

# Nanologica

Sector: Medtech

## Q3 2023 – Untapped Potential Ahead

Redeye returns with a research update on Nanologica following its Q3 2023 report, which were soft in terms of sales but in line with our EBIT estimate. With an eventful period in terms of customer activity, we see an exciting period ahead.

### Q3 2023 – Preparing for sales ramp-up

Nanologica's Q3 report fell short of our sales estimate, but it aligned with our EBIT projection due to lower costs than initially forecasted. The cash position at the end of Q3 stood at SEK 22.6m. Initial deliveries have been made to a customer described as "one of the world's largest insulin manufacturers" in Asia. We anticipate updates on the progress to be available before the year's end, and this customer could become an important reference customer for Nanologica and solely account for significant sales.

### Slight adjustments to forecasts

We lower our expectations for sales in Q4 from SEK14m to SEK6m, leading to FY2023e sales of SEK7m. Nevertheless, with production obstacles now being overcome, we believe that order fulfillments will pave the way for a sales to take off from Q4 2023 and onwards. In this context, the company again reiterated its FY2024e target of SEK100m in sales.

### Valuation and Share Price

Following the Q3 report, two primary changes have influenced our fair value range. We have increased our WACC from 12.5% to 13% in alignment with a Redeye policy decision, and also made minor downwards adjustments (negligible in a valuation perspective) to our near-term forecasts. These adjustments slightly lower our fair value range to SEK7-29, with a base case valuation of SEK16.

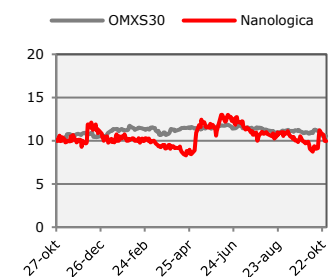
Accordingly, at SEK11 per share, we see potential for good news related to progress from the communicated orders and also new customer evaluations to narrow the valuation gap to our base case.

Key Financials (SEKm)	2021	2022	2023e	2024e	2025e
Net sales	13	2	7	90	187
Sales growth	-20%	-88%	356%	1174%	107%
EBITDA	-30	-39	-29	5	46
EBIT	-41	-51	-42	-9	30
EBIT Margin (%)	-315%	-3270%	-597%	-10%	16%
EV/sales	29,3	188,1	52,8	4,1	2,0
EV/EBIT	-9,3	-5,8	-8,8	-42,1	12,4

### FAIR VALUE RANGE

BEAR	BASE	BULL
7 (7)	16 (17)	29 (30)

### NICA VS OMXS30 – 12 MONTHS



### REDEYE RATING



### KEY STATS

Ticker	NICA
Market	Small Cap
Share Price (SEK)	11
Market Cap (SEKm)	401
Net Debt (SEKm)	-22.6
Free Float (%)	53%
Avg. daily volume ('000)	11.9

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## Investment case

### An emerging pick-and-shovel play

We consider Nanologica a pick-and-shovel play, targeting an enticing niche in purifying peptides, such as GLP-1 and insulin. Although its commercial launch was delayed on account of production setbacks, these challenges have now been addressed, and the company is ready for launch. The company has garnered client interest in the form of customer evaluations and initial orders. Additionally, we hold the belief that the market is concerned about the potential need for a capital injection ahead of the sales ramp-up, a requirement we do not anticipate.

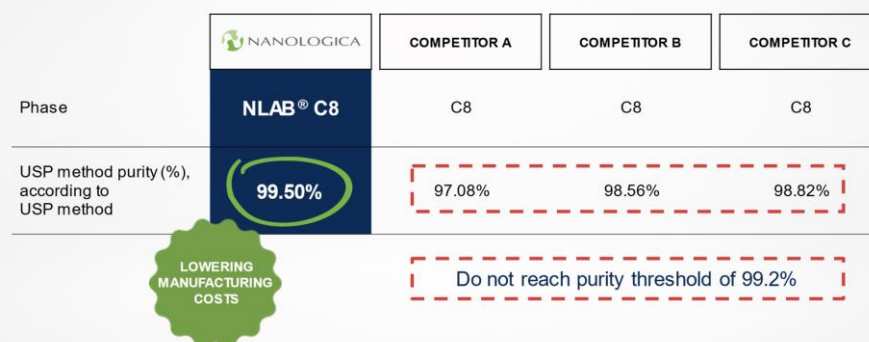
### Prerequisites in place for a commercial breakthrough

Nanologica has received several initial orders for NLAB Saga® and even an evaluation order from one of the largest insulin manufacturers in the world, which could offer a significant commercial opportunity. However, a setback in the production process initially impeded Nanologica's ability to fulfil these orders. Nonetheless, as of May 2023, it has effectively resolved this obstacle, ensuring the product now meets the necessary quality standards. Consequently, Nanologica can now commence delivery to customers for larger-scale evaluation, paving the way for a potential sales ramp-up. We foresee a sales ramp-up picking up in Q4 2023 and beyond which should have a tangible impact on the share price.

#### Supportive analysis: Growth through health-economics benefits

Nanologica is a leading global producer of nanoporous silica, or silicon dioxide, and has a mission to develop more effective and affordable medicines for the betterment of patients and healthcare systems. It intends its NLAB Saga® product to become the preferred choice for purifying peptides, such as insulin, insulin analogues, and GLP-1 analogues, by chromatography. Its competitors require two rounds of reverse-phase chromatography, while Nanologica has demonstrated that NLAB Saga® achieves a purity level exceeding 99.2% after only one round.

This purification stage is the costliest step in insulin production, representing up to 25% of total production costs, Nanologica estimates. Cost reduction is a crucial driver for pharmaceutical manufacturers, making treatment more affordable and available to more patients. The utilisation of NLAB Saga® enhances purification process efficiency, and silicon's durability allows it to be used in multiple cleaning cycles, bringing significant cost savings for pharmaceutical manufacturers.



The market for preparative chromatography is – along with Nanologica's commercial prospects – projected to experience rapid growth due to the increasing prevalence of type 2 diabetes and obesity, which necessitates the broader use of insulin and GLP-1. Given the cost savings it affords customers, the company's financial targets suggest SEK100m in 2024 revenue, which we believe could expand to cSEK260m in 2026e.

**Challenge I: Barriers to entry**

Replacing established methods in the healthcare and pharmaceutical industry is a lengthy process that requires thorough investigations by potential customers and long sales lead times. Hence, we see a risk that the sales ramp-up could be longer than anticipated, leading to slower sales than Nanologica's guidance suggests, which eventually would require more capital.

**Challenge II: Finalizing production scale-up could pose challenges**

Nanologica's products have captured customer interest, and the company has anticipated sales growth in recent years. However, the outbreak of COVID-19 and its aftermath and the challenges encountered during the production scale-up have created significant hurdles that have taken longer than expected to overcome, delaying previous sales objectives considerably. Although the company has largely addressed these issues now, it is essential to highlight that additional challenges in the production scale-up may arise, potentially bringing further delays to Nanologica's ability to fulfill large-scale production.

**SEK16 base case - sales growth to close the valuation gap**

Our 2023e-2032e DCF suggests a base case fair value of SEK16, suggesting upside potential. The observed discrepancy likely stems from skepticism surrounding the anticipated sales ramp-up and concerns about potential dilutive financing. Our bull case scenario amounts to SEK29, while our bear case scenario stands at SEK7 (accounts for dilutive financing). We anticipate that the realization of quarterly reports confirming sales growth will serve as catalysts to bridge the valuation gap.

**Nanologica base case DCF**

Redeye base case				
Assumptions		DCF	SEKm	Per share (SEK)
Tax rate	20,6%	2023e-2025e	-16	-0,5
WACC	13,0%	2026e-2030e	235	6,5
CAGR, 2023e-2025e	413,7%	Terminal	337	9,3
CAGR, 2026e-2031e	15,0%	Net cash	23	0,6
Average EBIT 2026e-2031e	25,6%			
Shares outstanding	36,1			
<b>Terminal values, 2032</b>		<b>Fair value</b>	<b>578</b>	<b>16</b>
Group sales	520	Upside potential		52%
Terminal growth	2%			
EBIT margin	25%			

Source: Redeye Research

## Q3 2023

Nanologica's Q3 2023 report showed lower sales than we had estimated, coming in at SEK0.3m vs our SEK3.6m estimate. We had initially projected that sales would start ramping up somewhat in Q3, but that proved to be optimistic (the deviation in absolute numbers remains relatively small). The company's sales team is now in a position to enhance their efforts in three out of four key markets (the United States, India, and China).

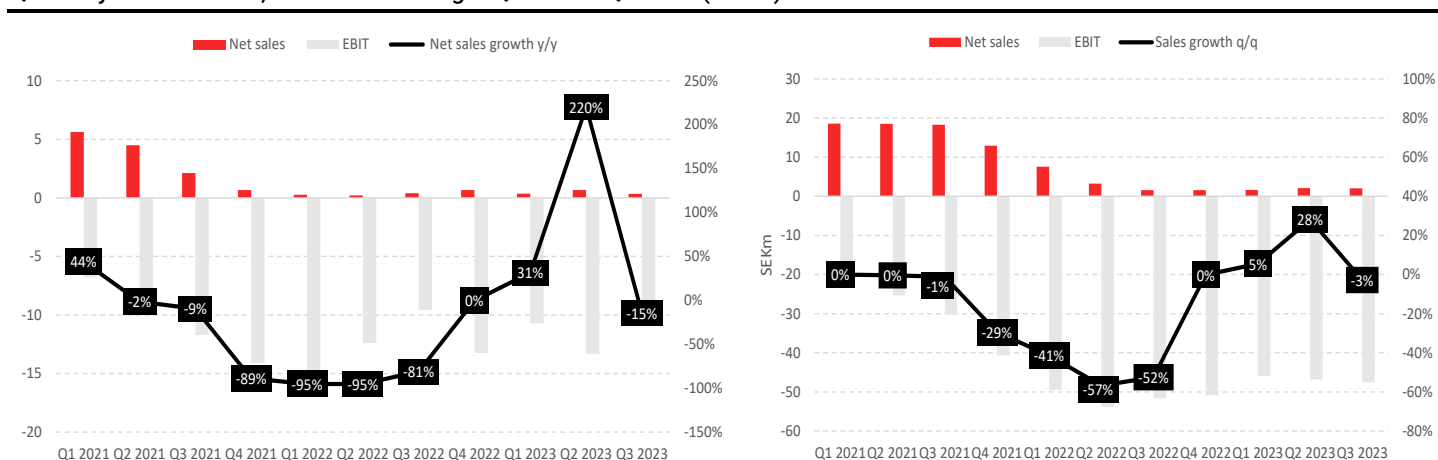
The sales force have previously been hampered by not being able to deliver on customer interest due to the previous production limitations. Consequently, sales in preparative chromatography are expected to impact the PnL from Q4 onward positively.

## Deviation table (SEKm)

(SEKm)	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q2 2023e	dev.%	dev. Abs.
<b>Net sales</b>	<b>0,2</b>	<b>0,4</b>	<b>0,7</b>	<b>0,4</b>	<b>0,7</b>	<b>1,3</b>	<b>-47%</b>	<b>-0,6</b>
Sales growth y/y	-95%	-81%	0%	31%	220%	500%		
Sales growth q/q	-22%	91%	68%	-47%	89%	255%		
<b>Gross profit</b>	<b>1,2</b>	<b>1,4</b>	<b>1,5</b>	<b>1,5</b>	<b>0,8</b>	<b>0,4</b>	<b>83%</b>	<b>0,4</b>
Gross margin (%)	565%	352%	223%	412%	120%	35%		
<b>OPEX</b>	<b>-10,7</b>	<b>-8,1</b>	<b>-11,7</b>	<b>-8,9</b>	<b>-10,5</b>	<b>-9,1</b>	<b>16%</b>	<b>-1,4</b>
Other external expenses	-3,7	-2,2	-3,3	-1,9	-2,1	-3,0	-32%	0,9
Personnel costs	-6,5	-5,8	-8,3	-6,8	-8,2	-5,8	42%	-2,4
Other operating expenses	-0,5	-0,1	-0,1	-0,2	-0,2	-0,3	-17%	0,0
<b>EBITDA</b>	<b>-9,5</b>	<b>-6,6</b>	<b>-10,2</b>	<b>-7,5</b>	<b>-9,7</b>	<b>-8,6</b>	<b>12%</b>	<b>-1,1</b>
EBITDA margin	-4518%	-1658%	-1506%	-2101%	-1442%	-685%		
<b>EBIT</b>	<b>-12,4</b>	<b>-9,6</b>	<b>-13,3</b>	<b>-10,7</b>	<b>-13,3</b>	<b>-12,0</b>	<b>11%</b>	<b>-1,3</b>
EBIT margin	-5903%	-2384%	-1966%	-3019%	-1981%	-955%		

Source: Redeye research, company data

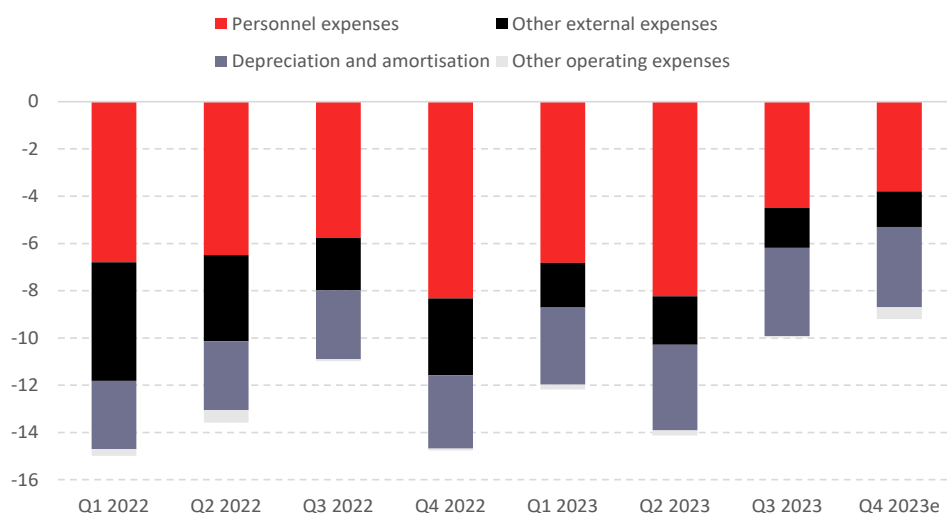
## Quarterly financials left, LTM financials right Q1 2021 – Q3 2023 (SEKm)



Source: Redeye research, company data

The cost-cutting measures announced earlier in 2023 has begun leaving print in the PnL, and Nanologica reported lower OPEX than we had forecasted, leading to EBIT of SEK-10.3m compared to our SEK-10.1m estimate. Primarily affected by lower personnel costs than we had anticipated. The lower cost level will persist in the coming quarters and the CEO mentioned in the report that "from September, cash flow will improve".

**OPEX line item distribution Q1 2022 – Q4 2023e**

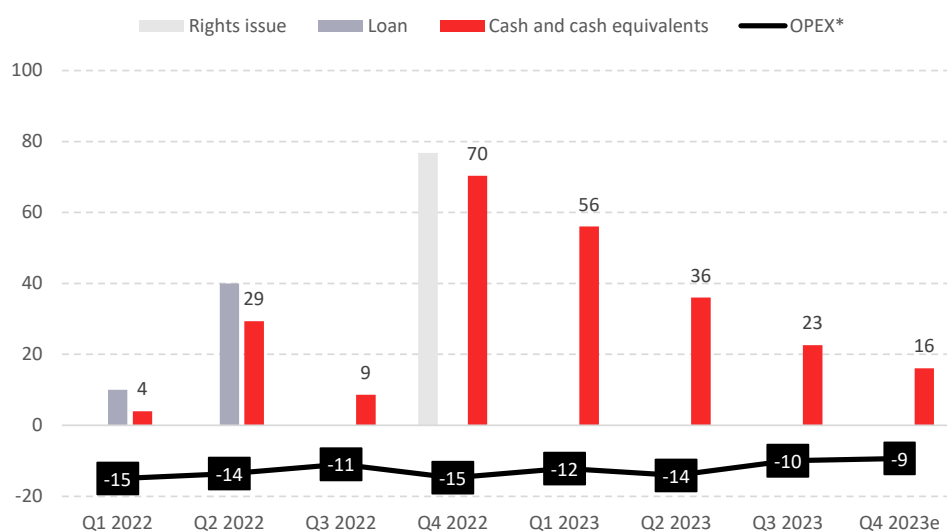


Source: Redeye Research

The cash position amounted to SEK22.6m, following a cash flow of SEK-13.5m. The financing situation will be contingent on the pace of the sales ramp-up throughout Q4 2023 and H1 2024.

We anticipate a notable reduction in cash burn starting from Q4 and beyond. According to the current outlook, Nanologica should not need to raise additional capital. In the event of a potential financing gap, debt financing emerges as an attractive option, and Nanologica has prior experience with such solutions. Hence, while unlikely, a capital injection can not be ruled out, and is accounted for in our bear case.

**Cash position and OPEX estimate Q1 2022 – Q4 2023e**



\*including Amortization&Depreciation

Source: Redeye Research

**Concluding remarks**

As we have previously discussed, the acquisition of reference customers and the collection of real-world data from the usage of Nanologica's silica are currently among the most critical factors for the company, as we believe it will play a pivotal role in facilitating long-term sales.

Hence, we wish to highlight the recently announced order from what Nanologica refers to as "one of the world's largest insulin manufacturers," made public in mid-October. Progress with this particular customer, who has the potential to become a reference customer, is expected to be communicated before the end of the year. This development has the potential to lead to significant long-term sales volumes ranging from tens of millions to hundreds of millions SEK, from this one customer, as stated by the CEO in an earlier interview with Redeye.

**Estimate changes**

Having thoroughly analyzed the quarterly report, we have made the following adjustments to our financial forecasts:

- Slight adjustment to near-term forecasts to accommodate with current outlook
- Minor financial housekeeping

**Updated forecasts 2023e-2025e**

	2023e	Updated 2024e	2025e	2023e	Previous 2024e	2025e	Chg % 2023e	Chg % 2024e	Chg % 2025e
<b>Net sales</b>	7	90	187	19	95	176	-62%	-5%	7%
Other income*	1	2	4	1	2	4			
<b>EBITDA</b>	-29	5	46	-29	-3	42	0%	-271%	10%
Depreciation/Amortization	-14	-14	-16	-14	-4	-7			
<b>EBIT</b>	-42	-9	30	-43	-7	35	-1%	25%	-14%
EBIT margin (%)	-597%	-10%	16%	-254%	-7%	20%			

Source: Redeye Research

**Financial overview 2019 – 2025e (SEKm)**

SEKm	2019	2020	2021	2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023e	2023e	2024e	2025e
<b>Revenues</b>	14,2	20,0	13,5	4,8	2,1	2,4	0,2	5,7	8,1	92,5	191,3
Net sales	9	16	13	2	0	1	0	6	7	90	187
Other income*	5	4	1	3	2	2	0	0	1	2	4
<b>Gross Profit</b>	8,9	16,0	6,0	3,5	1,5	0,8	-0,3	2,9	2,6	46,4	94,4
COGS	-5	-4	-8	-1	-1	-2	0	-3	-6	-46	-97
<b>OPEX</b>	-23,5	-29,9	-36,2	-42,5	-8,9	-10,5	-6,2	-5,8	-31,5	-41,3	-48,3
Other external expenses	-8	-12	-13	-14	-2	-2	-2	-2	-7	-18	-19
Personnel costs	-15	-18	-21	-27	-7	-8	-4	-4	-23	-22	-28
Other operating expenses	-1	0	-2	-1	0	0	0	-1	-1	-1	-2
<b>EBITDA</b>	-14,6	-13,9	-30,2	-39,0	-7,5	-9,7	-6,5	-2,9	-28,9	5,1	46,1
Depreciation/Amortization	-5	-6	-10	-12	-3	-4	-4	-3	-14	-14	-16
<b>EBIT</b>	-20,1	-19,6	-40,7	-50,8	-10,7	-13,3	-10,3	-6,3	-42,4	-8,9	30,2
Taxes and net financials	-1	-3	-4	0	-1	-1	-1	-1	-4	-2	-10
<b>Net income</b>	-21,1	-22,2	-44,8	-50,8	-12,1	-14,7	-11,6	-6,8	-46,9	-10,9	19,9
Sales growth y/y (%)	N/A	75%	-20%	-88%	31%	220%	-15%	750%	356%	1174%	107%
Gross margin (%)	63%	80%	44%	73%	70%	34%	-177%	50%	32%	50%	49%
EBITDA margin (%)	-158%	-86%	-234%	-2507%	-2101%	-1442%	-1914%	-51%	-407%	6%	25%
EBIT margin (%)	-217%	-121%	-315%	-3270%	-3019%	-1981%	-3009%	-111%	-597%	-10%	16%
EPS	-1,3	-0,8	-1,6	-1,4	-0,3	-0,4	-0,3	-0,2	-1,3	-0,3	0,6

Source: Redeye research, company data

## Valuation

At Redeye, we approach the valuation of a company's stock using three scenarios, to provide a dynamic view of the case. As a complement to our base case valuation, we also model pessimistic (bear case) and optimistic (bull case) scenarios.

The differences in estimates between the scenarios are based on modifications of the assumptions used in our valuation process. However, we apply a WACC of 13%, based on: (i) an equity risk premium derived from qualitative and quantitative aspects of the company using our Redeye company quality model; and (ii) Redeye's risk-free interest rate of 3%. We do not factor any M&A into our forecasts. These assumptions apply across our scenarios.

### Summary of changes to our valuation:

- Slightly adjusted near-term forecasts
- Risk-free rate increased from 2.5 to 3% raising our WACC to from 9.5% to 10%

### Base case – SEK16 (17)

Our base case represents the most probable scenario, in which we see customer evaluations starting to materialise at the end of 2023, with sales ramping up significantly during 2024, assuming Nanologica will become cash-flow-positive at the end of that year.

### Nanologica base case DCF

Redeye base case				
Assumptions		DCF	SEKm	Per share (SEK)
Tax rate	20,6%	2023e-2025e	-16	-0,5
WACC	13,0%	2026e-2030e	235	6,5
CAGR, 2023e-2025e	413,7%	Terminal	337	9,3
CAGR, 2026e-2031e	15,0%	Net cash	23	0,6
Average EBIT 2026e-2031e	25,6%			
Shares outstanding	36,1			
<b>Terminal values, 2032</b>		<b>Fair value</b>	<b>578</b>	<b>16</b>
Group sales	520	Upside potential		52%
Terminal growth	2%			
EBIT margin	25%			

Source: Redeye Research

### Sensitivity analysis

		Weighed Average Cost of Capital (WACC)				
		15,0%	14,0%	13,0%	12,0%	11,0%
Terminal EBIT margin	21,0%	11,7	13,0	14,5	16,2	18,4
	23,0%	12,3	13,6	15,2	17,2	19,5
	25,0%	12,9	14,3	16,0	18,1	20,6
	27,0%	13,4	14,9	16,8	19,0	21,7
	29,0%	14,0	15,6	17,5	19,9	22,8

Source: Redeye Research

## Bull case – SEK29 (30)

In our bull case, we assume Nanologica swiftly establishes itself as a trusted supplier of NLAB Saga® to large-volume customers providing more extensive sales growth and slightly higher margins in the near and long term compared to our base case.

### Nanologica bull case DCF

Redeye bull case				
Assumptions		DCF	SEKm	Per share (SEK)
Tax rate	20,6%	2023e-2025e	-17	-0,5
WACC	13,0%	2026e-2030e	423	11,7
CAGR, 2023e-2025e	478,1%	Terminal	621	17,2
CAGR, 2026e-2031e	19,8%	Net cash	23	0,6
Average EBIT 2026e-2031e	26,5%			
Shares outstanding	36,1			
<b>Terminal values, 2032</b>		<b>Fair value</b>	<b>1 050</b>	<b>29</b>
Group sales	959	Upside potential		177%
Terminal growth	2%			
EBIT margin	25%			

Source: Redeye Research

## Bear case – SEK7 (7)

In our bear case, we take a moderate view of the sales ramp-up in the coming years and believe Nanologica would need to raise additional equity ahead of turning cash-flow-positive in 2024. We incorporate a rights issue of cSEK35m leading to a dilution of c12% in the start of 2024. We also assume slightly lower sales ramp-up and lower margins.

### Nanologica bear case DCF

Redeye bear case				
Assumptions		DCF	SEKm	Per share (SEK)
Tax rate	20,6%	2023e-2025e	-15	-0,4
WACC	13,0%	2026e-2030e	111	2,7
CAGR, 2023e-2025e	339,3%	Terminal	138	3,4
CAGR, 2026e-2031e	12,1%	Net cash	56	1,4
Average EBIT 2026e-2031e	23,1%			
Shares outstanding	36,1			
Shares outstanding (diluted)	40,9			
<b>Terminal values, 2032</b>		<b>Fair value</b>	<b>290</b>	<b>7</b>
Group sales	267	Downside risk		-33%
Terminal growth	2%			
EBIT margin	20%			

Source: Redeye Research



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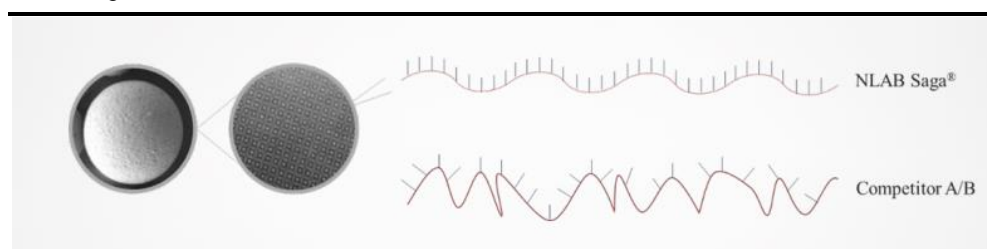
## General summary

### Background

Nanologica, founded in 2004, originated from research in material sciences, specifically in the areas of synthesis, analysis, and characterisation of new porous materials under the direction of Dr Alfonso Garcia-Bennett. The company operates in two main areas: drug development and chromatography (preparative and analytical).

Its goal is to increase access to innovative treatments and medicines worldwide for the benefit of patients. In preparative chromatography, Nanologica aims to reduce the cost of insulin and other diabetes drugs by providing a purification product that is more efficient and long-lasting than those of competitors. The company's NLAB Saga® product works by providing a smooth surface on silica particles, enabling a high coverage of ligands and a large available surface area, as illustrated below, leading to more efficient purification performance and a longer-lasting product.

#### NLAB Saga®



Source: Company report

In drug development, Nanologica has developed a unique platform for delivering drugs locally to the lungs. By loading drugs into the pores of silica particles, the drugs' solubility and bioavailability can be improved, protecting the drugs from degradation, while a wider range of substances, including biologics, can be formulated for inhalation. This platform aims to provide new treatment options for patients with severe lung diseases.

Nanologica has a small research and production facility at its headquarters in Södertälje, at which it conducts the development of new products and small-scale silica production. In 2019, the company invested in large-scale production capacity at a contract manufacturer in the UK. It successfully produced material identical to the material produced at its pilot plant in Södertälje.

The company was listed on the Spotlight Stock market in 2015, and its shares have, since March 2022, been listed on Nasdaq Small Cap.

### Value proposition

The key advantage of Nanologica is its ability to produce more cost-effective and high-quality medicines utilising its proprietary porous silica technology. This has significant implications as healthcare costs continue to rise, as does demand for solutions that can help control these costs. The company's technology provides policymakers and payers with a valuable tool for addressing this challenge. In addition, the company's products offer customers the opportunity to require one round fewer of reverse-phase chromatography while still achieving the required purity, allowing for more cost- and resource-effective drug production.

## Competitive advantages

Nanologica has developed expertise in the production and functionalisation of nanoporous materials. Its technology offers superior precision and customisation for its customers. In preparative chromatography, internal know-how of the production process of its silica creates a barrier against competitors, and by refraining from patenting the production process, the company believes it can maintain its competitive advantage for a more extended period than if the process was made public through a patent application or patent. We view this as a high-risk/high-reward strategy.

## Business strategy

The market for high-quality silica for chromatography could be viewed as an oligopoly currently dominated by established international players like Osaka Soda, YMC, and Nouryon. Nanologica specialises in preparative chromatography. It primarily serving manufacturers of diabetes drugs and peptides that require chemically and mechanically stable silica for purification processes, Nanologica's silica offering clear advantages over competitors' (as described in the Value Proposition section above). This places the company in a growing market driven by an increasing demand for insulin and other diabetes medications. The market is considered an oligopoly, and Nanologica is one of the few suppliers worldwide to produce silica suitable for purifying insulin, insulin analogues, and GLP-1s. The company manufactures its silica for preparative chromatography on a ton scale at a contract manufacturer.

Should Nanologica establish a strong position in preparative chromatography, we see the potential for it to extend its offering other solutions related to preparative chromatography, such as ion exchange resin or soft product often called a bead made of cellulose or agarose.

In drug development, Nanologica focuses on inhaled drugs and respiratory diseases based on its proprietary drug delivery platform for delivering drugs to the lungs. By validating and evaluating chemical, biological, clinical, regulatory, and commercial properties, it can select the most viable drug candidates for further clinical development, partly in-house and partly in partnership with other companies. Nanologica's strategy here is to conduct clinical studies through phase 2 (demonstrating safety and early efficacy support) and then license or sell the projects to pharmaceutical companies for further clinical development and market launch.

## People and ownership

### Management and board

Nanologica has ~20 employees. CEO Andreas Bhagwani has been with the company in his current role since 2011 and has a background as a management consultant specialising in sales and leadership. He has co-founded several companies, including Sigrid Therapeutics and Atrogi. CFO Eva Osterman has a background in finance at larger companies including Lantmännen and PwC, and has held various positions in business controlling, financial controlling, audit, and reporting.

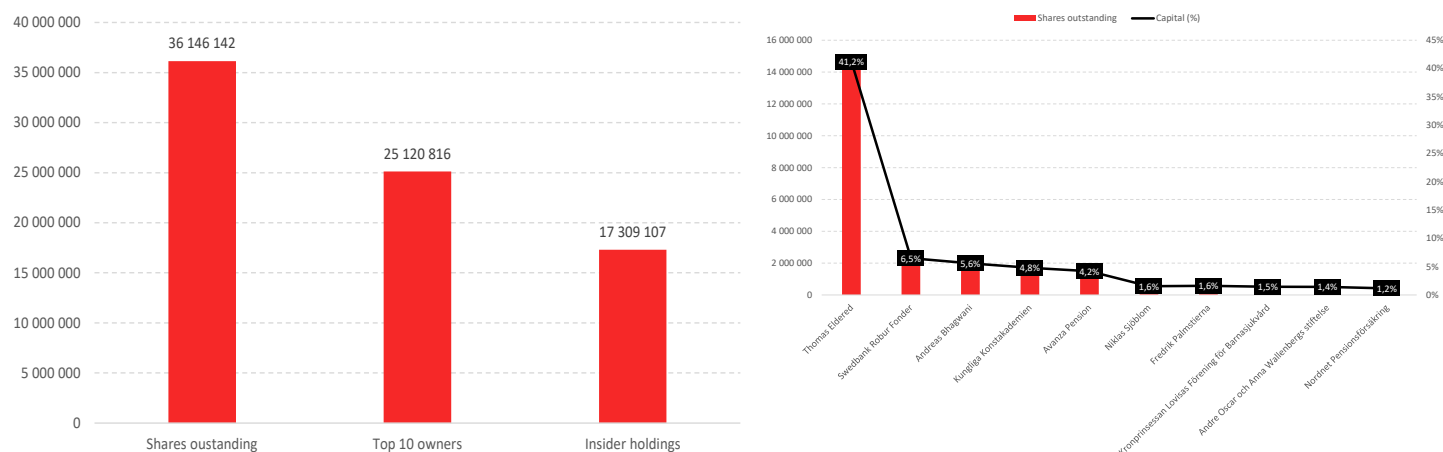
Chair Gisela Sitbon has been on the board since 2012 and has more than 25 years of experience in the life science industry. She has served as CEO at Professional Genetics Laboratory AB and as a section manager at Karo Bio. Currently, she works as a business coach in the life science sector and is also the chair at Gradientech AB and Emplicure AB.

Overall, Nanologica's management, backed by its board, possesses the experience and skills to navigate the company toward a commercial breakthrough, in our view. A more detailed description of individuals on the board and in management can be found in the appendices of this report.

### Ownership base

The largest shareholder is Thomas Eldered (Flerie Invest), the co-founder of Recipharm, which EQT acquired in a cUSD2.1bn deal. Other major owners include institutional ownership in the form of Swedbank Robur Funds and CEO Andreas Bhagwani.

### Shareholders structure (2023-09-30)









Source: Modular finance

Nanologica's insider ownership amounts to 47%, the majority held by board member Thomas Eldered, who owns some 15 million shares (equivalent to 42% of equity). The CEO holds around two million shares (9% equity), and chair Gisela Sitbon has 26,666 shares (0.1% equity). At Redeye, we consider skin-in-the-game positively, as it signals alignment with shareholder values in management decision-making. Accordingly, Nanologica scores well on this parameter.

## Appendices






### Management and board

#### Management

Name	Position	Shares	Options
 <p>EMBA from the Stockholm School of Economics and studies in agronomy at the Swedish University of Agricultural Sciences. Andreas has co-founded several companies, the most recent being Sigrid Therapeutics AB and Atrogi AB. He has worked as a management consultant in several companies for over a decade, specialising in sales and leadership. Current assignments include board member of Vega Bianco AB, CEO and chairman of the board of Nanologica Black AB and Nanologica Yellow AB, board member of Nanghavi AB and Nanghavi Chromatography Solutions Pvt Ltd, deputy board member and partner of Kichisaga Leadership AB and holder of the individual firm Baraza Konsult.</p>	CEO	2 017 264	200 000
 <p>Master of Science in Business Administration and Economics from Uppsala University. Several years of experience in finance at larger companies where she has worked with business controlling, financial controlling, reporting, and internal audit. Other current assignments include board member of Nanghavi Chromatography Solutions Pvt Ltd and Nanologia Australia Pty. Ltd, deputy board member of Nanghavi AB, Nanologica Black AB, Nanologica Yellow AB, and Consensor AB, and auditor in Rangsta Båtklubb</p>	Chief Financial Officer	51 283	150 000
 <p>Master of Science in Industrial Economics from the Linköping University of Technology and Executive Management Program from Stockholm School of Economics. Prior to her work with Nanologica, Anna-Karin worked as the CEO of Telge Inköp for 10 years. Other current assignments include Avia Pharma Holding AB and AKRR Konsult AB.</p>	Chief Operating Officer	48 483	0
 <p>BSc in Biochemistry and Biological Chemistry from the University of Nottingham and Ph.D. from the University of Nottingham. Gary has vast experience and is recognised as an expert in inhaled drug delivery. Prior assignments include AstraZeneca where he worked as Head of Project Leadership for Respiratory Pharmaceutical Technology &amp; Development and work at Mylan and Pfizer. Gary is also a board member of GRP Consulting AB</p>	Chief Scientific Officer	0	115 000
 <p>Master of Science in Business Administration, BSc, Business Economics, and MSc, Marketing Management from Lund University. Over 20 years of experience in leading marketing and business development positions in the respiratory field and inhalation. Ulf most recently worked at AstraZeneca where he held various roles.</p>	VP Drug Development	2 861	115 000
 <p>Master of Science in Chemical Engineering at Lund Technical University and Bachelor of Science in Pharmaceutical Sciences from the University of Greenwich. Extensive experience in the life science industry and has most recently worked for 10 years at Agilent Technologies. Katarina has also worked as a product manager at Shamadzy HPLC/LCMS. Current board member of Biotech I Kungsbacka AB.</p>	SVP Chromatography	0	120 000

Source: Company data

#### Board of directors

Name	Position	Shares	Options
 <p>PhD. in Medical Sciences from the Karolinska Institute. Over 25 years of experience within the life science industry. Prior assignments include CEO and other roles at Professional Genetics Laboratory AB and section manager at Karo Bio AB. Other current assignments includes chairman of the board of Grandientech AB, Empicure AB, and board member of Stibon Bioscience Partner Zenz AB.</p>	Chairman of the board	26 666	
 <p>Master of Science Engineering from Chalmers University of Technology in Gothenburg and MBA from University of Gothenburg School of Business. Over 20 years of experience in the chemical and life science industry. Prior assignments include senior positions at AkzoNobel and several positions in process chemistry at AstraZeneca in Södertälje. Other assignments include Business Unit Manager BioMedical &amp; Research at AddLife AB, Board Member of MaBeRo Consulting AB, Bergman Labora AB, LabRobot AB, LabVent Control AS, Holm&amp;Halby AS, and EuroClone Spa.</p>	Director	13 000	
 <p>Master of Science in Industrial Economics from Linköping Technical University. Thomas is the co-founder of Recipharm AB where he also worked for 13 years. Other prior experiences include Vice President of Recip AB and Factory Manager for Pharmacia. He has also held various assignments in companies primarily in the life science sector.</p>	Director	14 901 635	
 <p>Bachelor of Economics in Business Administration from Webster University. Anders has been the CEO of several companies in the biotechnology and financial sectors. Other current assignments include CEO of Mindforce Lab AB and board member of Akkumula AB, Albonja AB, and Epicyt Pharma AB.</p>	Director	13 333	
 <p>Bachelor of Science in Business Administration for the Stockholm School of Economics. Over 20 years of experience as a communications consultant for various companies. Lena works through Lena Torlegård AB as an independent advisor in financial and corporate communication. Current chairman of the board of CoDesignSweden AB</p>	Director	7 652	

Source: Company data

## Chromatography

The process of silica-based liquid chromatography involves separating various substances in a solution by passing it through a column, where the different substances interact with silica particles, making them pass through the column at different speeds.

This method is commonly used as a purification process in the production of peptide drugs like insulin, where large quantities of silica are employed in preparative chromatography columns. The residual products formed during insulin production must be removed before the drugs can be considered safe for human use. Purification is achieved by allowing the insulin and residual products to bind differently to the silica particles, resulting in different rates of passage through the column during a purification cycle. Once purified by this technique, the insulin is of sufficient purity to treat patients and can be formulated for administration.

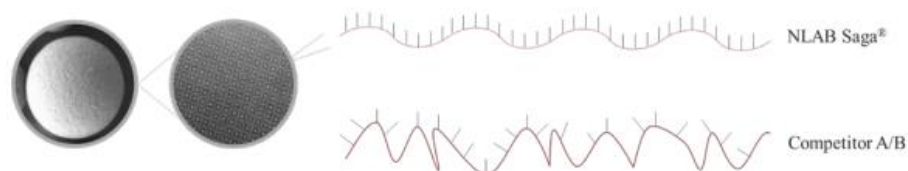
Silica-based analytical liquid chromatography is utilised in the pharmaceutical and food industries to analyse solutions and determine the presence of various substances and their concentrations. It is also used to evaluate silica materials as purification media for preparative chromatography before customers choose them. Nanologica specialises in preparative high-performance liquid chromatography (HPLC). The company also offers analytical HPLC solutions.

When processes are conducted at a low pH, the functional groups on the surface of silica particles, known as ligands, can be hydrolysed. This affects surface properties and can result in reduced separation capacity. Conversely, a high pH can cause the dissolution of the silica matrix itself, leading to a decline in product performance.

Thanks to Nanologica's exclusive manufacturing process, however, its silica particles have a smooth surface, allowing for even distribution of ligands that shield the silica from degradation caused by harsh purification chemicals like lye. This results in a product that consistently delivers high performance and a long lifespan.

NLAB Saga®'s high performance enables a streamlined purification process, and its exceptional durability allows for multiple purification cycles, leading to significant cost savings for pharmaceutical manufacturers. Cost reduction is a critical driver for drug manufacturers, as this purification step can account for up to 25% of the total production cost in insulin production, according to calculations by Nanologica.

### Nanologica's NLAB Saga®



*Image: A smooth surface of the silica particle allows for a high coverage of ligands and a large available surface area, which leads to a higher and more even performance.*

Source: Company website

## Drug delivery

Nanologica's second business area, drug development, utilises micrometre-sized spherical silica particles that contain thousands of nanometre-sized pores in its drug delivery technology. These nanoporous particles have been specifically designed to transport drugs directly to the lungs, and their particle size is closely monitored (1-5µm) to ensure maximum deposition in the lungs. The particles are composed of biosoluble amorphous silica, meaning it dissolves in lung fluid and is eliminated from the body as silicic acid via the kidneys. Medicinal substances are encapsulated inside these nanoporous particles to create pharmaceutical products for inhalation. This approach could also enable local lung treatment in cases where only systemic therapies are available.

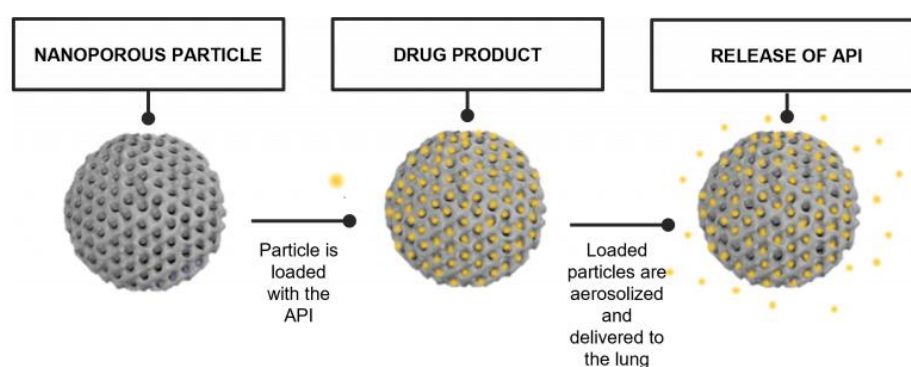
Nanologica's NAP™ technology comes with three primary advantages:

- Increased solubility and/or bioavailability for drug substances
- Controlled release profile creating new opportunities for the treatment of lung disease
- Potential platform for delivery of biological drugs to the lungs

The drug development process involves creating new drugs or enhancing existing ones from the idea phase through preclinical and clinical studies until they are ready for the market. Drug delivery encompasses different approaches for delivering drugs to the body and various techniques for formulating and manufacturing drugs. The goal is to deliver the appropriate amount of medication to the right place in the body at the right time.

Nanologica's loaded particles are aerosolised into a dry powder for inhalation without additional excipients and delivered to the lungs where the active pharmaceutical ingredient is released from the pores of the particles. Aerosolisation of Nanologica's drug-loaded particles results in a fine particle fraction (the proportion of particles that are the optimal size for inhalation) in the range of 70–80%, which is twice as much as conventional dry powder inhalation products. This implies a larger portion of the drug dose has the potential to reach the lungs than with conventional products. The flow properties of NAP™ are not altered since the loaded particles remain free-flowing and can be easily dispensed into a dry powder inhaler.

### Nanologica's NAP™ technology



Source: Company website

## Summary Redeye Rating

The rating consists of three valuation keys, each constituting an overall assessment of several factors rated on a scale of 0 to 1 points. The maximum score for a valuation key is 5 points.

**Rating changes in the report: No rating changes in the report**

**People: 3**

**Business: 3**

**Financials: 1**



	2021	2022	2023e	2024e		Sum FCF (SEKm)
<b>INCOME STATEMENT</b>					<b>DCF Valuation Metrics</b>	
Net sales	13	2	7	90	Initial Period (2023-2027)	48
Gross Profit	6	4	3	46	Momentum Period (2028-2031)	171
Operating Expenses	36	42	31	41	Stable Period (2032-)	375
EBITDA	-30	-39	-29	5	Firm Value	556
Depreciation & Amortization	10	12	14	14	Net Debt (last quarter)	-23
EBIT	-41	-51	-42	-9	Equity Value	578
Net Financial Items	-4	0	0	0	Fair Value per Share	16
EBT	-45	-51	-47	-11		
Income Tax Expenses	0	0	0	0	<b>SHAREHOLDER STRUCTURE</b>	<b>CAPITAL % VOTES %</b>
Non-Controlling Interest	0	0	0	0	Thomas Elderred	41% 41%
Net Income	-45	-51	-47	-11	Swedbank Robur Fonder	6% 6%
					Andreas Bhagwani	6% 6%
					Kungliga Konstakademien	5% 5%
					Avanza Pension	4% 4%
<b>BALANCE SHEET</b>						
<b>Assets</b>					<b>SHARE INFORMATION</b>	
<b>Current assets</b>					Reuters code	NICA.ST
Cash & Equivalents	11	70	53	40	List	Small Cap Stockholm
Inventories	2	1	4	23	Share price	11
Accounts Receivable	43	1	2	9	Total shares, million	36,1
Other Current Assets	1	44	14	23		
Total Current Assets	57	117	73	95		
<b>Non-current assets</b>					<b>MANAGEMENT &amp; BOARD</b>	
Property, Plant & Equipment, Net	2	3	4	7	CEO	Andreas Bhagwani
Goodwill	0	0	0	0	CFO	Eva Osterman
Intangible Assets	14	16	18	20	Chairman	Gisela Sitbon
Right-of-Use Assets	25	19	13	6		
Shares in Associates	0	0	0	0		
Other Long-Term Assets	0	0	0	0	<b>ANALYSTS</b>	
Total Non-Current Assets	42	38	34	33	Filip Einarsson	Redeye AB
					Johan Unnerus	Mäster Samuelsgatan 42, 10tr 111 57 Stockholm
Total Assets	98	155	107	128		
<b>Liabilities</b>						
<b>Current liabilities</b>						
Short-Term Debt	2	1	1	16		
Short-Term Lease Liabilities	3	3	3	3		
Accounts Payable	4	2	2	14		
Other Current Liabilities	6	7	7	12		
Total Current Liabilities	14	14	13	45		
<b>Non-current liabilities</b>						
Long-Term Debt	1	0	0	0		
Long-Term Lease Liabilities	3	1	1	1		
Other Long-Term Liabilities	28	67	67	67		
Total Non-current Liabilities	32	68	68	68		
Non-Controlling Interest	0	0	0	0		
Shareholder's Equity	52	73	26	15		
Total Liabilities & Equity	98	155	107	128		
<b>CASH FLOW</b>						
NOPAT	-41	-51	-42	-9		
Change in Working Capital	-14	0	26	-18		
Operating Cash Flow	-46	-45	-7	-15		
Capital Expenditures	-1	-2	-2	-3		
Investment in Intangible Assets	-6	-7	-8	-10		
Investing Cash Flow	-7	-7	-10	-13		
Financing Cash Flow	-2	112	0	15		
Free Cash Flow	-54	-54	-17	-28		

## Redeye Rating and Background Definitions

### Company Quality

Company Quality is based on a set of quality checks across three categories; PEOPLE, BUSINESS, FINANCE. These are the building blocks that enable a company to deliver sustained operational outperformance and attractive long-term earnings growth.

Each category is grouped into multiple sub-categories assessed by five checks. These are based on widely accepted and tested investment criteria and used by demonstrably successful investors and investment firms. Each sub-category may also include a complementary check that provides additional information to assist with investment decision-making.

If a check is successful, it is assigned a score of one point; the total successful checks are added to give a score for each sub-category. The overall score for a category is the average of all sub-category scores, based on a scale that ranges from 0 to 5 rounded up to the nearest whole number. The overall score for each category is then used to generate the size of the bar in the Company Quality graphic.

### People

At the end of the day, people drive profits. Not numbers. Understanding the motivations of people behind a business is a significant part of understanding the long-term drive of the company. It all comes down to doing business with people you trust, or at least avoiding dealing with people of questionable character.

The People rating is based on quantitative scores in seven categories:

- Passion, Execution, Capital Allocation, Communication, Compensation, Ownership, and Board.

### Business

If you don't understand the competitive environment and don't have a clear sense of how the business will engage customers, create value and consistently deliver that value at a profit, you won't succeed as an investor. Knowing the business model inside out will provide you some level of certainty and reduce the risk when you buy a stock.

The Business rating is based on quantitative scores grouped into five sub-categories:

- Business Scalability, Market Structure, Value Proposition, Economic Moat, and Operational Risks.

### Financials

Investing is part art, part science. Financial ratios make up most of the science. Ratios are used to evaluate the financial soundness of a business. Also, these ratios are key factors that will impact a company's financial performance and valuation. However, you only need a few to determine whether a company is financially strong or weak.

The Financial rating is based on quantitative scores that are grouped into five separate categories:

- Earnings Power, Profit Margin, Growth Rate, Financial Health, and Earnings Quality.

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## Disclaimer

### Important information

Redeye AB ("Redeye" or "the Company") is a specialist financial advisory boutique that focuses on small and mid-cap growth companies in the Nordic region. We focus on the technology and life science sectors. We provide services within Corporate Broking, Corporate Finance, equity research and investor relations. Our strengths are our award-winning research department, experienced advisers, a unique investor network, and the powerful distribution channel redeye.se. Redeye was founded in 1999 and since 2007 has been subject to the supervision of the Swedish Financial Supervisory Authority.

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### Redeye Rating (2023-10-29)

Rating	People	Business	Financials
5p	32	15	4
3p - 4p	142	128	43
0p - 2p	5	36	132
Company N	179	179	179

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### CONFLICT OF INTERESTS

Filip Einarsson owns shares in the company : No

Sebastian Andersson owns shares in the company : No

Redeye performs/have performed services for the Company and receives/have received compensation from the Company in connection with this.