Modulight

Iniatiation of coverage

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Inderes corporate customer

This report is a summary translation of the report “Laseryhtiötä kalibroidaan kohti kasvua” published on 03/20/2023 at 07:15 am.

Laser company being calibrated towards growth

Modulight is a technology company focused on the design and manufacture of lasers and optics with a strategic focus on medical and biomedical applications. Modulight's growth story was interrupted after the 2021 IPO and the company is now looking to get back on track for profitable growth with a renewed strategy. We expect the company to deliver strong growth, although the visibility of the forecast is weak. Our valuation that relies on sales-based ratios and cash flows suggests the stock being moderately overvalued. Thus, we initiate the coverage of Modulight with a Reduce recommendation and a target price of EUR 2.3.

Growth and turnaround story relies on the success of the medical and biomedical project model

Since 2014, Modulight has strategically focused on medicine and biomedicine – particularly on cancer and eye medicine. Its strengths include flexibility in design and production, a high level of manufacturing expertise and the integration of products with cloud services. Cloud services enable SaaS-style pay-per-treatment pricing and various support services. The company seeks close development partnerships with its clients, ranging from large global corporations to early-stage unlisted companies. Modulight's revenues depend on the progress of long and uncertain projects that, if successful, could lead to the commercialization of the company's lasers, for example as part of a new patient treatment. Project model income has been very volatile, and the company's revenue and profitability have fallen sharply since the Q3'21 IPO.

We expect good growth and profitability in the long term

Visibility on the content and progress of Modulight's projects is limited, reflecting a high forecast risk. Our revenue estimate (2024: 12.8 MEUR) is based on expectations of a recovery in project revenues as the financial situation of customers and the availability of components normalize. We also expect success in some of the many growth opportunities identified by the company, such as laser systems for flow cytometers. We expect the business to remain loss-making for the next few years (2024: -2.6 MEUR). The profitability is depressed by the company's growth investments and increasing depreciation due to the recent investment in a production plant. The cash flow from operating activities is slightly better than the operating loss as depreciation exceeds investments. Despite the negative cash flow in the coming years, the company's financial position is secured by a very strong cash position after the IPO, which also allows for further investments in growth. In the long term, we estimate that the project model starts to deliver results, leading to healthy revenue growth and good profitability, supported by a high gross margin and a scalable business model.

The share is slightly expensive in relation to cash flows and near-term revenue

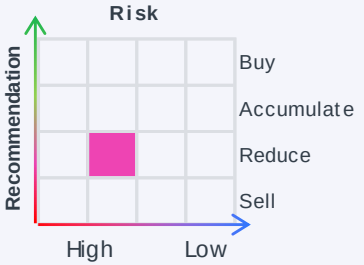
Our valuation is primarily based on a DCF calculation modeling the present value of future cash flows and on sales-based multiples (EV/S). Our DCF model indicates that current value of cash flows is EUR 2.3. Projected cash flows are concentrated beyond 2032 due to losses in the coming years and our high long-term growth estimates. EV/S multiples of 7.5-5.8x for 2023-2024 are well above the 3.2x-2.8x valuation of peers. We also look at valuation through two alternative scenarios, suggesting a high profit or loss potential depending on the company's future performance and market pricing. The risk profile of the stock is quite high (level 3) due to the high forecast risk and the persistent losses so far. Our target price is based on our DCF model view of the present value of future cash flows.

Recommendation

Reduce
(previous)

2.30 EUR
(previous EUR)

Share price:
2.42



Key figures

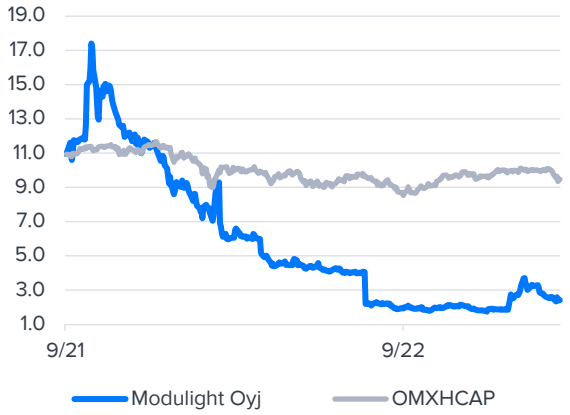
	2022	2023e	2024e	2025e
Revenue	4.6	9.5	12.8	18.1
growth-%	-49%	107%	34%	42%
EBIT adj.	-7.8	-3.9	-2.6	0.4
EBIT-% adj.	-169.5%	-40.4 %	-20.4 %	2.1 %
Net Income	-8.6	-3.7	-2.4	0.5
EPS (adj.)	-0.20	-0.09	-0.06	0.01
P/E (adj.)	neg.	neg.	neg.	>100
P/B	1.9	1.6	1.7	1.7
Dividend yield-%	0.0 %	0.0 %	0.0 %	0.0 %
EV/EBIT (adj.)	neg.	neg.	neg.	>100
EV/EBITDA	neg.	neg.	>100	23.4
EV/S	19.6	7.5	5.8	4.1

Source: Inderes

Guidance

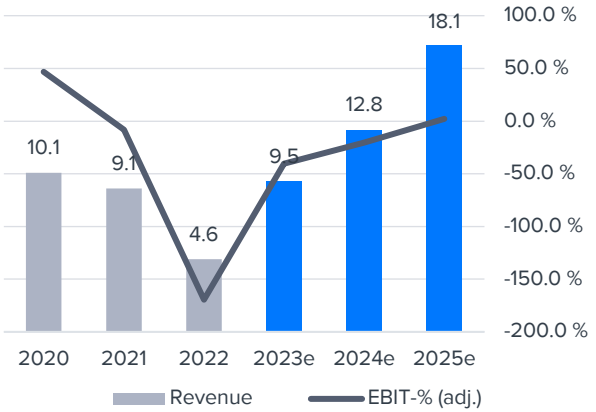
Modulight does not provide any guidance.

Share price



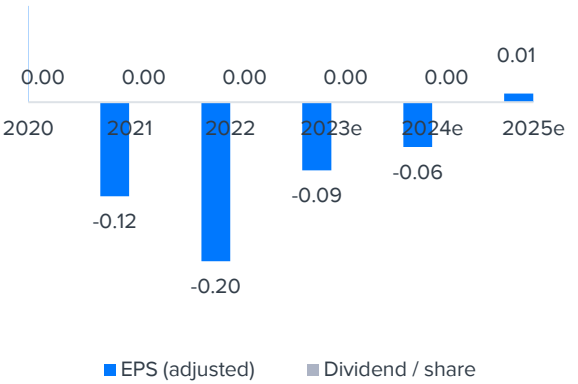
Source: Millistream Market Data AB

Revenue and EBIT %



Source: Inderes

EPS and dividend



Source: Inderes

Value drivers

- A defensive market with growth well into the future
- The company's technological expertise, ability to tailor products and build cloud services gives Modulight a competitive advantage
- A model based on license fees and pay-per-treatment pricing can be highly scalable if successful

Risk factors

- The project-based model has been unreliable, at least for 2022, and we believe its long-term performance requires further evidence.
- Revenue and profitability are poorly predictable
- Low visibility of projects and their progress
- Immature and concentrated customer base brings more risk

Valuation	2023e	2024e	2025e
Share price	2.42	2.42	2.42
Number of shares, millions	42.6	42.6	42.6
Market cap	103	103	103
EV	72	74	75
P/E (adj.)	neg.	neg.	>100
P/E	neg.	neg.	>100
P/FCF	neg.	neg.	neg.
P/B	1.6	1.7	1.7
P/S	10.8	8.0	5.7
EV/Sales	7.5	5.8	4.1
EV/EBITDA	neg.	>100	23.4
EV/EBIT (adj.)	neg.	neg.	>100
Payout ratio (%)	0.0 %	0.0 %	0.0 %
Dividend yield-%	0.0 %	0.0 %	0.0 %

Source: Inderes

Contents

Modulight in brief

Modulight is a Finnish company focused on the design and manufacture of lasers and optics. Modulight's strategic focus is on biomedical and medical applications, but the company also supplies its products to other technology sectors.

2000
Year of establishment

2021
IPO , EUR 71.9 million (gross)

4.6 MEUR (-49 % vs. 2021)
Revenue 2022

-7.8 MEUR (-169 % of revenue)
EBIT 2022

62
Personnel at the end of 2022

+8.3 % 2021-2030
Photodynamic therapy market growth (CAGR)

2000-2013

- 2000 The company is established
- 2004 Semiconductor lasers for ESA's SMOS satellite
- 2005 Subsidiary in the USA
- Development and piloting of technologies and medical applications
- Commercial and operational development
- Preparing the new strategy

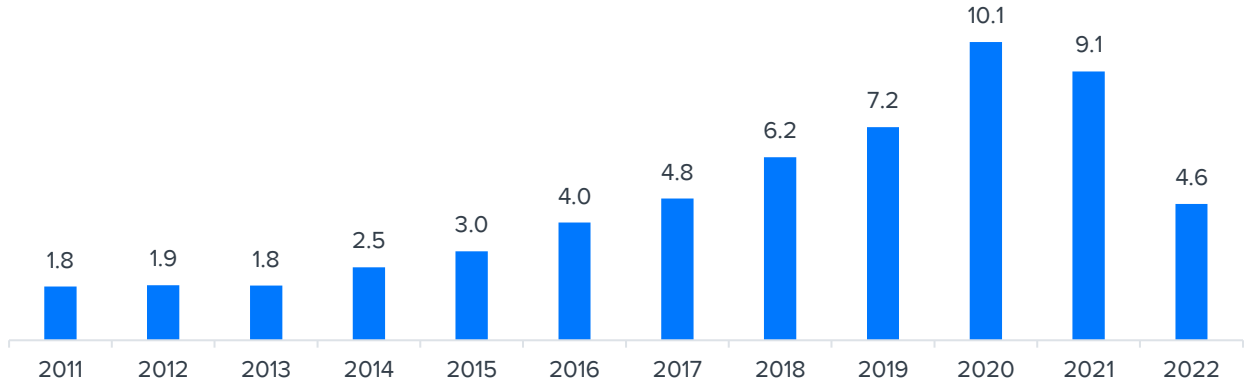
2014-2018

- 2014 Strategic focus on medicine and biomedicine, US and large customers
- 2014: CE marking for a laser platform for cancer medicine
- 2016 First cloud-based system deployment; FDA approval for cancer laser
- 2018 Ophthalmology agreement with Bausch & Lomb

2019-2023

- 2019 CE marking for ophthalmic laser
- 2019: Launch of a 23 MEUR investment program in the production plant
- 2020 Profitable growth continued for a decade
- 2021 Listing on the First North marketplace
- 2022 Sharp fall in revenue and profitability
- 2023: Launch of the new strategy
- 2023: FDA approval for Visudyne ophthalmic laser

Revenue, MEUR



Source: Modulight / Inderes

Business model 2/2

Laser technology company aims to get back on the growth track

Modulight is a Finnish technology company that designs, manufactures and sells laser products and optics. The company's products include semiconductors, laser modules and complete laser systems. The company has a particular strategic focus on medical applications, developing solutions in areas such as oncology and ophthalmology. Modulight received FDA approval (marketing authorization from the Food and Drug Administration in the US) in January 2023 for its ophthalmic laser to activate the photosensitive Bausch & Lomb drug Visudyne. The approval will allow the company to start the actual commercialization of its first medical laser. Other medical applications are still in the research and development phase and Modulight products are not yet used to treat patients outside clinical trials. Modulight's technologies can also be applied to several other technology areas, such as weather measurement or laser printing machines, where the company is looking to expand. In the future, Modulight aims to develop technology for diagnostic applications and, for example, laser systems for quantum computers. The company's headquarters and production plant are located in Tampere, Finland and the company had 62 employees at the end of 2022.

Modulight was founded in 2000 and listed on the Nasdaq First North Growth Market in 2021. Modulight has been a profitable growth company with a high-tech profile. The company was profitable between 2011 and 2021 and also grew strongly during this period (CAGR 17.6%). However, the long period of strong growth was interrupted in 2022 when revenue fell sharply, and profitability turned heavily negative. Modulight aims to return to be a profitable growth company with a new strategy that will take effect in 2023, focusing on strong growth targets and the use of the company's newly completed production facility. Geographically, the company is particularly focused on the US market.

A vertically integrated operating model

Modulight has a vertically integrated business model, where the company is responsible for product development, design and manufacturing. Sales have also been handled by the company itself, but it has recently started to use distributors. With this approach, Modulight aims to respond flexibly and through customization to the technological needs of its customers, which we believe are numerous due to the large number of laser applications, specific technological requirements and the different sectors of the customer base. The actual applications are typically developed by Modulight together with its customers. Product development starts with an early-stage pilot study or, in a medical application, a pre-clinical (animal or cell model) phase. The development of the application will progress in stages towards actual commercialization. In medical applications, the company aims to obtain regulatory approval for the laser equipment together with the developed drug. The approval would give Modulight a strong position as a laser supplier for the application and the opportunity to generate revenue as part of the overall treatment.

Vertically integrated laser manufacturer

Modulight designs the products itself, often according to the customer's wishes. Customization acts as a differentiation factor against mass producers.

The company has its own new production facility, which enables scalable and traceable production and increases productivity.

The company's products are connected to the cloud, which brings added value to the customer with new functionalities.

Modulight's clients range from research institutions to mature and early-stage companies.

Medical applications are typically developed on a project model with the drug owner in stages, from early pre-clinical phase to regulatory-approved treatment.

Technology applications are also typically developed together with the customer from an early prototype to a commercial product.

Modulight mainly uses a project-based earning model, where project revenue is earned in stages according to progress. The company aims to use a Saas-type model, where pricing is based on the number of treatments.

Modulight aims to support product lifecycle management with services such as after-sales support, spare parts availability and software maintenance.

Source: Modulight / Inderes

Modulight's business areas and key products

Cloud services

	Core areas	Growth areas	Other
Medicine, biomedicine and diagnostics	Oncology	Dermatology	Genomics (sequencing)
	Ophthalmology	Flow cytometry	Other life science
	Fluorescence imaging		
Other high value-added solutions		Quantum computing	Digital presses
		Metrology	Observation of the environment
			Other technology applications

Examples of finished products

ML7710

A laser platform for medical applications, which can be customized with several lasers of different wavelengths.

ML6710i

Ophthalmic laser for, e.g., retinal treatments. The device is controlled via iPad.

ML8500

Laser illuminator for well plates for diagnostic applications.

ML6600

A three-wavelength laser system that can be used, for example, in microscopy for fluorescence imaging of tissue sections.

Source: Modulight / Inderes

Business model 2/7

In-house design and manufacturing for flexibility and service capability

Modulight manufactures its products in-house at its production facility in Tampere, Finland, which is located next to the company headquarters. According to the company, its in-house manufacturing is a key competitive advantage based on (1) the long-term accumulation of expertise in compound semiconductor lasers (gallium arsenide and indium phosphide) and product cloud connectivity, (2) control of the entire design and manufacturing process, (3) the ability and know-how to customize products (for example in terms of laser wavelength or optical power) and (4) ensuring the availability of products to customers throughout the product life cycle. We share the company management's view on the benefits of in-house manufacturing.

Modulight is finalizing the investment in a production plant that started in 2019, which at EUR 23 million is very significant for a company of its size. The high cost of the investment is explained by the very high standard of cleanrooms required for production and the expensive equipment needed for production automation. We believe that the investment has gone according to plan, although the supply problems related to the COVID pandemic have hampered the purchase of certain equipment and increased the price of materials. However, the company has been able to compensate for the increase in costs, as the pandemic has also opened up opportunities to acquire certain equipment at very competitive prices. The production facility is already partially operational, and we expect the final installations to be completed in early 2023.

The plant investment will increase Modulight's production capacity, productivity and production quality while reducing manual labor. We also believe that the investment will enable the company to move to higher volume production series and thus support the implementation of the company's growth strategy. However, we don't believe that Modulight is willing or able to challenge the major laser manufacturers on price-competitive products, but rather the company is seeking to specialize as a high-tech supplier, particularly for medical and life science applications. We estimate that the company will not fully benefit from the investment in the very short term, as the volumes of individual products will only increase significantly when the products enter the actual commercialization phase. It is difficult to estimate the timeframe for the full utilization of the new capacity, but it could take several years depending on the success of the commercialization of the products.

Certain materials used in Modulight's laser chips are of a quality and purity only available from a handful of suppliers worldwide. In our view, the company has a moderate supplier risk in the event of a deterioration in the availability of materials due to, for example, production disruptions or an escalation of geopolitical risks. Modulight says it has experienced component shortages during 2022, although it's unclear exactly which materials or components have been affected.

The business model covers a significant part of the value chain

Innovation	Modulight develops laser technology and cloud services for medical, biomedical and technology applications
Prototyping	Prototype customization and iterative development with the customer
Testing and validation	Researching safety and efficacy in patient trials; Validating and improving a technological product
Productization	Product design; data collection; production and sale of disposable and spare parts
Production	Production in compliance with regulatory requirements; traceability of production
Life cycle support	Warranty and after-sales services; user support and training; preventive maintenance and equipment calibration; recycling

Source: Modulight / Inderes

Business model 3/7

Customer base includes hospitals, research institutes and companies at various development stages

Modulight's customers include public and private hospitals and research institutions, early-stage companies and large companies in the mature development phase. Based on Modulight's H2'22 reporting, the company had 27 customer projects that the company believes have significant commercial potential (i.e. by the company's own definition, potential for at least 10 MEUR in annual revenues). We estimate that the vast majority of these projects are medical, biomedical and diagnostic projects in the Life Science area. We note that individual projects are highly uncertain and unpredictable when it comes to reaching the commercialization stage. In our estimate, a minority of the projects are in other technology areas where the company's technology can be applied in a straightforward manner. According to Modulight, three of the project clients are hospitals or research institutes, seven are early-stage companies, nine are established companies and eight are companies with a turnover of more than USD 1 billion. By ownership structure, the majority of clients (16) were listed companies and the rest were privately or publicly owned.

We estimate that research institutes and hospitals are reliable customers, as are companies with a turnover of more than USD 1 billion. In particular, early-stage companies but also established ones may include companies that are heavily dependent on external funding and therefore have a high risk profile as customers. Modulight has written down its trade receivables significantly for a company of its size. We discuss this in more detail in the Financial situation section.

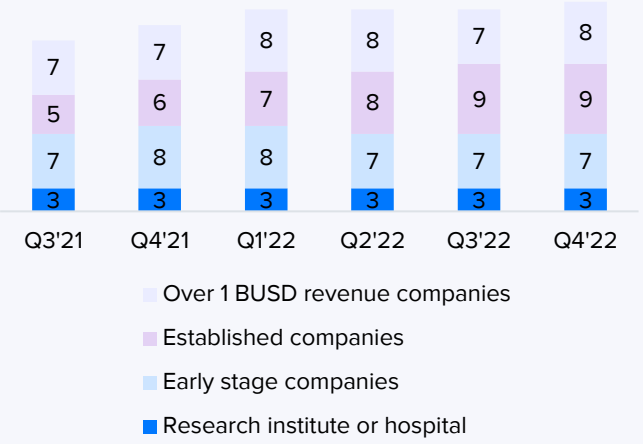
The number of projects increased rapidly from thirteen to more than twenty between 2020 and 2021, with a relatively high number of new projects started. The number of projects still increased after the IPO (Q3'21) and has leveled off during 2022. Reporting on the number of projects shows that almost all new projects have increased the total number of projects. This suggests that projects are of very long duration and are rarely terminated.

Building revenue by partnering with customers

Modulight seeks to enter into partnership agreements with its customers, starting from the product development and conceptualization phase and, if successful, continuing through to product commercialization. We believe that Modulight has chosen this type of approach because it allows it to differentiate itself from its competitors by customizing a product with advanced features that the customer needs. The close partnership also makes it possible to achieve a high level of customer knowledge. On the other hand, the model allows Modulight to obtain regulatory approval for its lasers, for example for use with a specific medicine, which would give the company a strong position in the commercialization phase.

Number of projects

Projects by type of customer



Source: Modulight / Inderes

Business model 4/7

The project model takes time and is risky

Particularly in the medical field, Modulight's partner customers must demonstrate the safety and efficacy of products designed for patient use, such as developed drugs. This requires phased and long-term patient trials. If, at any stage of development, a drug candidate, e.g., proves to have an inadequate safety profile, the relevant authority may suspend the development of the drug candidate. Modulight is exposed to the same high binary risk and long development cycles as its partners. In other technology sectors, development cycles are faster, but we estimate that Modulight's development projects in other areas are also at high risk of being interrupted before reaching the commercialization phase.

The phases of projects can be broken down as follows: 1) pre-clinical/conceptualization phase, 2) clinical phase I/pilot production, 3) clinical phase II&III/product development and 4) commercialization. Modulight is currently in the commercialization phase of an ophthalmic laser to activate the Visudyne drug. Furthermore, based on the reported data, we estimate that one of the projects would be in phase 3 of the phases outlined above. Indeed, we understand that the majority of projects are very early-stage projects, with a particular focus on pre-clinical projects (i.e. animal testing) and the conceptualization and piloting phases of technological projects. Presumably, the vast majority of projects will be interrupted, e.g., due to a lack of safety or efficacy of a drug candidate or treatment, and Modulight's business for that project will also cease. Visibility on the likelihood and timing of project progress is limited, as we believe that most medical projects are experimental treatments, for which we don't believe that historical probabilities of drug development necessarily apply.

From the number of projects reported by Modulight, it can be concluded that between Q1'19 and Q1'22 no projects were discontinued or completed, as all new projects directly added to the total number of projects. During Q2'22-Q3'22, one project was discontinued in each quarter. This underlines the longevity and slow turnaround of projects. Modulight has announced that it will apply stricter criteria for the admission of new projects in order to maintain a high quality of projects and to avoid future write-downs (4 MEUR) realized at the end of 2021.

According to Modulight, it typically takes 6-24 months from the first contact with a customer to the start of a project. Clinical trials typically take place 3-5 years after contacting the client. Typical cancer medicine projects take 5-10 years from project start to clinical approval. The duration of clinical development of a drug is typically closer to the upper end of the range. Our assessment is that projects in early-stage companies often run behind schedule. However, customers at a more mature stage of development have the resources and experience to deliver projects within more realistic timeframes.

Duration of the pharmaceutical development project

Source: Davis FS, Biotech Forecasting & Valuation, 2016. / Inderes

Project phases and duration

Sales cycle	The length of the sales cycle from contacting the customer to starting the project varies, typically lasting a few months.
Initial phase of the project	The pre-clinical or conceptualization phase typically takes 2-4 years
Clinical phases product development	In medicine, 3-4 years at fastest, but 7-8 years on average; slightly faster for technology solutions
Regulatory approval	A marketing authorization is sought for the laser and the light-activated medicine together The administrative process takes 1-2 years.
After commercialization	Sales of new medicines, medical devices and treatments typically develop slowly. Efficacy and safety are monitored throughout the lifetime on the market.

Source: Modulight / Inderes

Business model 5/7

Monetization comes from the progress of projects

Modulight aims to price its products and services based on value. This means that the company's pricing is based not so much on the cost of manufacturing individual laser devices, but on the added value the company brings to the project. Modulight's target pricing ranges are illustrated in the attached graphic. Pre-clinical and clinical Phase I typically involves a single laser device and associated services. Clinical Phase II/III is typically performed as a multi-center study, with several devices typically required. In the commercialization phase, Modulight is aiming for SaaS-style pricing, where the company would receive revenue per treatment based on the added value of the treatment. Pricing depends on whether the client is an academic or private sector client, especially in the early stages.

According to Modulight, the prices of the treatments provided vary considerably. For more routine treatments, such as laser treatment of the fundus, the total cost of the treatment is typically a few thousand euros. In contrast, biological anticancer drugs are priced in the US at up to over USD 100 000, which means that laser-activated anticancer treatments could also be priced quite high. In the absence of concrete commercialization agreements at this stage, the visibility on the total price of the treatments and Modulight's share of the total value of the treatment is limited. In pharmaceutical treatments, we estimate that the drug owner has a stronger position in the value chain than the laser equipment manufacturer.

As we believe that the majority of projects are still at an early stage, revenue at this stage is dominated by one-off payments based on project progress. We estimate that individual invoices are still modest, in the tens or at most hundreds of thousands of euros. However, during H1'22, Modulight announced a contract worth USD 3.9 million, which will be recognized during H2'22-H1'23. We believe that this agreement could give an indication of the scale of billing for clinical phase II/III or product development technology projects. In its definition of large-scale commercialization, Modulight expects an annual revenue of EUR 10 million. The company does not yet have such projects leading to large-scale commercialization.

Problems with monetization especially in 2022

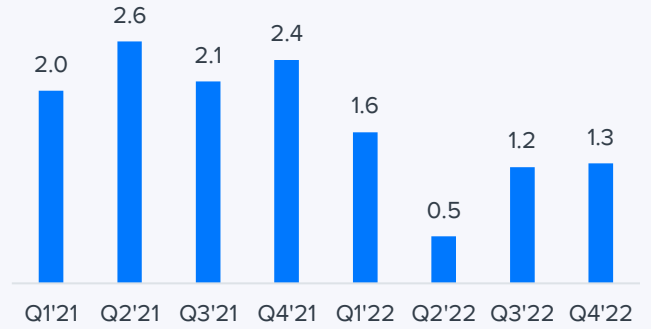
Medicine and biomedicine have been at the heart of Modulight's strategy since 2014. The company grew profitably throughout the last decade (although the strong growth in trade receivables in recent years raises questions). However, revenue and profitability deteriorated very sharply during 2022. According to the company, the decline was driven by a reduction in client appointments due to the COVID pandemic, client funding difficulties and geopolitical uncertainty. Given the sharp decline in revenue (around -80% in Q2'22 vs. Q2'21), we believe that the problems may also be due to monetization issues of the business model used. The company has recently introduced new elements to its strategy, which it hopes will deliver faster financial results.

The pricing model sought by Modulight

Project phase	Pricing
Pre-clinical phase or researcher-driven study / suitability assessment	Private sector clients one-off fee 0.1-1 MEUR; Academic clients EUR 100,00-150,000
Clinical phase I / Piloting	One-off fee 0.5-5 MEUR; Service fee 25% of the customer's investment
Clinical phase II-III / Product development	One-off fee 2-30 MEUR; Service fee 25% of the customer's investment
Large-scale commercialization	2-20% of revenue / added value to treatment; Service fee 25-35% of client's investment

Source: Modulight

Quarterly revenues, MEUR



Source: Modulight

Business model 6/7

Sales and distribution with an emphasis on in-house operations in the US and partnerships elsewhere

Modulight's presence at industry conferences and trade fairs plays a key role in meeting and finding customers. Digital marketing and social media also play an important role. We estimate that Modulight has already built up a fairly broad reputation in the industry over its 20+ years of operation. The company reports that it receives many contacts from potential customers who are already familiar with Modulight.

In addition to its presence at trade fairs, the company's products are used in many scientific projects and clinical trials, the results of which are reported at industry meetings. This spreads awareness of the company's products and services among researchers and industry representatives. According to the company, it also has a network of key opinion leaders who contribute to the visibility and credibility of Modulight's solutions in the industry.

To date, Modulight has been responsible for the distribution of its products. However, in its recent 2023-2025 strategy, the company is focusing on direct sales, especially in the US, and selected partnerships in Europe and Asia. We believe that Modulight will continue to use more and more external distributors outside the US in the future. As an example, in January 2023 Modulight announced a partnership with Laser 2000 in Europe. The agreement covers the distribution of products in Germany, Austria, Switzerland and France. We estimate the distributors' margin to be around 40%, which is typical for the industry. Sales of the products will start as soon as possible during Q1'23.

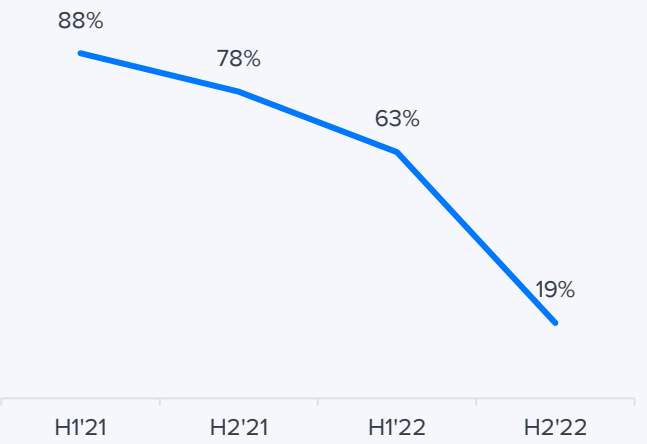
The business model has potential for scalability

In recent years, Modulight has achieved a gross margin of over 80% and in 2020 the margin was as high as 91%. However, with the difficulties in 2022, the gross margin has fallen dramatically. The reason for the sharp fall in the 2022 gross margin remains partly unclear. However, we believe that the history of the company and the nature of the industry shows that high gross margins are still possible for the company. However, in the coming years, increasing depreciation of new production equipment may weigh on reported gross margins.

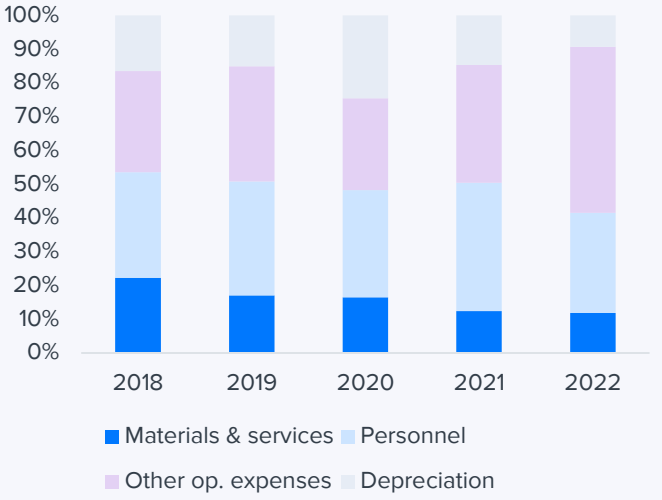
Modulight's pricing strategy for the future will include a move towards SaaS-style, pay-per-treatment pricing, enabled by the connection of devices to cloud services. We understand that this type of pricing isn't yet typical in the healthcare sector, but Modulight says that its customers have shown a clear interest in using this model. We believe that success in implementing the model on a large scale would open the door to a highly scalable and profitable business for Modulight. At this stage, however, we remain cautious about the model until more evidence of its widespread adoption emerges.

Challenges to implementing a scalable model include a long period of product development with the customer, which can take a long time to commercialize, and a high probability that projects will be discontinued before reaching the commercialization phase.

Gross margin



Cost structure



Business model 7/7

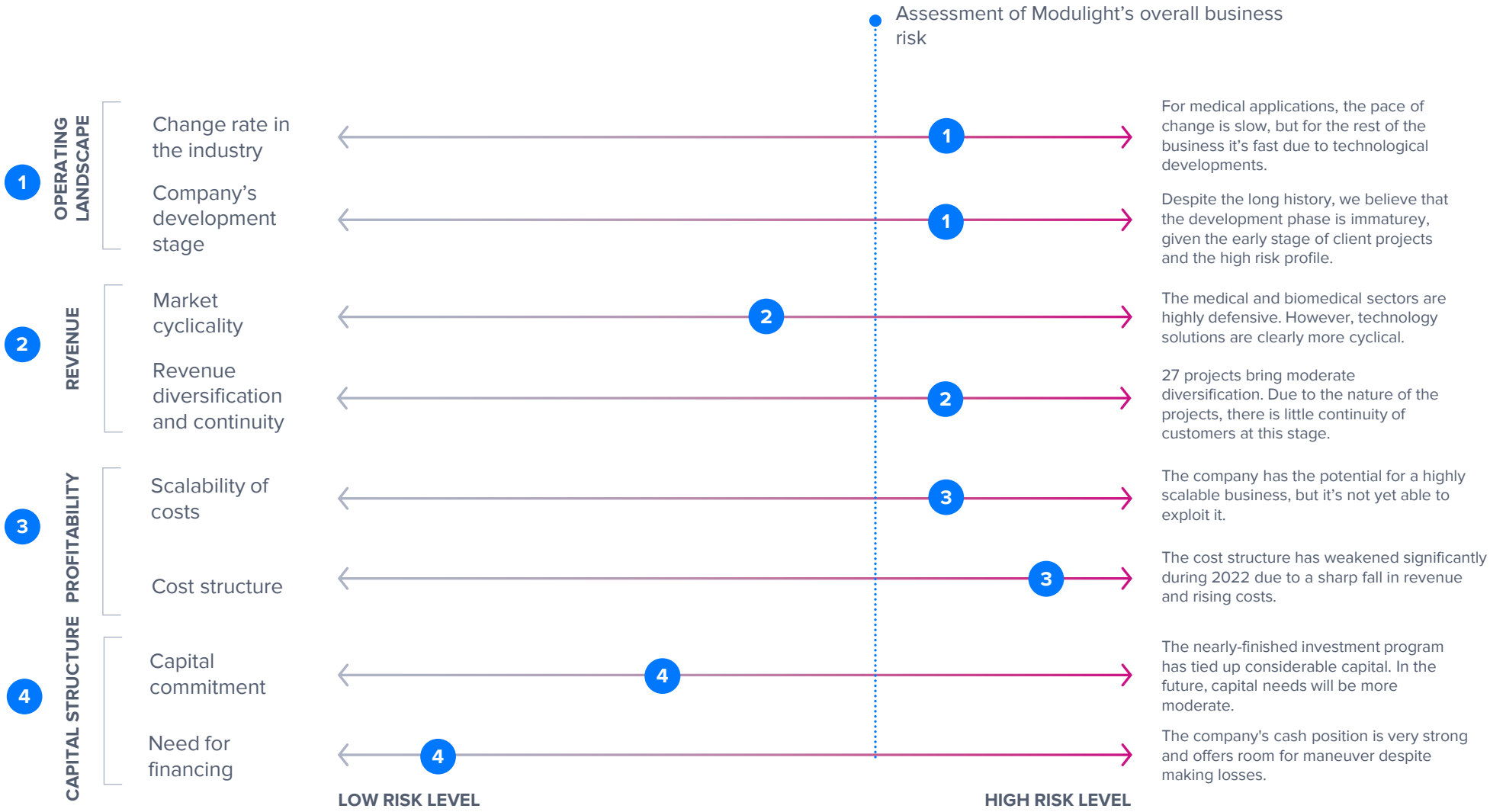
In some cases, we believe that acquisitions can offer a company a faster and more secure way to enter a selected market than lengthy product development. Modulight's strong balance sheet would also allow for this.

Another scalability challenge we see is the need for a local presence, which we believe is needed to serve customers alongside cloud services. As part of its new strategy, Modulight is investing in the growth of its US operations, which is driving up the company's costs.

The cost structure is dominated by personnel costs

Modulight's cost structure is currently heavy as revenue has fallen sharply while personnel costs have risen. Materials and services have been a relatively small part of the cost structure due to the high gross margin. However, the margin has deteriorated sharply in recent reports. Personnel costs have historically been the largest expense item and can be expected to increase in the future, as the company has plenty of vacancies available. We estimate that salary costs in the US are also higher than in Finland. Other operating expenses have also been a major expense item, which increased in 2022 partly due to a write-down of trade receivables, according to the company. In the H2'22 report, other operating expenses continued to grow strongly, which the company said was due to the execution of its growth strategy, including increased travel. The increase in costs therefore appears to be at least partly fixed. The depreciation of investments in the production plant can also be expected to increase in the future.

Risk profile of the business model



Source: Inderes

Technology and products 1/4

Laser technology in medicine, biomedicine and diagnostics

Laser light has only one wavelength, and its light waves oscillate in the same direction and at the same frequency. In medical and biomedical applications, this enables, e.g., applications where an inactive drug is activated by a laser light in the desired tissue. Such an application of medicine is called photodynamic therapy (PDT). In turn, Biomedical and diagnostic applications are typically based on the illumination of fluorescent tracers by laser, enabling imaging solutions, various biological measurements and assays or DNA sequencing.

Medical applications and photodynamic therapy (PDT)

Modulight develops its lasers for medical applications in partnerships with, for example, pharmaceutical companies. For drug development projects, the company will supply a laser light source of a specific wavelength, for which it has ML7710 (cancer medicine) and ML6710i (ophthalmology) instruments approved for patient studies. Several lasers of different wavelengths can be incorporated for different applications.

As an example of an application of cancer medicine, a patient suffering from a tumor can be administered an intravenous drug from Modulight's partner pharmaceutical company. The drug is distributed throughout the body via the bloodstream. The drug is harmless to cells until it's activated in a tumor by illuminating the tumor with a laser of a specific wavelength. Upon activation, the drug produces highly reactive reactive oxygen species that destroy cancer cells. Side effects are kept to a minimum because the drug is not activated outside the cancer tissue to any significant extent.

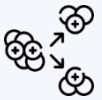
A treatment like this example is called photodynamic therapy. In addition to cancer medicine, PDT can be used to treat conditions such as eye or skin diseases. In addition to the example above, there are many different types of PDT cancer applications, differing for example in terms of the drugs used, their different mechanisms of action and the indications (i.e. different types of cancer). What these approaches have in common is that a laser light of a specific wavelength is used to illuminate a molecule in the patient, which reacts to the light. The reaction may involve activation of a drug molecule or, for example, the molecule becoming fluorescent, allowing the operating surgeon to differentiate the cancer from healthy tissue and cut away the cancer as precisely as possible.

The drug can also be linked to an antibody that adheres to specific surface structures of the cancer cell, which is called photoimmunotherapy, or second-generation PDT. In the latest third-generation applications, the drug can be packaged inside microscopic lipid droplets. The droplets can be broken down at the desired place with a laser light, releasing the drug into the target tissue.

General principle of laser operation in medical and biomedical applications

The laser device produces light of the desired wavelength at the desired power and illuminates the target to be treated or the sample to be examined.

The target molecule absorbs the energy from the laser light based on the wavelength of the laser and the chemical properties of the target molecule.



The laser energy can activate the drug target molecule, for example to produce highly reactive compounds or to release the drug as the carrier structure breaks down around it.

The energy contained in a laser can also be stored for a very short time in the target molecule and released as longer wavelength light (fluorescence). This phenomenon can be used for imaging and diagnostics.

Source: Inderes

Technology and products 2/4

Photodynamic therapy can treat superficial tissues, such as the eye or skin, that are easily accessible without surgery. On the other hand, in open or endoscopic surgery, a laser beam can reach almost all tissues, starting from the brain. PDT is not a mainstream cancer treatment, at least not yet, but is an experimental treatment. The widespread commercial success of Modulight in these applications would require regulatory approvals for such experimental treatments and breakthrough into routine treatment practices.

In ophthalmology, for example, Visudyne (verteporfin) is used in the photodynamic treatment of macular degeneration. Modulight has signed an agreement with the pharmaceutical company Bausch & Lomb for the exclusive supply of Visudyne lasers. Modulight received FDA approval after delays in early 2023 and will start commercialization during H1'23.

In addition to ophthalmology, photodynamic therapy is also used to treat skin diseases. Modulight has identified dermatology as a future opportunity in its growth strategy, but as far as we know, the company currently has no projects close to commercialization in this area.

Biomedical and diagnostic applications are typically based on fluorescence

In biomedicine, lasers are used in a wide range of applications. For example, the Modulight ML8500 plate reader can be used to perform numerous measurements and assays on living cells or to determine the concentration of a specific protein in a sample. The ML6600 laser light source can also be used for a wide range of applications. In fluorescence microscopy, for example, a laser is used to illuminate markers introduced into cells or tissue sections, allowing the desired structures in the cell or tissue sample to be visualized in the desired colors. Such measurements and applications have been commonplace in laboratories for decades and we believe that Modulight's market potential is mainly based on small-scale customized solutions rather than mass-market solutions.

Applications in biomedicine and diagnostics are usually based on fluorescence. In this case, fluorescent tracer is illuminated at the appropriate wavelength, so that the laser energy is stored in the tracer and immediately released at a longer wavelength. In practice, for example, when a tracer is illuminated with a blue laser (wavelength around 490 nm), it fluoresces back at a longer green wavelength (around 550 nm). Potential future applications for Modulight in biomedicine and diagnostics include flow cytometry and genetics. Flow cytometers are widely used in experimental laboratories and clinically, e.g., in the diagnosis of blood samples and cancers. Flow cytometers are very widely used as research and diagnostic equipment in research and clinical laboratories. Their market is very large and defensive.

Modulight's key products

ML7710

A laser platform for medical applications, which can be customized with several lasers of different wavelengths.

ML6710i

Ophthalmic laser, used for example in Visudyne drug treatment. The device is controlled via iPad.

ML8500

A well plate reader for diagnostic applications.

ML6600

A three-wavelength laser system that can be used, for example, in microscopy for fluorescence imaging of tissues.

Source: Modulight / Inderes

Technology and products 3/4

We believe that a breakthrough in this market would be a significant opportunity for Modulight. However, flow cytometers are an established technology, and we believe the company will face significant competition from larger players in this market. In genetic applications, fluorescence can be used to determine the sequence of nucleic acids DNA samples. These applications represent existing technology that keeps on developing, where we believe there is significant competition.

Cloud services add value for the customer and help in differentiating from the competitors

Modulight has outlined that in the future, all its products will be connected to the company's cloud platform. Already today, for example, the ML7710 and Ml6710i medical laser platforms are connected to the cloud. The cloud platform enables treatment planning and the sharing of treatment protocols, as well as the processing of treatment-related data, giving caregivers near-instant feedback on treatment dose and other variables. The company says that feedback and data accumulation from multiple treatments can help improve treatment outcomes. The platform also enables, e.g., remote support and training for users, real-time data sharing in multi-center studies between different treatment facilities, and a billing model based on number of treatments. In the future, the platform may also enable personalized medicine solutions by tailoring treatment to the patient's needs. We believe that the cloud platform can serve as a differentiator from competitors.

ML7710 and ML6710i laser platforms are ready-to-use products for medical applications

We believe that Modulight's key products are the ML7710 and ML6710i laser platforms that are suitable for patient treatment. Modulight is able to customize the platform with the wavelengths the customer wants and, if necessary, add them in the future as needed. Both products have CE marking (EU marketing authorization) and FDA approval for the US market. We have discussed other ready-for-sale products that we believe are less important to the company in the chart on the previous page.

Products in other application areas are still mainly in the development phase

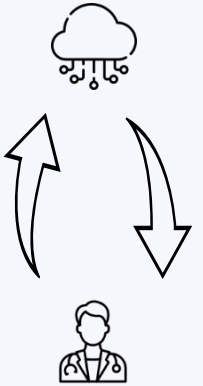
In addition to the ready-for-sale products mentioned above, Modulight is developing new products in its projects, which we estimate are in most cases still at the conceptualization or development stage. We understand that such products require a significant development investment, both in terms of money and time. Modulight has said that it has identified potential applications for its laser technology, such as quantum computers. We understand that quantum computers require very high-quality lasers, which could serve as an excellent reference for Modulight and potentially a significant business opportunity. However, visibility of the commercial potential of quantum computers is low at this stage. Other potential applications highlighted by Modulight include digital printing presses and environmental measurement. The visibility of Modulight's competitiveness and project development stage is limited at this stage.

Cloud service supporting treatment

A doctor plans the treatment and stores the treatment protocol in Modulight's own cloud service.

The treatment protocol is downloaded from the cloud and the treatment is carried out according to the protocol.

The data collected during the treatment is uploaded to the cloud, where it's processed, and the caregiver receives feedback on the treatment almost immediately.



Cloud service features and benefits

Remote device management and user support	Sharing training materials and protocols. Usage tracking and activation of features. Real-time consulting. Monitoring device performance and maintenance requirements.
Data collection, analysis and utilization	Pricing based on number and type of uses Licensing of new use cases. Monitoring the use of the equipment for compliance with regulations and contracts.
Processing and storing treatment data	Treatment feedback (see above). Data storage for later analysis. Data sharing between participating centers.

Source: Modulight, Inderes

Examples of applications

Example of laser use in oncology

In photodynamic therapy, a cancer patient is given an intravenous light-sensitive drug that travels throughout the body in the bloodstream. The drug is in an inactive form, so it has no therapeutic or side effects.

The cancer tissue is illuminated with a laser at the right wavelength, which triggers the activation of the drug and the formation of oxygen free radicals that destroy cells. The drug is not activated elsewhere in the body, so side effects are minimal.

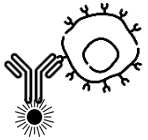
Example of the use of Visudyne in ophthalmology

The drug is administered as in the above cancer medicine example. It becomes particularly enriched in the vascular cells of patients with macular degeneration. In the disease, patients have an overgrowth of blood vessels, which causes the symptoms of the disease.

The drug in the fundus is illuminated by a red (689 nm) laser, which triggers the production of free radicals and cell death. The overgrowth of blood vessels is reduced, and symptoms are relieved.

Patients need to spend time in the dark or otherwise protect themselves from light after treatment, as light can cause activation of the drug and side effects, for example on the skin.

Example of diagnostics - flow cytometry



A blood sample is taken from the patient, from which blood cells are isolated. Cells are treated with an antibody that binds only to a protein on the surface of certain types of blood cells. A fluorescent tracer is attached to the antibody.

The cell sample is run through a flow cytometer, where the cells are passed in a thin tube one after the other and illuminated by a laser.

Cells with a fluorescent marker attached to their surface by an antibody send back light. The light emitted can be measured and the sample can provide the number of blood cells of interest and other information.

Source: Inderes

Industry and competitive field 1/5

Modulight builds competitiveness by differentiating itself within the overall laser technology market

Modulight operates and aims to operate in several segments of the overall laser technology market. We estimate that the most important of these is the photodynamic therapy market, which covers Modulight's core business areas of oncology, ophthalmology and fluorescence endoscopy. For the other business areas, we rely on the independent analysis commissioned by Modulight and carried out by the consultancy firm KPMG. We consider this to be the best available source for estimating the value of the laser market in the potential market segments selected by Modulight. In addition to these, the company has its sights set on several other technology areas where it says it is taking an opportunistic approach. These opportunistic initiatives are on a very broad technological scale, so we will not deal with them all separately in this report.

Market for photodynamic therapy (PDT)

Modulight's medical business is in the photodynamic therapy market. This market is estimated to reach USD 1.4 billion in 2021 and grow to USD 2.8 billion by 2030 (CAGR 8.3%)[1]. The overall market is further segmented into photosensitive drugs and devices that activate the drug. We estimate that photosensitive pharmaceuticals account for a larger share of the market value than devices. In addition to lasers, the light source for the device can also be implemented using LED technology, for example. The market size of laser equipment in the overall photodynamic therapy market is therefore difficult to quantify precisely.

Cancer treatments are expected to be the largest application area for PDT by 2030 as cancer cases increase and new treatments are developed. Currently, we believe that the biggest application area for PDT is in various skin care indications such as solar keratosis and psoriasis.

Among ophthalmological applications, PDT is used, e.g., to treat macular degeneration, for which Modulight will start exclusively supplying Bausch & Lomb with lasers to activate its Visudyne drug. The size of ophthalmic solutions in relation to the total PDT market is not known. However, the 21% share of ophthalmic lasers in the total market for medical lasers gives an indication[2].

We believe that fluorescence endoscopes are part of the market for fluorescence-guided surgical systems, which is estimated to be worth USD 68 million and to grow by 16.6% until 2028[3].

Modulight's growth objectives as a contract manufacturer

In addition to cancer, ophthalmology and fluorescence endoscopy, Modulight has identified four areas of particular growth potential: flow cytometry, dermatology, semiconductor metrology and quantum computing. The company sees these areas as potential high-volume, high value-added opportunities where the core technologies can be applied with low thresholds and high synergies.

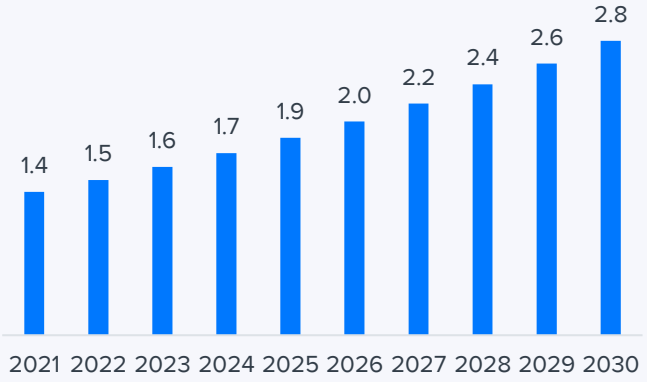
Modulight's target markets

Modulight's focus areas are the oncology and ophthalmology photodynamic therapy (PDT) and fluorescence endoscopy markets.

In addition to these, the company has identified four high potential growth markets: skin diseases (PDT), flow cytometry, semiconductor metrology and quantum computing.

Other opportunistic growth areas include digital printing presses, genomics, automotive environmental monitoring, other life science applications and other high value-added applications.

Photodynamic therapy market 2021-2030[1], BUSD



1) Emergen Research
2) Global Market Insights 2023
3) Mordor Intelligence

Industry and competitive field 2/5

KPMG estimates the combined total market value for laser equipment in these growth areas at EUR 1.1 billion in 2021 and is expected to grow to EUR 1.8 billion by 2026.

According to KPMG, dermatology applications are an attractive short- to medium-term opportunity for Modulight due to the large market. Modulight has the potential to act as a subcontractor for OEMs in the industry. The laser market for dermatology was around EUR 450 million in 2021 and is expected to grow to EUR 640 million by 2026 (CAGR 7%), according to KPMG.

Laser systems for flow cytometry are worth around EUR 230 million and the market is expected to grow to EUR 370 million by 2026 (CAGR 10%). We understand that price competition in this area is fierce, so we believe that success in this sector will require Modulight to successfully differentiate itself from its competitors in terms of technology. We estimate that the flow cytometry market is quite concentrated, and thus we believe that success will require becoming a subcontractor to a large player.

According to KPMG, laser solutions will account for EUR 78 million of the quantum computing market in 2021. The market is expected to grow very strongly as a result of the breakthrough in quantum computing, reaching EUR 290 million in 2026 (CAGR 30%). We believe that Modulight's ability to develop and customize laser solutions could well position the company in this developing market. The prospects for the commercialization and growth of this new technology are still very low at this stage.

The overall ODM market that Modulight is targeting is, in our view, competitive and challenging. In our view, the company needs to find the right partners and market niches where it can play to its strengths.

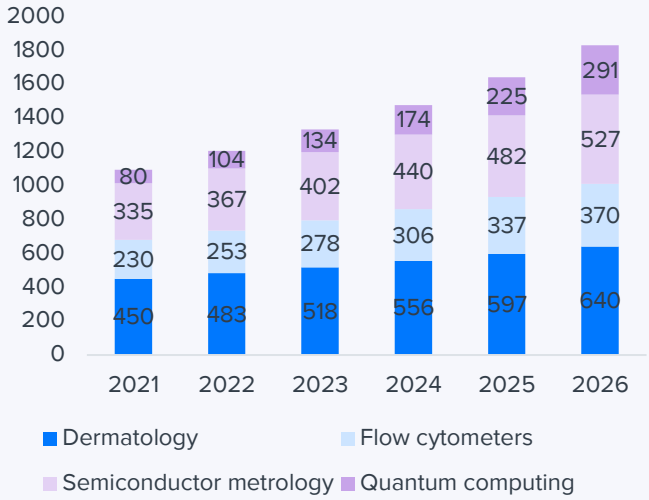
Modulight also selectively targets other markets

Modulight's laser technology can also be applied to other technology areas, which the company says it is opportunistic about. These identified markets include digital printing presses, genomics (DNA/RNA sequencing), automotive environmental measurement technology and other life science applications. The company's practical progress in these markets is still unclear and we believe they are lower priority businesses for the company, so we won't discuss these markets in detail in the scope of this report.

Market trends

We believe that the key market trends for Modulight are very much in line with those in the health technology, pharmaceutical and life science sectors in general. As the population grows and ages, the number of cancers and eye diseases, e.g., will increase steadily and predictably. In addition, combination treatments and personalized medicine are expected to become more common in cancer therapy, which could support Modulight's business. In general, the need for new treatments in medicine is obvious.

New growth levers, MEUR



Source: KPMG

Market trends

Aging population leads to increased incidence of cancer, eye and skin diseases

Rise of combination treatments and personalized medicine in cancer treatment.

Introduction of new treatments and technologies

Source: Modulight / Inderes

Industry and competitive field 3/5

Competitive factors in the market

Laser technology has traditionally been based on silicon-based semiconductors, where we believe Intel and AMD, the original developers of the technology, are still strong. Modulight focuses particularly on the newer and more demanding compound semiconductor technology. We believe that there are relatively few companies in the world that have mastered this technology because of the demanding manufacturing processes.

We believe that price is a key competitive factor in high-volume lasers, which means that the high-volume market is dominated by large laser manufacturers such as Mitsubishi Laser and Coherent. In the field of medical lasers, on the other hand, we estimate the quality of the product to be more important than the price. Long-term availability of spare parts and product support are also important. For example, we understand that there have been availability problems with Visudyne drug-activating lasers, which contributed to Bausch & Lomb entering into an exclusive manufacturing agreement with Modulight.

In the medical devices sector, there are barriers to entry where we believe Modulight has strengths. However, in new growth areas such as flow cytometry, there are fewer or no barriers and we estimate that price competition is more intense. Our views on the general barriers to entry and the role of Modulight are summarized in the adjacent graph.

Key competitors in different categories

Medical device manufacturers such as Medtronic, Stryker, Siemens Healthineers and General Electric produce lasers used in patient treatments. These companies have the advantage of long-term experience, extensive existing distribution channels and large sales and marketing resources. To our understanding, these companies typically subcontract lasers and their ability to design and customize products to customer needs is less than Modulight's, at least for small-scale projects. There are also smaller manufacturers in this category, such as Ellex (part of Lumibird), which makes lasers for ophthalmology.

Semiconductor technology companies include several large companies such as Coherent, II-VI (which was acquired by Coherent) and Mitsubishi Laser. We understand that these companies compete with Modulight mainly in industrial solutions, for which they are able to supply lasers at competitive prices. As far as we know, these companies don't manufacture medical lasers used to treat patients.

In our view, the third relevant category of competitors consists of **companies active in the market for photodynamic laser treatments.** Competitors are typically focused on specific areas of medicine, such as dermatology (Galderma, Suslaser), Lumibird (eye), and Theralase (cancer). The competitive field is summarized in the picture on the next page.

Barriers to entry and Modulight's position

Long product development	Modulight does not yet have any widely commercialized products, so this hurdle remains partly uncrossed.
Regulatory approvals	The sale of medical devices requires an official authorization, which typically takes years to obtain. Modulight has FDA marketing authorization and CE marking for its ophthalmic and oncological lasers.
Technological and production skills	Technological and production know-how in compound semi-conductor lasers is in the hands of a small number of players. Modulight is capable of a vertically integrated operating model with its own production facility and know-how.
Presence in local markets	We estimate that Modulight's local presence is limited at this stage, but the company will particularly focus on the US .
Competitive landscape	Some markets have large, effective competitors (e.g. Sony and BD Biosciences in flow cytometers).

Source: Inderes

Industry and competitive landscape 4/5 - examples of competitors

	Competitor	Description of the competitor	Modulight's competitive advantages[1]	Modulight's competitive disadvantages[1]
Manufacturers of medical devices	ZEISS CARL ZEISS MEDITEC Medtronic INTUITIVE SURGICAL GE Healthcare SIEMENS Healthineers	• Medical device manufacturers are mainly large global companies that design and manufacture lasers. • The companies typically use commercially available components and don't have in-house expertise in semiconductor technology. • Thus, the companies have limited scope to customize their products.	• The agility of a vertically integrated approach and the ability to customize products to customer needs • Technological and manufacturing expertise in semiconductor lasers • Flexibility in production thanks to in-house manufacturing capacity • Added value of cloud computing	• Resources of the sales and distribution organization compared to larger competitors • Price competitiveness • Recognition in the market
Semiconductor or technology companies	COHERENT MITSUBISHI LASER	• Large global companies that manufacture semiconductor components • Focus on standardized products with high production volumes	• Flexibility and customization • Medical and life science expertise	• Price competitiveness
System solutions developers	BAYER Lumitron LASERAGE MONTERIS MEDICAL	• The companies focus on application-level solutions. • No knowledge of semiconductor laser manufacturing	• Flexibility and customization • Manufacturing expertise in semiconductor lasers • Added value of cloud computing	• We estimate that some competitors have a more developed sales and distribution organization and wider brand awareness.
Companies focused on PDT[2]	GALDERMA LUMIBIRD MORE THAN LASERS theraLASE Destroying Cancer at the Speed of Light™	• Companies have focused on PDT applications • Focus typically in a specific medical area, such as ophthalmic lasers	• Flexibility and customization • Semiconductor laser expertise • Added value of cloud computing	• A more limited focus on a specific medical area than Modulight can be an advantage for competitors • Some competitors have greater resources (e.g. Lumibird).

Source: Inderes, Modulight, competitors
1) Inderes' estimate
2) PDT = photodynamic therapy

Industry and competitive field 5/5

Modulight's competitive factors

We believe that Modulight's key strength is its ability to customize products to customers' needs and to develop products in close cooperation with the customer. In our view, this flexibility is based on the company's vertically integrated operating model, where the company designs and manufactures the products itself and often carries out product development together with the customer. We also believe that Modulight has a high level of manufacturing expertise that enables it to produce lasers for demanding applications. There is also a high level of product traceability, which is important for medical solutions. The connectivity of the company's laser products to cloud services differentiates the company from its competitors and enables it to offer additional services and features.

In our view, the company's focus on life science laser solutions is also a clear differentiator, although some competitors also have similar expertise. Modulight employs several industry specialists, which enables profiling and a deep knowledge of the customer base and industry. We consider this a prerequisite for success in medical solutions.

As regards competitive disadvantages, we think that Modulight's production capacity and price competitiveness are currently insufficient to compete with large manufacturers for products that can be produced with relatively simple technological solutions and at relatively low cost. We think this is the reason Modulight has positioned itself in life science solutions that require high quality and smaller production batches. The company's project-based commercialization model has also struggled strongly during 2022, and we have some reservations about its viability until further evidence is provided. Modulight has made several business initiatives in different technology sectors, but in the absence of large-scale commercial successes, we consider this a risk.

With the investment in the new production facility, we estimate that Modulight will be able to serve customers requiring higher volumes, which will expand the potential customer base.

Intellectual property rights

According to Modulight, its intellectual property rights consist of patents, domain names and unregistered intellectual property rights such as copyrights, know-how and trade secrets. In addition, we believe that barrier to entry offer protection for the company. According to our latest information, Modulight has eight patent families, each containing one or more patents. The patent families are described in the table below. In our view, patents and other means of protection provide the company with good IPR protection, although it's challenging to assess them from the outside.

Summary of the patent portfolio

Patent family*	Region	Issued	Expires
1	USA	2007	2023
2	USA	2021	2038
3	USA	2022	2039
4	USA	Applied	-
5	USA	Applied	-
6	USA	Applied	-
7	USA	Applied	-
8	USA	Applied	-

* Description of the patent family
Source: Modulight
1=Optically pumped multilayered modulator having surface-normal geometry
2=A method and a system for configuring the first biomedical laser
3=A method of operating a biomedical laser
4A method for forming contact surface on top of mesa structure formed on semiconductor substrate
5=guiding adjustments of a laser spot size during ophthalmic laser therapy treatment
6=theranostic laser system
7=Method for light-activated drug delivery and system
8=Monitoring assistance and control of a theranostic medical laser system by voice

Source: Modulight / Inderes

Strategy and financial objectives 2023-2025 1/3

A strategy for strong growth and restoring profitability

In late 2022, Modulight published a new strategy and financial targets for 2023-2025. The company has five key strategic areas and five key projects to implement the strategy. The company also has five business objectives and three financial objectives, which we have summarized in the graph on the next page.

The company's strategy is clearly growth-oriented and also focuses on operational and technological quality and expertise. Modulight is looking to expand geographically, with the company saying it's aiming to start its own operations in the US and focus on selected partnerships in Europe and Asia. Another strategic growth driver is expansion into new applications and uses. In practice, this means, e.g., using the laser platform of cancer medicine for new types of cancer. The third growth lever in the strategy is the introduction of new business models, such as SaaS-type pay-per-treatment billing. Other strategic objectives relate to the development of business, commercial and technological skills.

In our view, the new strategy doesn't differ substantially from the previous one, except for the investment focus of the previous strategy, which is logical since a major investment in production was still ongoing.

In our view, the implementation of the growth strategy relies on the increased capacity resulting from the investment, which the company will seek to exploit by increasing production through large-scale deployments. We see Modulight's agility to customize and manufacture products according to customer needs and its (bio)medical expertise alongside its technological know-how as strategic strengths.

No hard figures in the financial targets

In terms of financial targets, Modulight is aiming for strong revenue growth and a return to strong profitability measured in terms of EBITDA. No numerical targets are set in the strategy. In terms of revenue, the company grew by 17.6% annually (CAGR) from 2011 to 2021. However, calculated with 2022 figures, long-term growth remained at 8.9% due to a sharp fall in revenue in 2022.

Modulight's business objectives include taking three development projects to the commercialization stage. This would mean, according to Modulight's definition, a revenue of EUR 30 million from these projects in addition to other business. The company's revenue target set out in the IPO was to achieve three commercial deployments by 2023. Based on the company's revenue of around EUR 10 million at the time and the definition of a commercial launch, this would have meant a revenue of at least EUR 40 million. The new strategy has therefore moved the target forward by two years. We currently estimate 2023 revenue to be well below EUR 10 million, which means that Modulight seems to fall well short of its previous targets.

We are currently taking a cautious approach to achieving the targets due to the much weaker performance of recent years and the uncertainties in the project model. Given the capacity provided by the investment program, we believe that the company has the potential as such to achieve the target if the commercialization of the development projects is successful. To achieve the strong profitability the company is aiming for (measured in terms of EBITDA), we expect strong revenue growth from the current level, with a high gross margin creating the basic conditions for good profitability. We believe that the company utilizes EBITDA to measure profitability because of high depreciation due to production investment, which will weigh on EBIT in the coming years.

In terms of revenue growth, we believe that the biggest near-term potential relates to the agreement with Bausch & Lomb. With the FDA approval, the company will be able to start commercializing the Visudyne laser for drug activation from H1'23. In the longer term, we believe that customers will be able to use the same equipment for other applications and purposes, which may further expand the commercial potential of the equipment.

Strategy and financial objectives 2023-2025 2/3

Key elements of the strategy	 Geographical expansion	 Expansion of the offering to new indications and applications	 New business models	 Commercial and operational excellence	 State-of-the-art laser technology expertise
Projects to implement the strategy	 Sales, marketing and operations development	 Productizing platform devices for various indications and applications	 Cloud technology and cloud-based services development	 Technology development based on the completed investment program	 Development of ESG, governance and reporting
Business targets	 At least three commercial roll outs of projects in the current R&D pipeline	 Local operations in the US and focusing on selected partnerships in Europe and Asia	 Development of SaaS-based business models	 Utilizing cloud-based services	 Carbon-neutral operations
Financial targets and dividend policy	 Strong revenue growth	 Return to strong profitability in terms of EBITDA-%	 The company distributes little or no dividends		

Source: Modulight

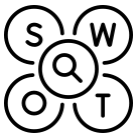
Strategy and financial objectives 3/3 - SWOT

Strengths

- A vertically integrated operating model that enables the company to serve customers flexibly and efficiently
- A combination of expertise in laser technology, manufacturing and life sciences acts as a differentiator
- Cloud service solutions and expertise
- Very strong balance sheet

Weaknesses

- In the project model, progress to the commercialization phase is uncertain and can take a very long time, even if successful
- Increase in trade receivables in 2019-2021, write-downs of receivables, and sharp drop in revenue in 2022 may indicate poor quality of projects and/or customers
- Visibility on the development of revenue and earnings
- Small size compared to competitors



Opportunities

- If commercialization is successful, laser platforms can be expanded to a wide range of applications
- Cloud services enable added value for care and commerce, such as pay-per-treatment billing
- Expanding the use of technology into new areas: flow cytometry and genetics and other technology areas

Threats

- Projects failing and taking longer to complete; Delays in regulatory approvals
- Payment difficulties for customers in the product development phase
- Larger competitors in new growth openings
- Weakness of bargaining power in higher volume products

Source: Inderes

Financial position 1/2

Historical performance has been very mixed

Modulight was founded in 2000 and reached a revenue of EUR 1 million in 2006. Modulight grew profitably between 2011 and 2022 (CAGR 17.6%).

However, after the IPO in Q3'21, the figures started to show signs of weakening. At the time of the IPO, the outlook for growth and profitability was still very strong, except for a sharp increase in trade receivables in 2019-2021. In the Q3'21 business review, revenue growth slowed and profitability deteriorated. In the following H2'21 report, the company reported a decline in revenue compared to the comparison period and a clear turnaround in profitability to a loss. The result was also burdened by a EUR 4 million write-down of trade receivables. In 2021, the company made its first operating loss since 2010.

The deterioration of business continued during 2022, with revenue falling to EUR 4.6 million from EUR 9.1 million in the previous year (-49%) and an operating loss of EUR -7.8 million. According to the company, the deterioration was explained by changes in the operating environment caused by the Covid-19 restrictions, as well as macroeconomic and geopolitical uncertainty. Further write-downs of EUR 0.5 million were made during 2022.

The deterioration in Modulight's revenue and earnings has been significant compared to the relatively recent outlook at the time of the IPO. The company says the COVID restrictions had made it difficult to meet with customers. The number of projects has remained stable, and the company has also reported that no projects have had to be terminated. We estimate that the impact of the COVID shutdowns has mainly been on the acquisition of new clients and projects.

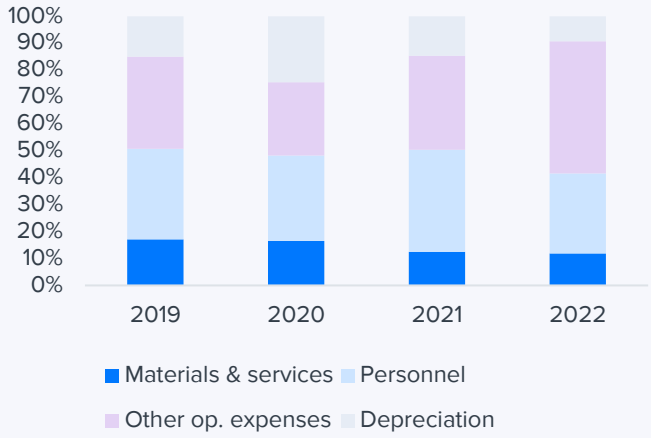
In biotechnology in particular, Q2'22 seems to have been the bottom in terms of funding. As a significant proportion of Modulight's customers are early-stage companies, a deterioration in the financial situation may be one possible reason for the decline in revenue if customer financing has deteriorated and projects may have had to be postponed. According to Clinicaltrials.gov, at least one clinical trial has been stopped due to the COVID pandemic.

In our view, COVID shutdowns and geopolitical uncertainty partly explain the deterioration in the figures. However, there has been little cancellation of projects, so we would expect a steadier revenue stream from 27 projects and other business. The visibility of the company's projects and their revenue recognition is limited, so the exact reasons for the deterioration in the figures are unclear at this stage. However, it's clear that the revenue generated by projects varies widely.

Trade receivables in 2017 were: 0.8 MEUR; 2018 1.3 MEUR; 2019 5.6 MEUR; 2020 7.4 MEUR. Trade receivables peaked at 8.7 MEUR in H1'21 and decreased to 3.0 MEUR at the end of 2022. According to the company, the largest write-down of EUR 4 million was related to increased financial risk and weakened solvency of customers. The risk of write-downs on outstanding trade receivables is difficult to estimate, but we believe that investors should be prepared for the possibility that receivables could be subject to significant write-downs.

Revenue & operating profit, MEUR

Cost structure



Financial position 2/2

Cost structure

Due to the high gross margin, Modulight's materials and services costs have been a moderate 12-17% of total costs in recent years. In turn, personnel costs have accounted for 30-38% of costs. At the time of writing, the company says on its website that it plans to recruit 25 people. In our view, personnel costs can be expected to increase relative to other costs in the coming years, especially as we expect some recruitment to take place in the US, where salaries for specialists are higher than in Finland. Depreciation has varied between 9-25%. Depreciation can also be expected to increase in the future, as the EUR 23 million plant investment program is expected to generate significantly higher depreciation in the future. Other operating expenses increased significantly in 2022 to 44% of total costs. According to the company, the increase was due to the acceleration of its growth strategy.

Cash flow has turned negative

Modulight's operating cash flow has been positive in 2018-2020 but turned clearly negative in 2021. Cash flow deteriorated further in 2022, mainly due to investments. Investments have accelerated due to the construction of a EUR 23 million production plant. The cash flow from investments in 2021 was EUR -9.6 million, deteriorating to EUR -13.7 million in 2022. Modulight's cash flow from financing has played a minor role, as in previous years the business has been mainly covered by income financing. The 2021 IPO resulted in a cash flow of EUR 75.3 million, which significantly strengthened the cash position.

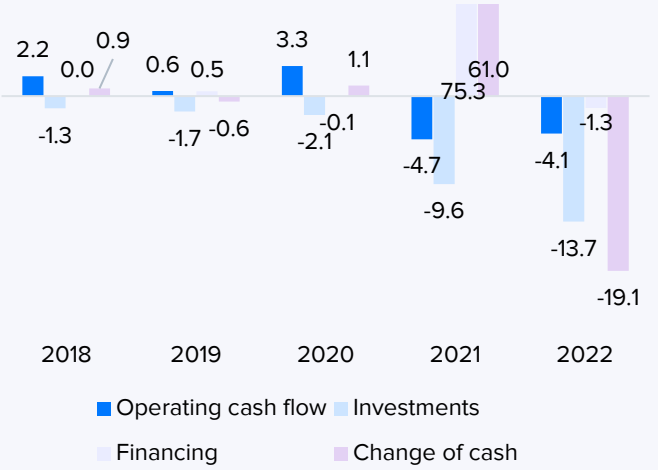
Strong balance sheet after the IPO

On the assets side of the balance sheet, intangible assets of EUR 7.7 million consisted of capitalized development costs and tangible assets of EUR 19.9 million consisted mainly of machinery and equipment, explained by the recent investment in the production plant. Inventories amounted to EUR 2.3 million and receivables to EUR 4.5 million, the most important of which were trade receivables of EUR 3.0 million. The main part of the assets consisted of cash, bank receivables and financial securities collected in 2021 as a result of the IPO (43.9 MEUR).

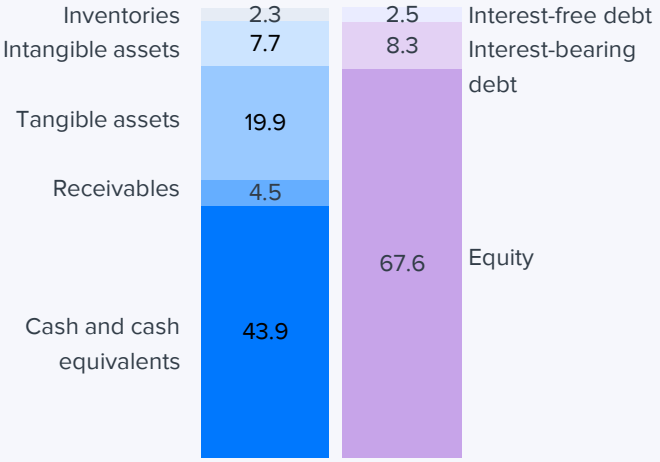
On the liabilities side, equity amounted to EUR 67.6 million. Interest-bearing liabilities amounted to EUR 8.3 million, the majority of which was long-term debt (6.6 MEUR). Non-interest-bearing liabilities amounted to EUR 2.5 million, of which accruals accounted for EUR 0.8 million.

With the company's investment program in its final stages, the balance sheet appears to us to be overcapitalized. Modulight states in its strategy that it will pay little or no dividends. Based on the company's own profitability strategy and our estimates, the company's losses won't continue for long. There seems to be considerable room for maneuver in the balance sheet, e.g., for M&A or further investments.

Cash flows, MEUR



Balance sheet 2022, 78.3 MEUR



Estimates 1/3

The forecasting model consists of several components with low visibility

According to the company's strategy, Modulight's business can be divided into 1) existing core businesses (currently 27 projects), 2) new identified growth areas for the future: dermatological medicine, flow cytometry, quantum computing and semiconductor metrology, and 3) the opportunistic market areas identified by the company.

For the current core business, we model revenue on the assumption that most of Modulight's 27 projects are early-stage development projects, with revenue coming in at the lower end of Modulight's reported range. We expect the number of projects to grow at a moderate pace of around 8% in the coming years and anticipate a slow shift in project focus from the early stages towards more mature and economically valuable stages.

We expect the progress of the projects to follow the average probabilities for drug development.. In other words, drug development has a certain probability of success at each stage of drug development based on history. We assume that the continuation of Modulight's projects into the next phase will follow these historical probabilities. In terms of drug development projects, we estimate that the time to market and from Modulight's perspective large-scale commercialization of treatments is still several years away. We estimate the probability of one large-scale commercialization project by 2025 to be around 50%. The Bausch & Lomb ophthalmic laser received marketing authorization in January 2023. We expect sales to start during H1'23.

The outlook for project business performance is poor, underlined in particular by the very steep decline in revenue and profitability that started in Q2'22. On the other hand, projects can also generate significant revenue, such as the USD 3.9 million contract announced in early 2022, which the company said will be recognized between Q3'22-Q2'23. Similar projects could boost revenue very rapidly, but it's very difficult to predict when they will come to fruition. Similarly, the entry of a single project into the large-scale commercialization phase (defined by Modulight as more than 10 MEUR revenue per year) could lead to a significantly rapid relative increase in revenue.

In terms of new growth areas and opportunistic growth levers, we believe that the company doesn't yet have significant revenue. Furthermore, the company hasn't provided any concrete information on the expected size or timing of these projects, so visibility into new business is limited. We model these areas rather conservatively based on a low project volume and a conservative level of revenue.

Key variables for revenue modeling

Bausch & Lomb agreement	Revenue EUR 5.6 million in 2025
Number of projects	35 prpjects in 2025; revenue EUR 8.2 million
Projects in the commercializati on phase	One project in the commercialization phase with a probability of 50% by 2025.
Other growth initatives	~EUR 4 million revenue by 2025.

Revenue and number of projects

Source: Inderes

Estimates 2/3

In our view, there is a very high forecast risk, as the visibility on the company's business development is considerably limited. Recent history shows that revenue and profitability can fall significantly in a very short period of time. On the other hand, a single project entering the commercialization phase could raise Modulight's revenue from the low absolute level very heavily.

Our earnings estimate assumes recovery from difficulties and a growth trajectory

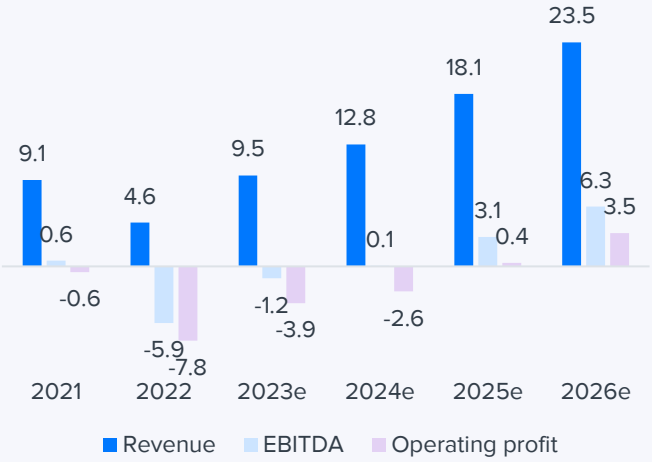
Modulight does not provide guidance, so our estimates are based purely on our revenue modeling. We expect revenue to recover fairly quickly after a very difficult year in 2022. Our full-year revenue estimate for 2023 is EUR 9.5 million. Our estimate assumes of a normalization of project revenue, a quiet start to deliveries related to the Bausch & Lomb contract and a USD 3.9 million contract signed in 2022, which should be partially recognized in H1'22. Our expectations of a recovery in the project business are supported by a partial easing of the financial situation in the life science sector compared to last year.

Regarding the Bausch & Lomb deal, Modulight has said that it already has ready customers, on which basis we are modeling revenue from H1'23 onwards. In the project business, we expect the company's major difficulties to be behind and revenue to normalize to the levels seen in previous years. The realization of these estimates also requires the company to achieve a small degree of success in opening new growth opportunities in H2'23 and easing of the component shortage experienced in 2022.

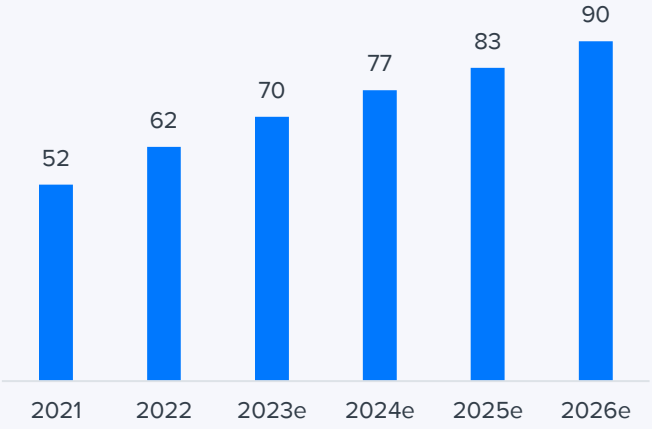
In the longer term, our growth estimate is based on a moderate increase in the number of projects and a slow shift in their focus towards more mature stages, with an expected increase in revenue per project. The Bausch ophthalmology contract will deliver rapid growth until 2024, after which we expect growth to slow. For 2025 and 2026, growth will be driven in particular by expectations of projects moving into more mature phases and increasing revenue from new growth projects. The strong growth we forecast will start to level off towards the end of the decade. Our projected CAGR for 2023-2030 is 26.8%. The number is remarkably high, but the base figure is also very low due to the weak year 2022. CAGR for 2021-2030 is 15.5%, close to the growth rate achieved in the previous decade. We estimate terminal growth of 2.5% based on the industry's good long-term growth outlook and favorable market trends. A key growth enabler is the recent investment in a factory, which Modulight has said will support the company's growth up to the EUR 100 million revenue level.

Although we forecast very strong growth for the coming years, our estimates can be considered cautious compared to the company's own targets. In its strategy up to 2025, Modulight aims to commercialize three projects on a large scale. We estimate that three such projects combined with the company's other sources of revenue would mean a revenue of more than EUR 40 million in 2025.

Revenue & operating profit, MEUR



Personnel



Source: Inderes

Estimates 3/3

Costs and profitability

We expect the gross margin to be slightly below the historical level of over 80% in the coming years, under pressure from cost inflation. However, we expect the gross margin to improve in the coming years with the commissioning of the new production plant. We expect the number of employees to grow quite rapidly based on the vacancies announced by the company and the planned growth, especially in the US.

We expect average personnel costs per employee to be just over EUR 80,000 per year and the cost growth rate to be 6%, based on expectations of wage inflation and an assumed higher wage level for US recruits compared to Finland. We expect other operating expenses to be around EUR 5 million in 2023 and to grow by around 6% per year in the coming years. EBITDA is forecast to reach zero in 2024 and quickly turn positive as revenue grows well ahead of costs.

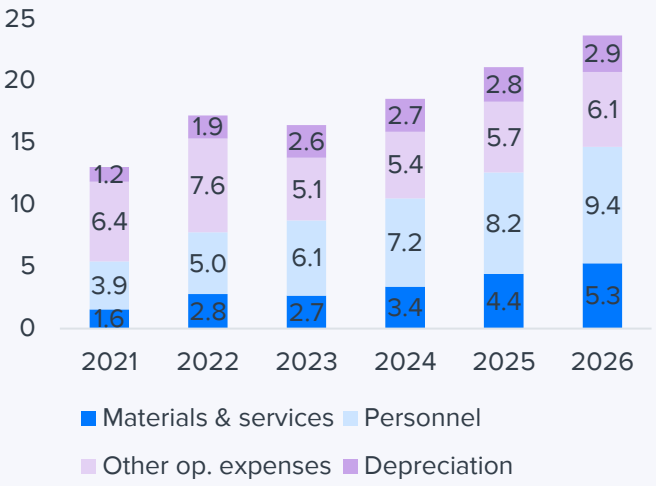
We estimate a depreciation level of around EUR 2.7 million in the coming years, based on our estimate of increasing depreciation of plant and equipment investments. Due to high depreciation, EBIT will only become marginally positive in 2025, after which it will grow strongly, driven by high sales and costs that grow more slowly than revenue. We assume a financial income of EUR 0.2 million due to the high cash position and a tax rate of 20%. We estimate the terminal level of EBIT to be a high 25%. Our assessment is based on the strong scalability potential of the business as the share of ongoing revenue increases through per-treatment pricing.

Cash flows turn positive and the balance sheet is (too) strong

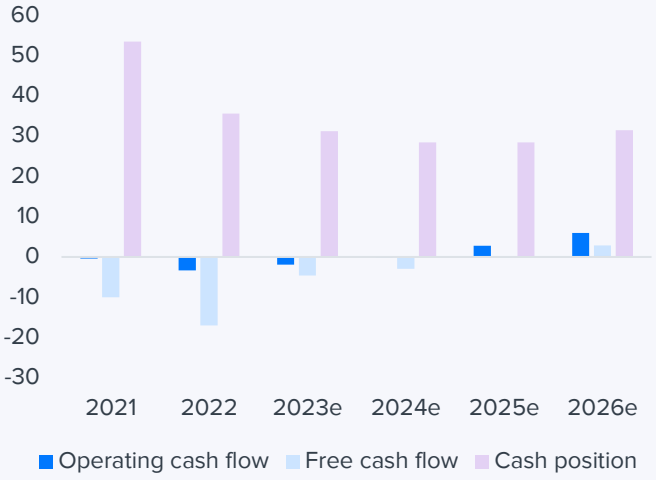
Modulight's operating cash flow turned clearly negative in 2022 due to a decrease in revenue and an increase in costs. We expect operating cash flow to reach zero in 2024 and improve thereafter as revenue growth and profitability improve. Operating cash flow is clearly better than reported EBIT in the coming years due to high depreciation. Modulight's free cash flow has been strongly negative in 2021-2022 due to investments in a new production plant and equipment. We expect the investment level to decline markedly from 2023 onwards, which we estimate to raise the free cash flow level to positive from 2026 onwards. With the turnaround in free cash flow, the depletion of net cash is reversed.

The company's net cash position is very strong in our estimates and the balance sheet appears to be overcapitalized. In its strategy, Modulight has stated that it will pay no or few dividends in the coming years. In our view, the strong balance sheet provides scope for significant investments or M&A for a company of its size.

Costs, MEUR



Cash flow, MEUR



Source: Inderes

Income statement

Income statement	H1'21	H2'21	2021	H1'22	H2'22	2022	H1'23e	H2'23e	2023e	H1'24e	H2'24e	2024e	2025e	2026e
Revenue	**4.6**	**4.5**	**9.1**	**2.1**	**2.5**	**4.6**	**4.7**	**4.8**	**9.5**	**5.9**	**6.9**	**12.8**	**18.1**	**23.5**
Group	4.6	4.5	9.1	2.1	2.5	4.6	4.7	4.8	9.5	5.9	6.9	12.8	18.1	23.5
EBITDA	**2.6**	**-2.2**	**0.4**	**-2.6**	**-3.3**	**-5.9**	**-0.5**	**-0.7**	**-1.2**	**-1.6**	**-1.0**	**0.1**	**3.2**	**6.4**
Depreciation	0.0	-1.2	-1.2	-0.9	-1.0	-1.9	-1.3	-1.3	-2.6	0.0	0.0	-2.7	-2.8	-2.9
EBIT	**2.6**	**-3.4**	**-0.8**	**-3.5**	**-4.3**	**-7.8**	**-1.8**	**-2.0**	**-3.9**	**-1.6**	**-1.0**	**-2.6**	**0.4**	**3.5**
Net financial items	-0.1	-4.2	-4.3	-0.9	0.1	-0.8	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.2
PTP	**2.5**	**-7.6**	**-5.1**	**-4.4**	**-4.2**	**-8.6**	**-1.7**	**-1.9**	**-3.7**	**-1.6**	**-1.0**	**-2.4**	**0.6**	**3.7**
Taxes	-0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.7
Net earnings	**2.0**	**-7.1**	**-5.1**	**-4.4**	**-4.2**	**-8.6**	**-1.7**	**-1.9**	**-3.7**	**-1.6**	**-1.0**	**-2.4**	**0.5**	**3.0**
EPS (adj.)	**0.05**	**-0.17**	**-0.12**	**-0.10**	**-0.10**	**-0.20**	**-0.04**	**-0.05**	**-0.09**	**-0.04**	**-0.02**	**-0.06**	**0.01**	**0.07**
EPS (rep.)	**0.05**	**-0.17**	**-0.12**	**-0.10**	**-0.10**	**-0.20**	**-0.04**	**-0.05**	**-0.09**	**-0.04**	**-0.02**	**-0.06**	**0.01**	**0.07**

Key figures	H1'21	H2'21	2021	H1'22	H2'22	2022	H1'23e	H2'23e	2023e	H1'24e	H2'24e	2024e	2025e	2026e
Revenue growth-%		-55.2 %	-9.8 %	-53.9 %	-44.6 %	-49.3 %	123.5 %	93.9 %	107.4 %	25.2 %	42.6 %	34.0 %	41.5 %	29.9 %
Adjusted EBIT growth-%		-171.3 %	-116.0 %	-233.6 %	28.5 %	935.2 %	-47.6 %	-52.9 %	-50.5 %	-14.1 %	-48.8 %	-32.4 %	-114.5 %	821.9 %
EBITDA-%	57.1 %	-47.8 %	4.9 %	-123.3 %	-133.9 %	-129.0 %	-10.9 %	-14.6 %	-12.8 %	-26.7 %	-15.1 %	0.5 %	17.6 %	27.4 %
Adjusted EBIT-%	57.1 %	-74.4 %	-8.3 %	-165.7 %	-172.7 %	-169.5 %	-38.9 %	-42.0 %	-40.4 %	-26.7 %	-15.1 %	-20.4 %	2.1 %	14.9 %
Net earnings-%	44.3 %	-157.0 %	-55.8 %	-208.0 %	-167.3 %	-185.9 %	-36.8 %	-39.9 %	-38.3 %	-26.7 %	-15.1 %	-18.8 %	2.6 %	12.6 %

Source: Inderes

Balance sheet

Assets	2021	2022	2023e	2024e	2025e
Non-current assets	**15.8**	**27.7**	**27.7**	**27.8**	**28.0**
Goodwill	0.0	0.0	0.0	0.0	0.0
Intangible assets	5.5	7.7	7.9	8.3	8.6
Tangible assets	10.3	19.9	19.8	19.6	19.3
Associated companies	0.0	0.0	0.0	0.0	0.0
Other investments	0.0	0.0	0.0	0.0	0.0
Other non-current assets	0.0	0.0	0.0	0.0	0.0
Deferred tax assets	0.0	0.0	0.0	0.0	0.0
Current assets	**71.7**	**50.7**	**44.9**	**42.9**	**43.7**
Inventories	1.1	2.3	1.9	2.3	2.7
Other current assets	0.0	0.0	0.0	0.0	0.0
Receivables	7.6	4.5	4.8	5.1	5.6
Cash and equivalents	63.0	43.9	38.2	35.4	35.4
Balance sheet total	**87.5**	**78.3**	**72.5**	**70.7**	**71.7**

Source: Inderes

Liabilities & equity	2021	2022	2023e	2024e	2025e
Equity	**76.2**	**67.6**	**63.9**	**61.5**	**62.0**
Share capital	0.1	0.1	0.1	0.1	0.1
Retained earnings	0.7	-7.8	-11.5	-13.9	-13.4
Hybrid bonds	0.0	0.0	0.0	0.0	0.0
Revaluation reserve	0.0	0.0	0.0	0.0	0.0
Other equity	75.3	75.3	75.3	75.3	75.3
Minorities	0.0	0.0	0.0	0.0	0.0
Non-current liabilities	**8.2**	**6.6**	**5.0**	**5.0**	**5.0**
Deferred tax liabilities	0.0	0.0	0.0	0.0	0.0
Provisions	0.0	0.0	0.0	0.0	0.0
Long term debt	8.2	6.6	5.0	5.0	5.0
Convertibles	0.0	0.0	0.0	0.0	0.0
Other long term liabilities	0.0	0.0	0.0	0.0	0.0
Current liabilities	**3.1**	**4.1**	**3.6**	**4.2**	**4.7**
Short term debt	1.3	1.7	2.0	2.0	2.0
Payables	1.8	2.5	1.6	2.2	2.7
Other current liabilities	0.0	0.0	0.0	0.0	0.0
Balance sheet total	**87.5**	**78.3**	**72.5**	**70.7**	**71.7**

Valuation and recommendation 1/4

Valuation relies on sales-based multiples and DCF

With Modulight being heavily loss-making and our projected profitability turnaround taking several years, we cannot rely on earnings multiples for valuation. On a sales basis, we can mirror the EV/S multiple to future growth prospects, profitability potential and the valuation of peers and the industry. In our view, the DCF calculation of the present value of projected cash flows is also a useful valuation method when pricing risk, unlike the EV/S multiple. However, forecasting cash flows in the case of Modulight is highly uncertain.

Uncertain growth and profitability outlook reduces accuracy of valuation

Our projected growth for the current decade 2021-2030 averages 18.9%. If realized, long-term rapid growth would be a valid justification for accepting even high valuation multiples. However, we believe that the forecast risk for growth is very high, as growth will depend on the success of the new pricing model, the penetration of new treatments and market capture from large competitors in competitive business areas (dermatology, flow cytometry, genetics). We believe that this uncertainty should be reflected in the adopted multiples.

In terms of profitability, Modulight had a long positive period in the last decade. The company's median EBIT margin from 2012 to 2022 was 23% (peaking at 47% in 2020). However, this continuity has been broken, especially during 2022, when revenue and profitability of the project business have been at a very low level. The decline in profitability has been most evident since Q2'22 and based on the latest 2022 financial statements, the difficulties will continue. We don't believe that historical highly profitable business performance can be directly translated into future profitability potential. Due to the increased cost structure, the short- and medium-term profitability outlook appears weaker than historical levels. We also expect the changing nature of the business from small batches of customized products to larger batches and partly more competitive markets to put pressure on profitability. On the other hand, the company's success in per-treatment pricing could increase the profitability potential in the long term.

In summary, we believe that Modulight's growth and profitability have both high potential and considerable uncertainties, which we balance in our valuation. The uncertainties and low predictability have been concretely reflected in the highly volatile market pricing and accepted multiples since the IPO (IPO price of EUR 6.49 per share and a range of EUR 1.72-17.65 per share thereafter).

Summary of key figures

Valuation	2023e	2024e	2025e
Share price	2.42	2.42	2.42
Number of shares, millions	42.6	42.6	42.6
Market capitalization	103	103	103
EV	72	74	75
P/B	1.6	1.7	1.7
P/S	10.8	8.0	5.7
EV/Sales	7.5	5.8	4.1
EV/EBITDA (adj.)	neg.	>100	23.4
EV/EBIT (adj.)	neg.	neg.	>100

Lähde: Inderes

Scenario assumptions

	High[1]	Estimate	Low[2]
Revenue CAGR 2021-2031	27.2%	18.9%	11.7%
Growth (TERM)	4%	3%	2%
Median EBIT-% 2021-2031	19.9%	14.9%	9.9%
EBIT (TERM)	30%	25%	20%
WACC	11%	11%	11%

1) In this scenario, revenue growth is 10 percentage points faster than our estimates for 2023-2031 and terminal growth is also higher. EBIT is 5 percentage points higher through the estimate period.
2) In this scenario, growth is 10 percentage points below our estimates and terminal growth is lower. EBIT is 5 percentage points lower through the estimate period.

Source: Inderes

Valuation and recommendation 2/4

EV/S multiple is high in the near future

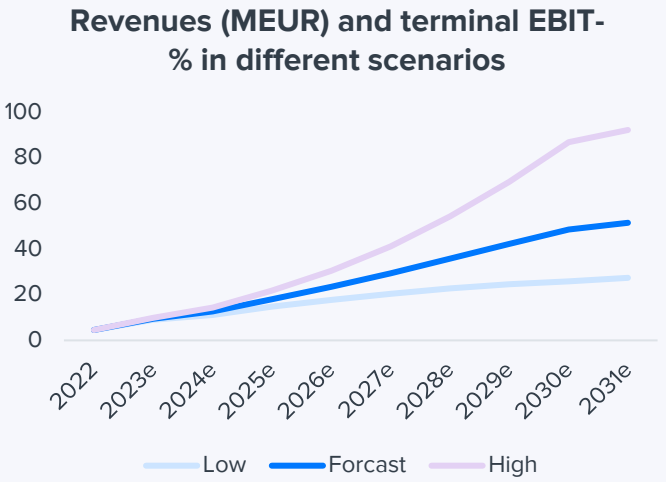
Modulight's EV/S multiples for 2023-2024 are 7.5x and 5.8x. The multiple will continue to fall in the coming years, on one hand as turnover grows, and on the other as declining losses slow the growth of enterprise value. In our view, the current valuation of the stock incorporates the assumption of above-market growth for several years combined with rapid recovery to good profitability. At this stage, we are relying on multiples for the next few years, as we believe that further evidence is needed for successful longer-term growth.

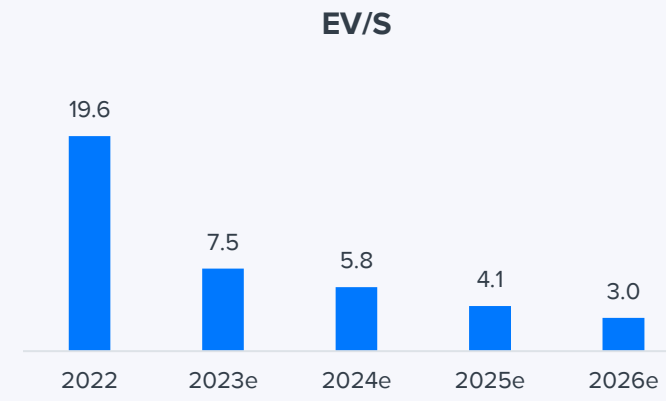
There are few direct listed peer companies, as photodynamic therapy companies are mostly unlisted and laser equipment is often only a small part of the larger companies' business. In our opinion, the best direct competitor is the French laser company Lumibird SA, which designs and manufactures semiconductor lasers for a range of industries, including ophthalmology. Lumibird's EV/S multiples are 1.9x and 1.8x for 2023-2024. The median multiples for the peer group of laser manufacturers are 2.0x and 1.8x.

We believe that Modulight's core business is the supply of laser solutions for medical projects. Therefore, we also consider medical technology companies to be a good peer group, with median EV/S ratios of 5.8x-5.4x for 2023-2024. At Nordic level, the Modulight is rated slightly below its most highly rated peer, the Xvivo Perfusion (11.8x-8.6x). The valuation exceeds the multiples of Finnish companies in the sector. Only Revenio, which has a proven track record of very strong profitable growth, is slightly more highly valued. In our view, Modulight is expensive on 2023-2024 EV/S multiples relative to laser manufacturers and medical technology companies.

The multiples for the coming years can also be considered high compared to the average historical valuation multiples for the medical technology sector. The long-term (2011-2021) median EV/S ratio of the Global Medical Devices & Supplies Index (Bloomberg) has been 4.2x based on the previous 12 months' revenue. The sector index consists of large, high-quality, mainly US-based health technology companies with a different profitability and growth profile from Modulight. Large companies are defensive and on average very profitable (median EBIT 13%), and moderately growing (median revenue growth 2011-2021: 7.2%). Given its growth and profitability potential, we believe Modulight deserves slightly higher multiples than the Global Medical Devices & Supplies sector.

Given the low profitability and forecast risk in the coming years, we believe Modulight's EV/S multiples are currently too high. On the current outlook, we are prepared to accept a multiple of 5-7x for the stock for the current year. In our estimates, valuation falls to the middle of the range in 2024 and below the range in 2025. We are prepared to increase the acceptable multiples if the company achieves the growth and profitability performance that we forecast.





Source: Inderes

Valuation and recommendation 3/4

If Modulight's 2024e growth were to materialize according to our estimates and the stock were priced at the upper end of our approved EV/S range at 7x, the stock would be worth EUR 3.0 discounted to the present. In the conservative scenario and at the lower end of the EV/S range (5x), the share's present value would be EUR 2.0. Similarly, with higher estimates and a higher valuation, the present value of the share would be EUR 4.8. The same analysis with 2026 forecast scenarios gives a range of EUR 1.9-6.2 for the share's present value. The stock could therefore have upside in our baseline scenario if the growth estimates materialize and the market continues to price the stock at relatively high sales-based multiples in the future. Exceeding or falling below growth estimates and the resulting assumed change in valuation multiples produces a very wide range of stock valuations.

In the DCF baseline scenario, the stock is slightly overvalued

The DCF model in the baseline scenario indicates a present value of future cash flows of EUR 2.3 per share. We have used a weighted average cost of capital (WACC) of 11% to reflect the risk profile of the investment. The WACC is brought up by the loss-making nature of the business, the high risk of estimates materializing and the fact that positive cash flows are located far into the future. In turn, the WACC is driven down by a strong balance sheet, historical evidence of profitability and good growth prospects in a defensive industry.

Due to the negative cash flows projected for the coming years, the impact on the share's present value between 2023 and 2027 is negative (-4%). With the growth in revenue and the expected profitability turnaround, by 2028-2032 cash flows account for 30% of the present value. Terminal cash flows projected beyond 2032 represent 74% of the present value. The strong cash flow bias towards the post-2032 period underlines the high risk profile of the stock.

The value of the stock is quite sensitive to the WACC employed when the estimated cash flows are far in the future, so the discount rate used has a strong impact on their present value. The WACC we estimate is dynamic and can change depending on the risk level of the company and the risk tolerance of the market. For example, positive signs of broad commercial success of projects and a sustained return to profitability would, in our view, be news that could have a downward impact on the WACC.

DCF values in different scenarios

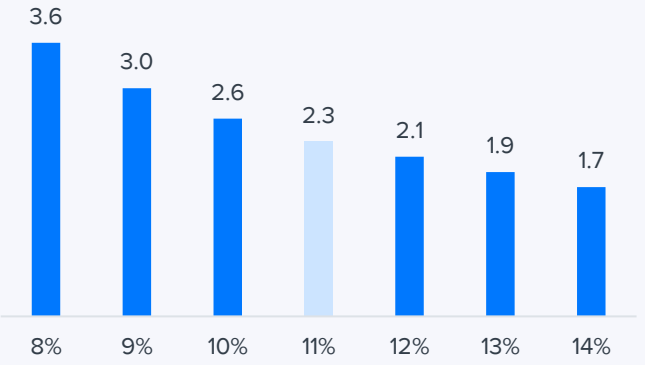
In the high scenario, the DCF is EUR 4.9 and in the low scenario EUR 1.1. The main factor explaining the differences between the scenarios is revenue growth, which is followed profitability. In particular, the higher terminal profitability (EBIT of 30%) used in the high scenario has a clear upward effect on the value. In the low scenario, terminal profitability remains at 20%. We note that the scenarios don't represent our view of the best and worst possible path for the business but are intended to provide investors with a perspective on the sensitivity of the valuation assumptions used, which in the case of Modulight is high.

EV/S valuation ranges 2024 & 2026

2024e, MEUR	High	Estimate	Low
Revenue	14.4	12.8	11.3
EV/S, LTM	15.1	9.9	6.6
EV/S, NTM	10.0	7.0	5.0
EV	217.4	126.6	74.6
Net debt	-27.8	-28.4	-28.9
Market cap	245.3	155.0	103.5
Per share	5.8	3.6	2.4
Discounted to present	**4.8**	**3.0**	**2.0**

2026e, MEUR	High	Estimate	Low
Revenue	30.5	23.5	17.8
EV/S, LTM	13.5	8.7	5.7
EV/S, NTM	10.0	7.0	5.0
EV	411.8	204.5	101.5
Net debt	-27.2	-31.4	-34.2
Market cap	439.0	235.9	135.7
Per share	10.3	5.5	3.2
Discounted to present	**6.2**	**3.3**	**1.9**

DCF-valuation sensitivity to WACC-%



Source: Inderes

Valuation and recommendation 4/4

Valuation summary

Our view on the fair value of Modulight's share is EUR 2.0-3.0. Given the company's profile, significant forecast risk and low visibility, we believe a relatively wide fair value range is justified. Central to the view is the DCF model and its scenarios, which suggest that the stock is slightly overvalued under our baseline assumptions. The projected cash flows therefore don't match our expected return. The DCF suggests a significant upside or downside margin for the stock in high and low growth scenarios.

Based on EV/S, Modulight is priced well above both laser manufacturers and medical device manufacturers with 2023-2024 estimates. If Modulight achieves the growth we forecast (12.8 MEUR revenue in 2024) and the market prices the company at high EV/S multiples (7x), we think the return potential would be quite attractive. However, as noted, the forecast risk is clearly elevated.

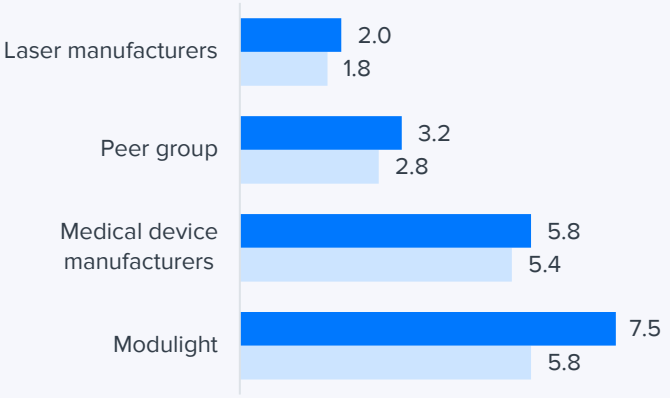
According to the company's guidance, it will pay little or no dividends during the strategy period 2023-2025. The investor's return will probably only be generated by changes in the share price. Given the low visibility and the remoteness of cash flows, we expect the share price to continue to fluctuate significantly in the future, in line with news flow, market-accepted valuation and company developments. In the long term, we believe that the success of the company and the investment will be primarily determined by the success of the company's project business.

In our view, the risk level of the stock is quite high (level 3). In addition to the forecast and pricing risk, uncertainty is compounded by the currently continuing loss-making nature of the business. On the other hand, a strong cash position and a track record of profitability have a risk-reducing effect and protect the investor from financial risks. From a capital loss perspective, we estimate that the main risks are related to a shortfall in revenue growth and/or profitability compared to our estimates and a simultaneous decline in the valuation multiples accepted by the market. The return on the stock, as indicated by the DCF, could then be very poor. We believe the stock is suitable for a patient investor seeking strong growth and tolerant of risk.

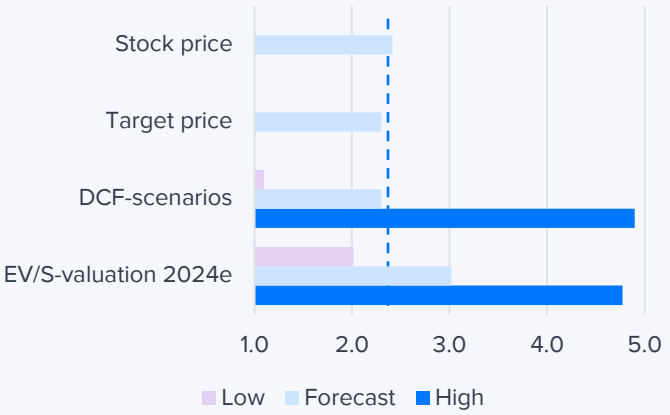
We initiate coverage with a Reduce recommendation

We initiate coverage of Modulight with a Reduce recommendation and a EUR 2.3 target price. Our recommendation is based on our view of the present value of future cash flows. In our view, the current share price of EUR 2.42 represents a fairly neutral pricing but doesn't provide a sufficient safety margin in the event of underperformance.

EV/S multiples 2023-2024e



Valuation summary



Source: Inderes

Investment profile

1. **High-tech laser company aiming to get back on track for profitable growth**
2. **Strategic focus on medicine and biomedicine**
3. **The company is aiming for a scalable operating model and per-treatment billing**
4. **A strong cash position provides room for maneuver and a buffer against losses**
5. **Evidence still needed on the effectiveness and profitability of the project model**

Potential

- A defensive market with growth well into the future
- The company's technological expertise, ability to tailor products and build cloud services gives Modulight a competitive advantage
- A model based on licence fees and per-treatment pricing can be highly scalable if successful

Risks

- The project-based model has been unreliable, at least for 2022, and we believe its long-term performance requires further evidence.
- Revenue and profitability are poorly predictable
- Low visibility of projects and their progress
- Immature and concentrated customer base brings more risk

Source: Inderes

Valuation table

Valuation	2021	2022	2023e	2024e	2025e	2026e
Share price	11.4	2.95	**2.42**	**2.42**	**2.42**	**2.42**
Number of shares, millions	42.6	42.6	**42.6**	**42.6**	**42.6**	**42.6**
Market cap	484	126	**103**	**103**	**103**	**103**
EV	430	90	**72**	**74**	**75**	**72**
P/E (adj.)	neg.	neg.	**neg.**	**neg.**	**>100**	**34.8**
P/E	neg.	neg.	**neg.**	**neg.**	**>100**	**34.8**
P/FCF	neg.	neg.	**neg.**	**neg.**	**neg.**	**36.1**
P/B	6.4	1.9	**1.6**	**1.7**	**1.7**	**1.6**
P/S	53.3	27.3	**10.8**	**8.0**	**5.7**	**4.4**
EV/Sales	47.4	19.6	**7.5**	**5.8**	**4.1**	**3.0**
EV/EBITDA	>100	neg.	**neg.**	**>100**	**23.4**	**11.1**
EV/EBIT (adj.)	neg.	neg.	**neg.**	**neg.**	**>100**	**20.4**
Payout ratio (%)	0.0 %	0.0 %	**0.0 %**	**0.0 %**	**0.0 %**	**50.0 %**
Dividend yield-%	0.0 %	0.0 %	**0.0 %**	**0.0 %**	**0.0 %**	**1.4 %**

Source: Inderes

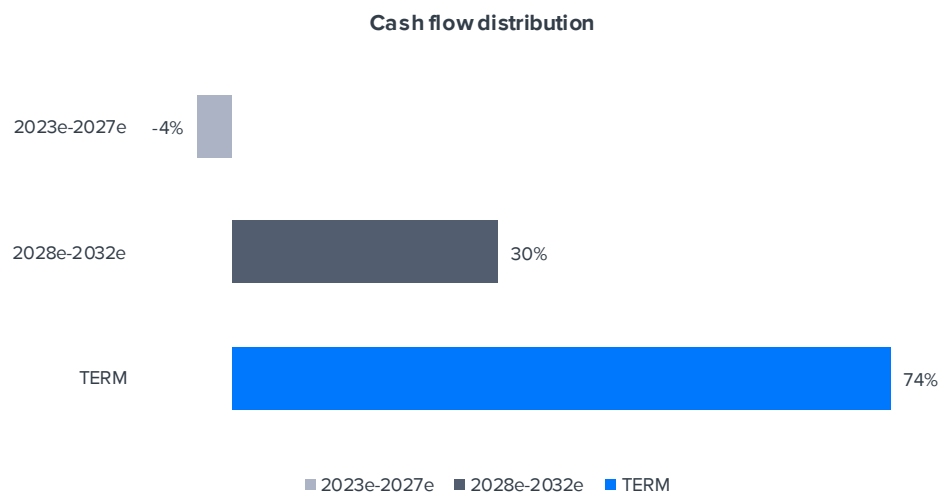
DCF calculation

DCF model	2022	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	TERM
Revenue growth-%	-49.3 %	107.4 %	34.0 %	41.5 %	29.9 %	25.0 %	22.0 %	18.0 %	15.0 %	6.0 %	3.0 %	3.0 %	3.0 %
EBIT-%	-169.5 %	-40.4 %	-20.4 %	2.1 %	14.9 %	22.0 %	24.0 %	25.0 %	25.0 %	25.0 %	25.0 %	25.0 %	25.0 %
EBIT (operating profit)	**-7.8**	**-3.9**	**-2.6**	**0.4**	**3.5**	**6.5**	**8.6**	**10.6**	**12.2**	**12.9**	**13.3**	**13.7**	
+ Depreciation	1.9	2.6	2.7	2.8	2.9	2.9	2.9	3.0	3.1	3.2	3.3	3.4	
- Paid taxes	0.0	0.0	0.0	-0.1	-0.7	-1.3	-1.7	-2.1	-2.4	-2.6	-2.6	-2.9	
- Tax, financial expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	
+ Tax, financial income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
- Change in working capital	2.6	-0.7	-0.2	-0.4	0.2	-0.5	-0.9	-0.8	-0.4	-0.2	0.0	-0.2	
Operating cash flow	**-3.3**	**-1.9**	**-0.1**	**2.7**	**5.9**	**7.6**	**8.9**	**10.7**	**12.4**	**13.3**	**13.9**	**14.1**	
+ Change in other long-term liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Gross CAPEX	-13.7	-2.7	-2.8	-2.9	-3.1	-3.2	-3.4	-3.6	-3.8	-3.9	-4.1	-3.6	
Free operating cash flow	**-17.0**	**-4.6**	**-2.9**	**-0.2**	**2.8**	**4.3**	**5.5**	**7.1**	**8.7**	**9.3**	**9.8**	**10.5**	
+/- Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FCFF	-17.0	-4.6	-2.9	-0.2	2.8	4.3	5.5	7.1	8.7	9.3	9.8	10.5	134
Discounted FCFF		**-4.2**	**-2.4**	**-0.2**	**1.9**	**2.6**	**3.0**	**3.5**	**3.8**	**3.7**	**3.5**	**3.4**	**43.5**
Sum of FCFF present value		62.1	66.4	68.8	69.0	67.1	64.4	61.4	57.9	54.1	50.4	46.9	43.5

Enterprise value DCF	**62.1**
- Interesting bearing debt	-8.3
+ Cash and cash equivalents	43.9
-Minorities	0.0
-Dividend/capital return	0.0
Equity value DCF	**97.7**
Equity value DCF per share	**2.3**

Wacc	
Tax-% (WACC)	20.0 %
Target debt ratio (D/(D+E)	10.0 %
Cost of debt	8.0 %
Equity Beta	1.80
Market risk premium	4.75%
Liquidity premium	0.50%
Risk free interest rate	2.5 %
Cost of equity	**11.6 %**
Weighted average cost of capital (WACC)	**11.0 %**

Source: Inderes



Peer group valuation

Peer group valuation	Market cap	EV	EV/EBIT		EV/EBITDA		EV/S		P/E		Dividend yield-%		P/B
Company	**MEUR**	**MEUR**	**2023e**	**2024e**	**2023e**	**2024e**	**2023e**	**2024e**	**2023e**	**2024e**	**2023e**	**2024e**	**2023e**
Carl Zeiss Meditech	12303	12509	29.8	26.3	25.5	22.7	6.0	5.5	41.2	37.2	0.8	0.9	5.6
Coherent Corp	4500	9056	8.6	7.6	6.6	6.1	1.8	1.7	9.3	7.9			0.8
Cutera Inc	449	541		55.0	131.6	16.2	2.0	1.7		58.3			12.6
IPG Photonics Corp	5205	4114	15.0	12.4	11.4	9.7	3.1	2.8	24.3	20.3			2.3
Lumentum	3216	3817	9.7	9.1	8.2	7.6	2.1	2.0	9.4	9.0			2.0
Lumibird SA	352	401	15.9	12.7	10.4	8.7	1.9	1.8	20.2	15.6			1.7
Medtronic	97847	113970	14.8	14.4	13.1	12.9	3.9	3.8	14.8	14.8	3.5	3.7	1.9
Nexstim	24	23				23.2	3.1	2.4		360.0			9.5
nLIGHT	425	323				59.2	1.5	1.3					
Optomed	60	58				77.7	3.4	2.8					3.8
Revenio Group	925	913	27.4	23.4	24.7	21.5	8.3	7.3	35.6	30.8	1.2	1.4	8.6
Stryker	97666	108112	24.6	22.3	21.7	20.2	5.8	5.4	27.4	24.7	1.1	1.1	5.7
Theralase	44	42					56.2	35.7					29.5
Xvivo Perfusion	648	627	93.8	45.8	59.0	33.7	11.8	8.6	112.9	55.4			4.9
Modulight Oyj (Inderes)	**103**	**72**	**-18.6**	**-28.5**	**-58.8**	**1260.9**	**7.5**	**5.8**	**-28.1**	**-42.7**	**0.0**	**0.0**	**1.6**
Average			**26.6**	**22.9**	**31.2**	**24.6**	**7.9**	**5.9**	**32.8**	**57.6**	**1.6**	**1.8**	**6.8**
Median			**15.9**	**18.4**	**17.4**	**20.2**	**3.2**	**2.8**	**24.3**	**24.7**	**1.1**	**1.2**	**4.9**
Diff-% to median			***-217%***	***-256%***	***-438%***	***6148%***	***132%***	***110%***	***-216%***	***-273%***	***-100%***	***-100%***	***-67%***

Source: Refinitiv / Inderes

Summary

Income statement	2020	2021	2022	2023e	2024e
Revenue	10.1	9.1	4.6	**9.5**	**12.8**
EBITDA	5.8	0.4	-5.9	**-1.2**	**0.1**
EBIT	4.7	-0.8	-7.8	**-3.9**	**-2.6**
PTP	4.6	-5.1	-8.6	**-3.7**	**-2.4**
Net Income	3.7	-5.1	-8.6	**-3.7**	**-2.4**
Extraordinary items	0.0	0.0	0.0	**0.0**	**0.0**

Balance sheet	2020	2021	2022	2023e	2024e
Balance sheet total	19.7	87.5	78.3	**72.5**	**70.7**
Equity capital	9.6	76.2	67.6	**63.9**	**61.5**
Goodwill	0.0	0.0	0.0	**0.0**	**0.0**
Net debt	3.9	-53.4	-35.6	**-31.2**	**-28.4**

Cash flow	2020	2021	2022	2023e	2024e
EBITDA	5.8	0.4	-5.9	**-1.2**	**0.1**
Change in working capital	-1.5	-0.9	2.6	**-0.7**	**-0.2**
Operating cash flow	4.3	-0.4	-3.3	**-1.9**	**-0.1**
CAPEX	-2.1	-9.6	-13.7	**-2.7**	**-2.8**
Free cash flow	2.2	-10.0	-17.0	**-4.6**	**-2.9**

Valuation multiples	2020	2021	2022	2023e	2024e
EV/S	0.4	47.4	19.6	**7.5**	**5.8**
EV/EBITDA (adj.)	0.7	>100	neg.	**neg.**	**>100**
EV/EBIT (adj.)	0.8	neg.	neg.	**neg.**	**neg.**
P/E (adj.)	0.0	neg.	neg.	**neg.**	**neg.**
P/B	0.0	6.4	1.9	**1.6**	**1.7**
Dividend-%		0.0 %	0.0 %	**0.0 %**	**0.0 %**

Source: Inderes

Per share data	2020	2021	2022	2023e	2024e
EPS (reported)	0.12	-0.12	-0.20	**-0.09**	**-0.06**
EPS (adj.)	0.12	-0.12	-0.20	**-0.09**	**-0.06**
OCF / share	0.14	-0.01	-0.08	**-0.05**	**0.00**
FCF / share	0.07	-0.23	-0.40	**-0.11**	**-0.07**
Book value / share	0.31	1.79	1.59	**1.50**	**1.44**
Dividend / share	0.00	0.00	0.00	**0.00**	**0.00**

Growth and profitability	2020	2021	2022	2023e	2024e
Revenue growth-%	40%	-10%	-49%	**107%**	**34%**
EBITDA growth-%	98%	-92%	-1428%	**-79%**	**-105%**
EBIT (adj.) growth-%	60%	-116%	935%	**-51%**	**-32%**
EPS (adj.) growth-%	-99%	-198%	69%	**-57%**	**-34%**
EBITDA-%	57.8 %	4.9 %	-129.0 %	**-12.8 %**	**0.5 %**
EBIT (adj.)-%	46.8 %	-8.3 %	-169.5 %	**-40.4 %**	**-20.4 %**
EBIT-%	46.8 %	-8.3 %	-169.5 %	**-40.4 %**	**-20.4 %**
ROE-%	46.7 %	-11.8 %	-11.9 %	**-5.6 %**	**-3.8 %**
ROI-%	35.0 %	-1.5 %	-9.6 %	**-5.3 %**	**-3.7 %**
Equity ratio	48.6 %	87.0 %	86.3 %	**88.1 %**	**87.0 %**
Gearing	41.1 %	-70.1 %	-52.7 %	**-48.8 %**	**-46.3 %**

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Recommendation history (>12 mo)

Date	Recommendation	Target price	Share price
3/19/2023	Reduce	2.30 €	2.42 €

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