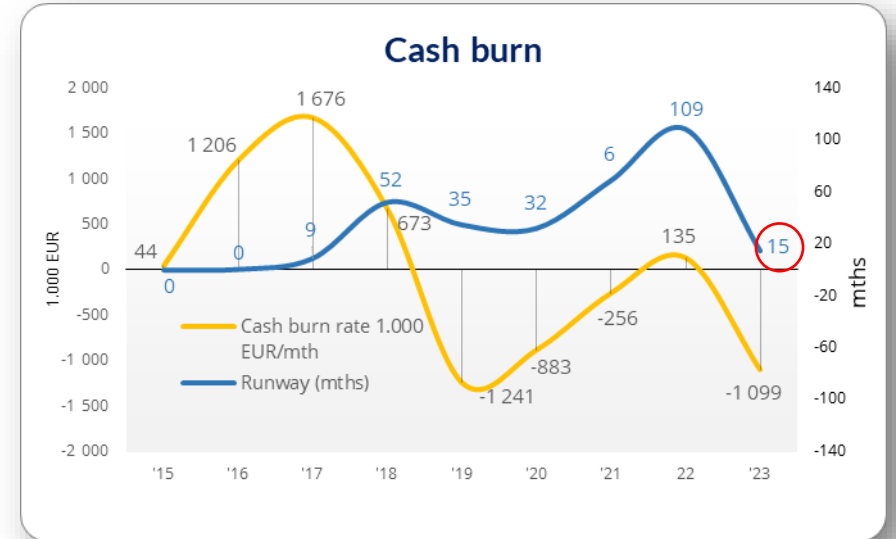
= The number of months until cash runs out. Opening cash divided by cash burn rate

Using 2023 Opening cash (16,3 me) 14,8 months  
The corresponding figure for 2024 would be approx. **2,8 months**<sup>1)</sup>



## Cash burn (gross/net)

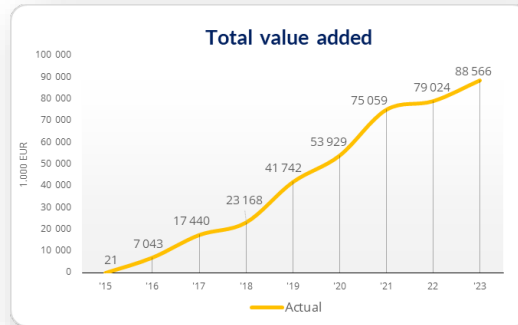
= Gross cash burn rate includes only operating expenses  
= Net cash burn rate measures total monthly cash loss. Net cash burn considers also income



<sup>1)</sup> Using 2023 cost structure and costs and 1.1.2024 opening cash balance

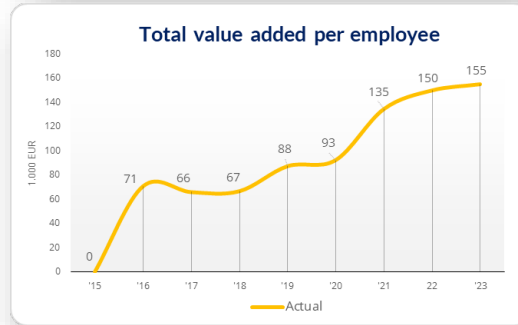


# Oy Apotti Ab - Productivity 2015 - 2023



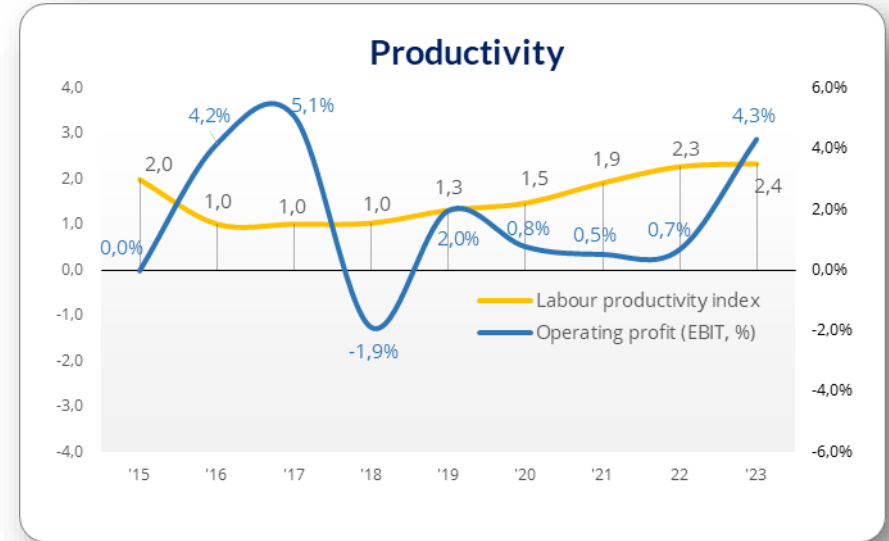
## Total value added

= EBIT + Depreciation + Salary costs - Other operating income - Gains/losses on sale of assets



## Labour productivity index

= Total value added / Salary costs



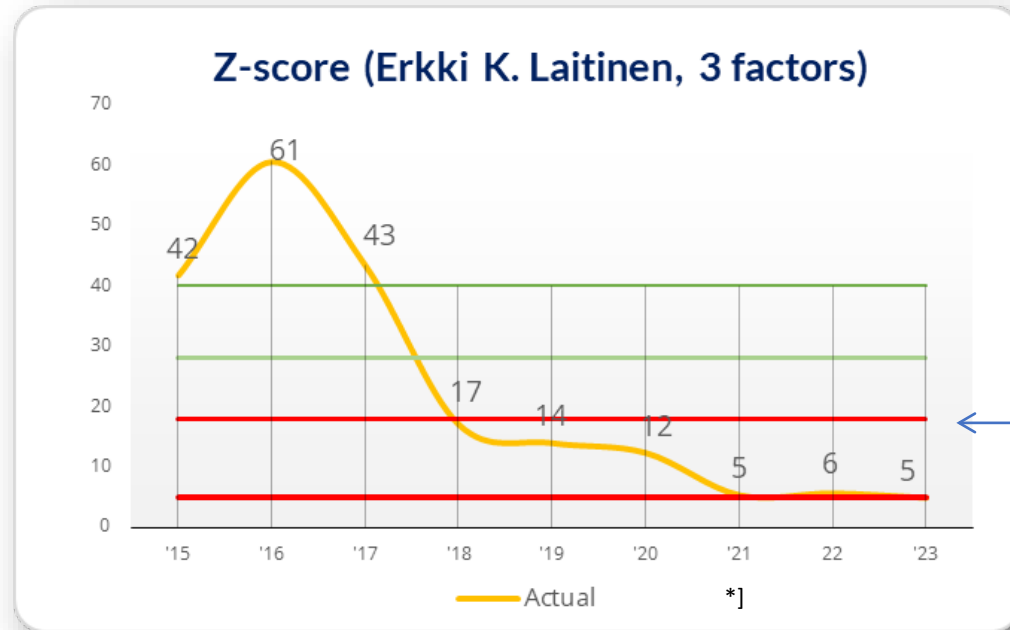
- According to various studies there is a strong correlation between Labour productivity index and EBIT margin

# Z-score as a predictor of bankruptcy risk

- **Bankruptcy research is based on the goal of finding the most essential factors that predict potential future financial crisis, which, if realized, could lead to the company's bankruptcy.**
- The development of the research and forecasting models has progressed e.g., from Edward I. Altman's one-factor model to Aatto Prihti's Z-score and Erkki K. Laitinen's three and five factor Z-scores.
  - The Z-score can be used, for example, in the evaluation of the company's internal financial condition, in which case the imminent threat of bankruptcy can be avoided by **taking corrective measures to improve operations.**
- The goal has not been to find a completely reliable, but indicative indicator, which would nevertheless raise a "red flag as a sign of danger" in sufficient time.
  - However, a Z-score falling below the critical value is not a certain "bankruptcy sentence", but rather gives the owner, financier and/or operative management an opportunity to react.
  - According to current research work done, Laitinen's three-factor Z-score gives more reliable results in predicting bankruptcy than Laitinen's five-factor Z-score.
  - **Z-score has proven to be an excellent identifier of bankrupt companies. It identifies the company's difficulties and possible bankruptcy with an approx. 80% probability already two years before bankruptcy.**
- In external reviews, the challenge of evaluating the results is that the financial statements only shows the situation at the time of the financial closings
  - Quite often companies in trouble i.e., in financial difficulties try to "embellish" the financial statements
  - The bankruptcy predictions made based on financial statement analysis only concerns the symptoms of bankruptcy and not their concrete causes
- Laitinen's 3 and 5 factor Z-score calculation is included in Argon Pro's analysis model

Three factor Z-score (Laitinen)	Indicative reference values
Excellent	> 40
Good	28 - 40
Satisfying	18 - 28
Weak	5 - 18
Poor	< 5
The critical value is 18	

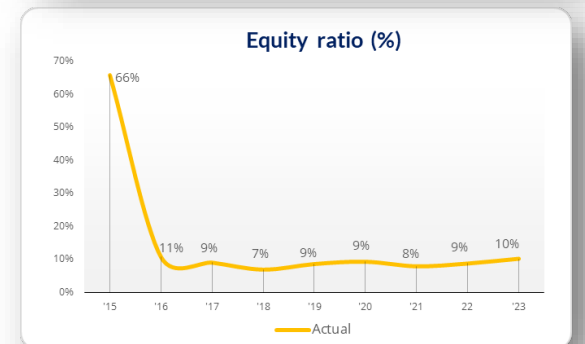
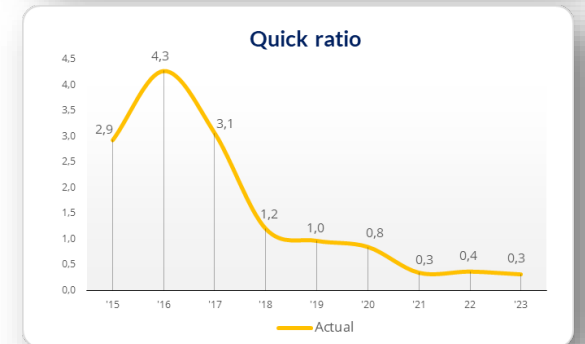
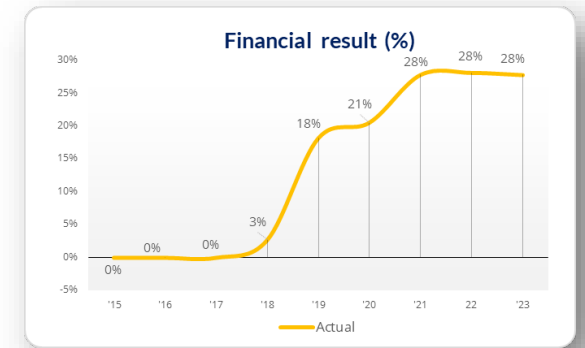
# Oy Apotti Ab - Z-score predicting bankruptcy



The critical value of Z-score is 18

- $Z^{(3 \text{ factors})} = (1,77 \times \text{Financial result-\%}) + (14,14 \times \text{Quick ratio}) + (0,54 \times \text{Equity ratio})$

## Components of 3 factor Z-score





# Case Apotti

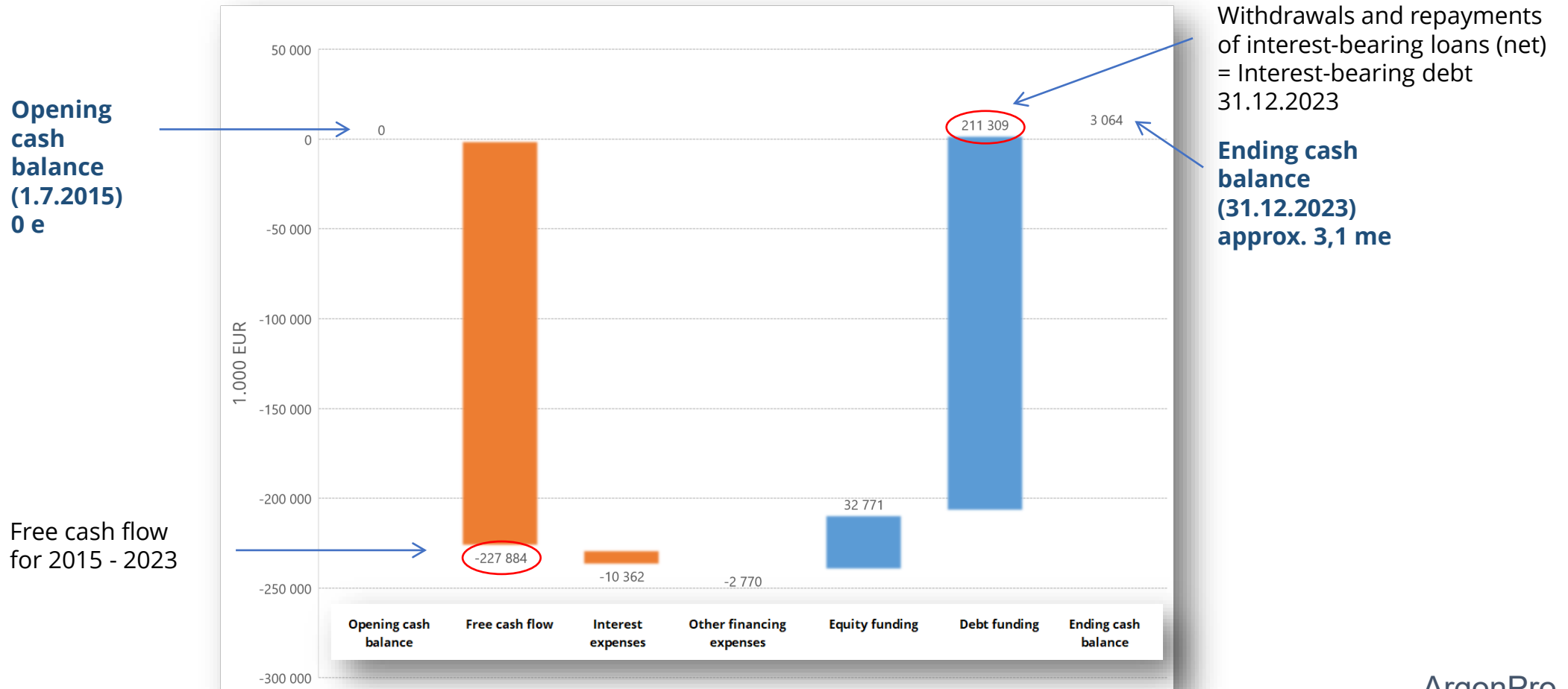
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Key findings and considerations



# Cash flow balance of Apotti 2015 - 2023

- The Company's negative free cash flow is financed mainly (approx. 85 - 90%) with debt
  - *With the Gearing ratio of approx. +752 %, the company is over-indebted*



# Key findings and considerations

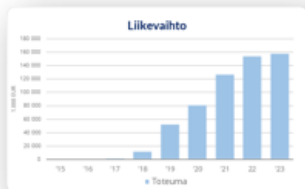
- The turnover of the Company comes mainly from the owners
  - *Some of the original owners are leaving the Company and the entire program. This will transfer financing and guarantee responsibilities to a smaller number of (remaining) owners - Who will guarantee the wellbeing services counties?*
- Gross profit margin of the Company has varied between -600 % and +100 %
  - *The question arises whether the Gross profit margin here is a margin of a "normal" company*
- **Although the Company is non-profit** and has only made one loss-making financial year, equity position has decreased when the balance sheet has been "pumped up" mainly by the capitalization of development costs.
  - *The Company's equity ratio (approx. 10 %) is at a weak level*
  - *The Company's debt (gearing) ratio is at a catastrophically bad level (+752 %)*
- During the review period, the Company has generated **negative free cash flow of approx. -228 me**
  - *However, free cash flows of the last two financial periods are positive - a promise of better performance?*
  - *The negative free cash flow has been financed mainly with debt*
    - A "normal" company wouldn't be able to get more debt financing with such a bad figures
  - *The cash balance at the end of 2023 (approx. 3,1 million euros) is not enough for the current operation*
    - Key ratios describing the liquidity of the Company (Quick and Current ratio) are well below the minimum levels.
- The Z-score predicting the bankruptcy of the Company is below critical level
- **Although the Company is non-profit, it should be able to manage its cash flow. The company needs new financing. On the other hand, the company is significantly over-indebted.**
  - *Regarding the future and the forecast, there is no information on how the situation is planned to turn around*

# The finances of Oy Apotti Ab are in poor condition!

← X,X % = Apotti

## Increase in revenue (%)

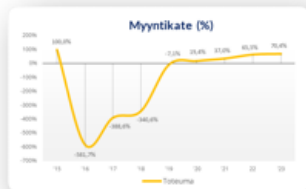
← +2,7%



Measure e.g. the development of the company's business growth. The number can also be used to evaluate the company's success in sales. A company can also increase its turnover by buying or reducing its turnover by selling businesses.

## Gross profit margin (%)

← 70,4%



The indicator is industry-specific and does not have a general rating scale, so the number should not be used to compare different industries. Comparison within the industry, or competitors and changes in own margin are important while monitoring targets.

## EBITDA (%)

← 32,1%

10% - 20%	Industry
2% - 10%	Commerce
5% - 15%	Services

Universal reference values cannot be given for this key indicator. Its level largely depends on the company's industry and capital structure. Industry/competitor-specific comparison and changes in own EBITDA (%) are important while monitoring targets.

## EBIT (%)

> 10%	Good
5 - 10%	Satisfactory
< 5%	Weak

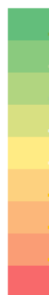


← 4,3%

Universal reference values cannot be given for this key indicator. Its level largely depends on the company's industry and capital structure. Industry/competitor-specific comparison and changes in own operating profit are important while monitoring targets.

## Equity ratio (%)

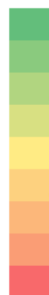
> 50%	Excellent
35%	Good
25%	Satisfactory
15%	Weak
0%	Poor



← 10,2%

## Gearing ratio (%)

< 10%	Excellent
10%	Good
60%	Satisfactory
120%	Weak
> 200%	Poor



← +752%

## Quick ratio

> 1,5	Excellent
1,5	Good
1,0	Satisfactory
0,5	Weak
< 0,3	Poor



← 0,3

## Current ratio

> 2,5	Excellent
2,5	Good
2,0	Satisfactory
1,5	Weak
< 1,0	Poor



← 0,3

## Return on Equity, (ROE) (%)

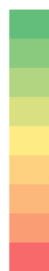
> 20%	Excellent
20%	Good
15%	Satisfactory
10%	Weak
< 5%	Poor



← 0,0%

## Return on Invested Capital, (ROI) (%)

> 15%	Excellent
15%	Good
10%	Satisfactory
6%	Weak
< 3%	Poor



← 0,0%

## Z-score (3 factors)

> 40	Excellent
40	Good
28	Satisfactory
18	Weak
< 5	Poor



← 5

## Z-score (5 factors)

> 20	Excellent
20	Good
10	Satisfactory
-7	Weak
< -15	Poor



← -3



## Background, formulas and reference values to the various financial indicators

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# Background to the financial indicators

- **Financial result (%)** describes how many percent of the company's income remains after expenses
  - Traditionally, the business of a bankrupt company has been unprofitable for several years before the bankruptcy.
  - A company with a negative financial result has to take out a new loan to pay its debts, which is an unsustainable situation in the longer term
- **Equity ratio (%)** describes the strength of the company's balance sheet
  - It has been found that the balance sheets of almost all bankrupt companies were weak.
  - A company with weak equity ratio is very likely to run into payment difficulties, and it is also more difficult for it to get external financing than a company with strong equity position.
  - In volatile times, a company with a strong equity ratio also has easier and cheaper access to external financing
- **Quick ratio** and **Current ratio** describes the company's ability to respond to short-term financing needs, and those ratios usually decrease as bankruptcy approaches
  - A weak Quick ratio is a traditional problem of bankrupt companies, but not necessarily the cause of bankruptcy itself.
- One of the key performance indicators is the cycle period of **Trade debtors** and **Trade creditors**.
- **Change in revenue (%)** measures the expansion or contraction of the company's business.
  - However, this financial indicator has given indications of bankruptcy only in the last year before the actual bankruptcy.
- **A company below the critical value of the Z-score has a high risk of bankruptcy.**
  - However, oversized value of one factor may distort the value of the Z-score and may lead to incorrect interpretations.
  - In groups where financing is usually managed centrally by the parent company, all or some factors may also be distorted, although the parent company is usually responsible for its subsidiaries



# Formulas for the financial indicators

Financial indicator	Formula
Net income	EBIT + Financial income – Financial expenses – Taxes
Financial result	Net income + Depreciation and reduction in value
Financial income (%)	$\frac{\text{Financial result}}{\text{Income from operations Total}} \times 100$
Equity ratio (%)	$\frac{\text{Shareholders' equity}}{\text{Total assets – Advance payments received}} \times 100$
Quick ratio	$\frac{\text{Financial assets – Receivables in Percentage of completion projects}}{\text{Short – term liabilities – Short – term advance payments received}}$
Current ratio	$\frac{\text{Inventory + Financial assets}}{\text{Short – term liabilities}}$
Days in Trade creditors	$\frac{\text{Trade creditors}}{\text{Purchases and External services (12 mths)}} \times 365$
Days in Trade debtors	$\frac{\text{Trade debtors}}{\text{Revenue (12 mths)}} \times 365$

# Reference values for financial indicators

Financial indicator	Excellent	Good	Satisfactory	Weak	Poor
Net income					
Financial result	At least as large as the repayments of the loan. In the long term, it should cover loan repayments, self-financing portions of investments, increases in working capital and profit distribution to owners.				
Financial income (%)					
Equity ratio (%)	> 50 %	35 – 50 %	25 – 35 %	15 – 25 %	< 15 %
Quick ratio	> 1,5	1,0 – 1,5	0,5 – 1,0	0,3 – 0,5	< 0,3
Current ratio	> 2,5	2,0 – 2,5	1,5 – 2,0	1,0 – 1,5	< 1,0
Days in Trade creditors	Industry/business-specific, however reasonably close to the sales receivables cycle time, the payment times of procurement/purchase agreements should be monitored at some level				
Days in Trade debtors	Industry/business-specific, however reasonably close to the cycle time of accounts payable, the payment times of sales contracts (payment terms) should be monitored at some level				



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