Savosolar

Initiation of coverage

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Inderes corporate customer

This report is a summary translation of the report “Katseet vihreässä siirtymässä” published on 03/09/2023 at 07:00 pm.

Eyes on the green transition

Savosolar is a renewable energy and marine logistics company whose two business areas are linked to the reduction of carbon dioxide emissions and the transition in target markets through, e.g., EU emissions trading. The merger with Meriaura at the end of 2022 strengthened Savosolar's balance sheet and should help turn the group's results into profit in 2023. However, justifying the current share price would require a clear improvement in the profitability of the Renewable Energy unit. We initiate coverage of Savosolar with a Sell recommendation and a EUR 0.06 target price.

Renewable energy focuses on solar thermal collectors and systems

Savosolar is one of the leading suppliers of large-scale solar thermal systems in Europe. The market for large solar thermal systems is still at an early stage of development (global market for collectors estimated at ~70 MEUR), but megatrends such as emission reduction and securing heat supply are supporting market growth. The planned inclusion of building heating in the EU emissions trading scheme from 2027 should accelerate demand. Solar thermal collectors based on the company's proprietary technology are manufactured in Mikkeli, Finland. Low production volumes (2022 revenue: 3.8 MEUR) have so far pushed the result clearly negative (EBIT 2022: -4.3 MEUR). The capacity of the plant would allow increasing revenue to EUR 25-30 million and, moreover, the stronger financial situation resulting from the merger will support the development and sale of more comprehensive systems.

Marine Logistics is profitable and contributes to the green transition

Marine logistics is carried out in the Baltic Sea and the North Sea with 15 vessels. Revenue (2022: 69 MEUR) is split between dry bulk (2/3) and special cargo (1/3). The former is mainly based on longer customer contracts, which contributes to the stability of the business. The six self-owned vessels include two strategically important multipurpose open deck carriers capable of special cargo and the biofuel-powered EcoCoaster dry bulk carrier. The remaining 9 vessels are time-chartered, allowing for a more capital efficient and flexible business model. However, the maritime freight market is cyclical in nature, so we think it likely that profitability will correct downwards after the cyclical peak in 2021-23 (EBIT 2022: 9.5 MEUR). The EU emissions trading scheme will gradually extend to maritime freight from 2024, when the company's work to reduce emissions including its own biofuel production may become a more significant competitive factor. Utilizing the company's listed share in acquisitions can contribute to the growth of Marine Logistics by consolidating a fragmented industry.

Current valuation high, as only Marine Logistics generates profit

To justify the current share price would require the Renewable Energy business to turn profitable. However, given the growth trend and cost structure of recent years, this is not yet in sight. Of the earnings-based valuation multiples, the group's EV/EBIT (23e: 24x) is very high and EV/EBITDA (23e: 9x) is also high considering the capital-intensive nature of the Marine Logistics business and the high need for maintenance investments. The P/B ratio (2023: 1.6x) also exceeds the median of the maritime transport peer group (1.0x). In the base case scenario of our sum-of-the-parts method, we assign a value of EUR 0 million to the Renewable Energy business and EUR 54 million to the Marine Logistics business. After a net debt of EUR 17 million, this would result in a market value of EUR 38 million (EUR 0.048/share). In a positive scenario, Renewable Energy's revenue would increase more than tenfold, earnings would turn positive, and the fair present value for the share would be as high as EUR 0.096. However, we consider the probability of this scenario to be low. In a negative scenario, the Renewable Energy unit would be closed after four years of clear losses, bringing the fair present value of the share down to EUR 0.023.

Recommendation

Sell

EUR 0.06

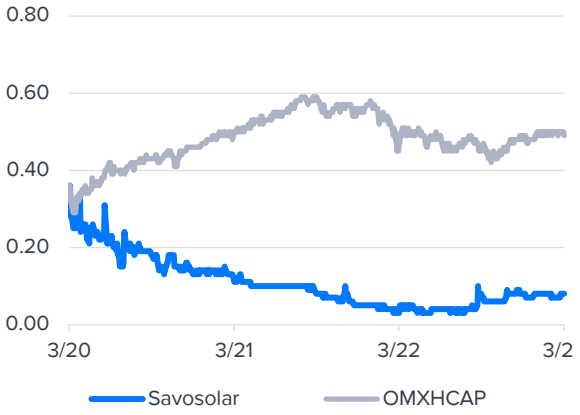
Share price:
0.078

Key figures

	2022	2023e	2024e	2025e
Revenue	8.6	72.0	74.6	80.7
growth-%	246%	734%	4%	8%
EBIT adj.	-3.8	3.2	2.6	3.8
EBIT-% adj.	-43.6 %	4.4 %	3.5 %	4.7 %
Net Income	-4.1	2.0	1.6	2.8
EPS (adj.)	-0.005	0.003	0.002	0.004
P/E (adj.)	neg.	31.3	38.7	21.6
P/B	1.5	1.6	1.6	1.5
Dividend yield-%	0.0 %	0.0 %	0.0 %	0.0 %
EV/EBIT (adj.)	neg.	24.1	29.0	19.3
EV/EBITDA	neg.	9.0	9.4	7.8
EV/S	8.1	1.1	1.0	0.9

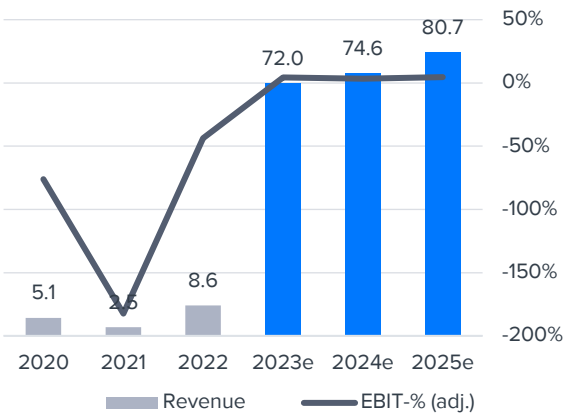
Source: Inderes

Share price



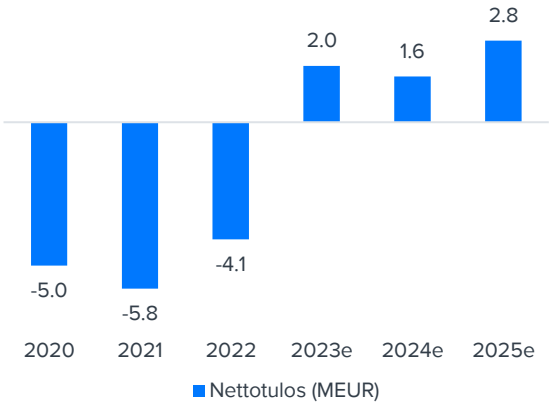
Source: Millistream Market Data AB

Revenue and EBIT %



Source: Inderes

Net profit



Source: Inderes

Value drivers

- Growing demand for environmentally friendly solutions that reduce greenhouse gas emissions
- Unwinding the overcapacity in the global maritime cargo market
- Regulation, such as emissions trading, will make reducing CO2 emissions a competitive factor in both heat production and maritime freight
- Savosolar is well positioned to reduce emissions in both business units

Risk factors

- The target market for the Renewable Energy unit is at an early stage of its development
- The profitability turnaround of the Renewable Energy unit is unlikely to materialize in the next few years, which will eat into cash flow
- The market for Maritime Logistics is cyclical
- Maritime Logistics cycle to turn down after peak years 2021-2022

Valuation	2023e	2024e	2025e
Share price	0.08	0.08	0.08
Number of shares, millions	783.1	783.1	783.1
Market cap	61	61	61
EV	77	76	74
P/E (adj.)	31.3	38.7	21.6
P/E	31.3	38.7	21.6
P/FCF	25.0	28.7	21.8
P/B	1.6	1.6	1.5
P/S	0.9	0.8	0.8
EV/Sales	1.1	1.0	0.9
EV/EBITDA	9.0	9.4	7.8
EV/EBIT (adj.)	24.1	29.0	19.3
Payout ratio (%)	0.0 %	0.0 %	0.0 %
Dividend yield-%	0.0 %	0.0 %	0.0 %

Source: Inderes

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Savosolar in brief

Savosolar's business consists of two business units, Renewable Energy and Marine Logistics.

Group CEO
Jari Varjotie
10 years of background in Savosolar

Renewable Energy business unit

Savosolar

Savosolar supplies solar thermal collectors and related systems for industry and district heating. Solar thermal collectors based on the company's proprietary technology are manufactured at the Savosolar factory in Mikkeli, Finland.

3.8 MEUR **(+51 % vs. 2021)**
Revenue 2022

-4.3 MEUR **(2021: -4.6 MEUR)**
EBIT 2022

>25,000 m²
Number of solar collectors delivered in 2021

35
Personnel at the end of 2022

Potential growth business

Marine Logistics business unit

MERIAURA

Meriaura's vessels operate mainly in the Baltic Sea and the North Sea on contract and freight services. The company specializes in the maritime transport of industrial products and raw materials, as well as the demanding transport of special cargo.

51 MEUR
Market value of ships 06/14/2022

137
Personnel at the end of 2022

VG ECOFUEL

VG-EcoFuel produces recycled biofuel (VG Marine EcoFuel™) at its refinery in Uusikaupunki, Finland. The company collects recycled and waste-based cooking oil as an industrial by-product, which it processes for reuse. Most of the production has so far been sold to Meriaura for use or as raw material to other operators in the sector.

1,600 tons
Production in 2021

69.4 MEUR
Net sales 2022, pro forma

9.5 MEUR
EBIT 2022, pro forma

Preserver of value

Source: Savosolar and Meriaura

Company description

Savosolar and Meriaura merged in 2022

Savosolar's business is divided into two business units, Marine Logistics and Renewable Energy. Marine Logistics comprises maritime cargo operator Meriaura and its subsidiary VG-EcoFuel, which processes renewable fuels mainly for Meriaura. The Renewable Energy business unit consists of the supply of solar thermal collectors and systems under the Savosolar brand.

Savosolar's business in 2010-2021 consisted purely of solar thermal business, so the merger with Meriaura on 11/30/2022 significantly changed the structure of the company. In the merger through share exchange, Savosolar completed a directed share issue to the holding company Meriaura Invest Oy (known before 02/16/2023 as VG-Shipping Oy) in exchange for all shares in Meriaura Oy and VG-EcoFuel Oy.

The merger aims to accelerate the growth of businesses relying on the green transition

The aim of the merger is that together the companies will be able to accelerate the expansion of their business in green transition projects such as solar thermal and low-carbon maritime logistics. The increased size of the Group and particularly the financial resources provided by the profitable Meriaura business will improve the financial position of Savosolar's hitherto loss-making business and support the development and sale of larger system packages. In addition, other sources of clean heat could be integrated into the system supply. From Meriaura's point of view, being a listed company supports opportunities to consolidate the maritime logistics industry by using own shares as a tool in future acquisitions.

A management team with both experience and new blood

Savosolar's CEO is Jari Varjotie, who has led the company since 2010. In addition to his role as Group CEO, he is responsible for the Renewable Energy business unit. The Marine Logistics business unit is led by Bengt-Erik Rosin, CEO of Meriaura Oy, who has 9 years of experience in the company. Heikki Timonen, who has served at Savosolar for 4 years, is the CFO. Following the merger, Kirsi Suopelto was appointed Group Chief Strategy Officer from outside the companies.

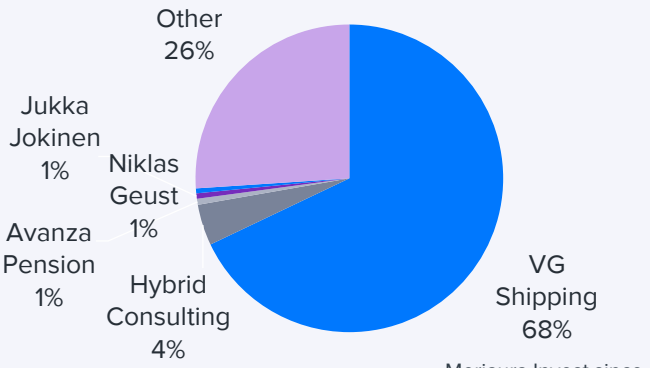
Meriaura Invest owns the majority of shares

As a result of the merger through a share exchange, Meriaura Invest became the largest shareholder of Savosolar (68% ownership). The company had no significant shareholdings in Savosolar before the arrangement. The main owner of Meriaura Invest is Meriaura's founder Jussi Mälkiä. At the end of 2022, Meriaura Invest sold 4% of Savosolar's share block to Hybrid Consulting Oy, in which Kirsi Suopelto, Savosolar's new Chairperson of the Board and Chief Strategy Officer, holds 43%. Business unit heads Varjotie and Rosin effectively own 0.02% and 0.16% of Savosolar's shares, respectively.

Share dual listed in Finland and Sweden

Other major shareholders in Savosolar include Swedish funds Avanza Pension, Nordnet Pensionsförsäkring and SPP Sverige Plus, as well as private investors Jukka Jokinen and Niklas Geust. Savosolar's shares are dual listed on both the Helsinki and Stockholm First North Growth markets and the company has a significant shareholder base in both countries.

Shareholders



Meriaura Invest since 02/16/2023.

Business units

Renewable Energy
5% of revenue
2022 pro forma

Marine Logistics
95% of revenue
2022 pro forma

Source: Savosolar and Inderes estimates

Renewable Energy (1/7)

Business in brief

Savosolar's business includes the supply of solar thermal collectors and systems to industrial customers and district heating producers who are looking to save on their heating costs and reduce the carbon footprint of their operations. Savosolar focuses mainly on large-scale installations of more than 1,000 m2 (~10,800 ft2) and more than 700 kW, where the efficiency features of the company's technology are better demonstrated. The company's business is project-based, which means that, especially at the current stage of the company's development, individual project deliveries often have a large impact on the full-year revenue. Historically, the company's key markets have been France and Denmark.

Collector technology developed since 2010

Savosolar has been developing solar collector technology since 2010 and has protected its innovations with several patents. The company's flat plate collectors combine the highest possible utilization of the surface area that receives the sun's rays with the suitability for cool conditions and sub-optimal weather through strong insulation. The design of the absorber profiles used in the company's solar collectors allows heat to dissipate quickly into the heat transfer fluid, reducing heat losses. The absorbers are coated using a patented process in which three ceramic nanolayers are created on the surface of the absorber in a vacuum chamber. The technology can also be used in solar cooling systems.

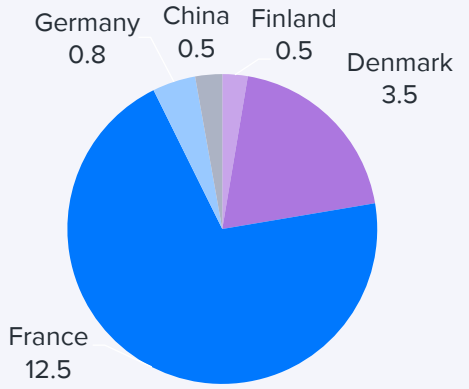
The collectors are manufactured at the Savosolar factory in Mikkeli, Finland. The equipment used to coat the absorbers is the single most expensive part of the company's plant, and its capacity partly determines the production limits. The equipment comes from Savcor, which used it to coat cellphone shells in the early 2000s. Production can be increased up to a certain point mainly by increasing the number of shifts. According to the company, its production capacity would allow it to increase its revenue to EUR 25-30 million with the current business model.

Savosolar offers collectors and complete systems

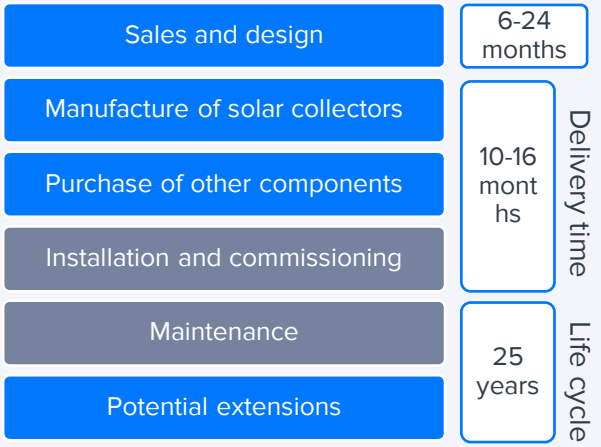
The company's delivery packages can include either solar collectors alone or a complete system. In addition to the actual collectors, a typical system supply includes design, ground works, installation and other equipment such as pumping station, thermal storage, piping and electricity. In system deliveries, solar collectors typically account for around 40% of the total value. Savosolar has extensive experience in designing solar thermal systems. The installation work is carried out by local subcontractors, but Savosolar's own staff will manage and supervise the installation phase.

Savosolar has made a conscious effort to improve its ability to deliver complete systems. Developing systems expertise will give the company better control over the entire supply chain and support the company's long-term growth ambitions. From a risk management perspective, it often makes more sense for customers to order a system from a single entity with overall responsibility than from multiple suppliers. However, taking on greater overall responsibility can also increase the cost risks associated with projects from Savosolar's perspective. The company has also sought to develop its ability to integrate solar thermal alongside other forms of heat generation and to offer its customers more comprehensive design services.

Delivery breakdown 2018-2022 (MEUR)



Business process



Source: Savosolar and Inderes estimates

Renewable Energy (2/7)

Dedicated sales function in core markets

Savosolar's sales organization is focused on the most important markets for the company in Europe, and the company also has partners in other markets of interest. The company has its own sales representation in France and in German-speaking Europe. In addition, the company has sales agents in, e.g., Latin America, South Africa, China, and Australia.

Sales pipelines have historically been long, and negotiations can take several years before a binding order is signed. From Savosolar's point of view, the optimal project size would be from EUR 2-4 million upwards, as smaller deliveries tend to result in high relative sales and engineering costs. During 2018-22, the average size of the company's deliveries was EUR 1.3 million, meaning that the majority of projects have so far been sub-optimal in size. However, smaller customer deliveries are made to develop the business and support long-term growth.

The customer base consists mainly of district heating producers and industrial operators

Savosolar's current end-customer base consists mainly of district heating producers and industrial companies. Solutions are supplied both directly to end-customers and to intermediaries such as integrators supplying heating systems or investment companies investing in energy systems.

Savosolar solutions have already been delivered to 17 countries, but historically the majority of deliveries have been concentrated in Denmark, Finland and France. In 2021, Savosolar announced that it had won a tender to supply EUR 0.5 million to Guangzhou, China. However, operating in China has been very challenging during the COVID pandemic.

Installing solar heating alongside conventional heating systems

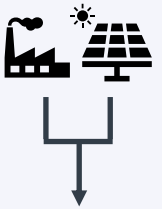
Solar thermal is almost never the only source of heat, as its efficiency varies significantly with the seasons and the weather. Therefore, other more traditional forms of production are used alongside it. Primary heat production is traditionally fueled by fossil fuels such as coal and gas (e.g. Central Europe) and biomass (e.g. Nordic countries). Solar thermal energy can typically provide around 20-28% of total heat demand without the need for large and expensive underground heat storage. In practice, heat stores are usually insulated water tanks. Small above-ground thermal storage facilities can store heat produced by solar collectors for about 2-3 days in winter and about 10 days in summer. With larger underground storage facilities, heat can be stored for several months.

Customers are interested in installing solar heating because it can reduce the costs and carbon emissions of traditional forms of heat generation. We estimate payback periods for solar thermal systems to be around 10 years on average for the industry. Customers' ability to finance such long-term investments is limited, which partly constraints demand. Another major challenge for solar thermal energy is the surface area required for collectors. Space is often in short supply, especially in densely populated areas where heat demand would be greatest. On the other hand, the surface area required for solar heating is much smaller than for photovoltaic heating or biopower, if the surface area required to grow biomass is taken into account.

Solar thermal as part of heat production

Primary production

- For example, bio-, coal-, gas- or electric heating
- Produces most of the heat, concentrated in the winter months

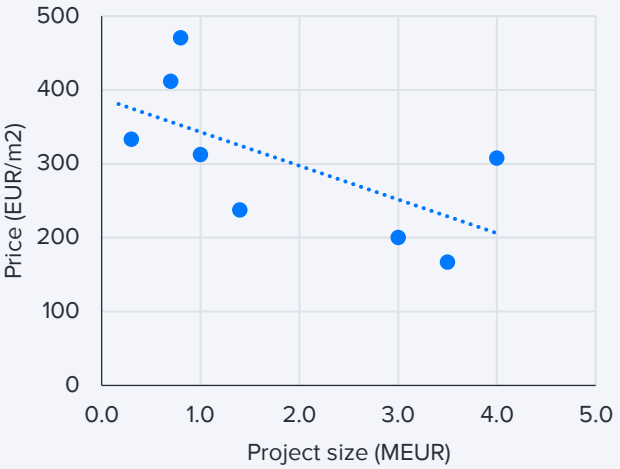


Solar heat

- Emission-free, low-cost heat in favorable weather conditions
- Covers < 28% of annual heat demand without heat storage

- **Industrial processes**
- **District heating**
- **Real estate**
- **Greenhouses**

Completed projects 2018-2022



Source: Savosolar and Inderes

Renewable Energy (3/7)

End-market found, but maintaining growth has been challenging

In its early days in the early 2010s, Savosolar focused on developing solar thermal collectors for the consumer segment and smaller systems. However, the company soon found that the efficiency features of the technology were more useful in larger systems. Deliveries to the first district heating site were made in 2013, after which district heating has become the most important destination for the collectors produced by the company. Savosolar's revenue grew strongly, reaching EUR 5.4 million in 2016. However, progress since then has been mixed. For example, revenue in 2017 was only EUR 0.8 million due to a lack of customer projects. Since then, revenue has been up from time to time, but the growth trend has no longer been positive and has fluctuated with customer projects. In 2021, revenue fell to EUR 2.5 million, partly due to the pandemic slowing down customers' decision-making. Revenue returned to growth during 2022, reaching EUR 3.8 million (+51% y/y), but economic uncertainty and a turbulent energy market have continued to slow down customer decision-making, according to the company.

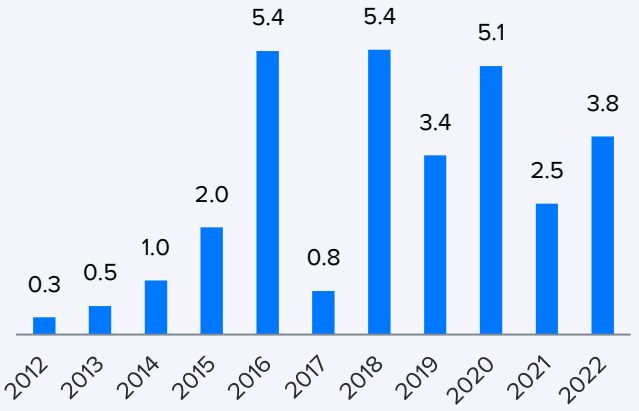
Denmark has long been a European pioneer in the deployment of large-scale solar thermal systems and was therefore Savosolar's most important market in 2015-2018. However, Danish demand has slowed since 2018 due to changes in subsidy policy. France is now one of the most active solar heat markets in Europe and currently the most important target market for Savosolar. In addition to subsidy policies, France has commercial project developers, who are often more agile and efficient than municipal heat producers. Project developers invest in solar heat production and sell the heat to be used in, e.g., industrial processes. In Germany, demand for solar energy systems has also increased significantly in recent years due to government subsidy policies and the rising cost of fossil fuels, but the market for large solar thermal systems is not yet close to the level of activity in France.

Small scale and low material margin kept the result negative

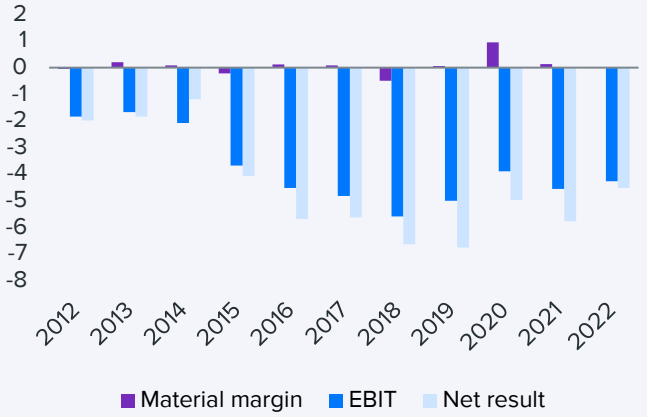
The average material margin for the business was 4% of revenue in 2018-21. The material margin developed positively in 2018-2020, but at best in 2020 the material margin was only 18%, which was not enough to turn the operating result into profit (EBIT 2020: -3.9 MEUR, -76% of revenue). In 2021, the material margin fell to 5%, due to rapidly rising material prices and inventory write-downs, among other factors. Cost inflation has delayed the recovery of the margin level during 2022 (H1 material margin 1%).

Due to the low level of revenue and low material margin, Savosolar's operating result has historically been negative, averaging -4.7 MEUR/year in 2018-2021. The company has also spent just under EUR 1 million per year on product development in 2020-2021. However, there has been no need to make significant investments in production, as the company estimates that the capacity of its current plant would allow it to increase its revenue to EUR 25-30 million. The average net result in 2018-22 was EUR -5.6 million, as the company has paid about EUR 1 million in net financing costs each year. Financing costs have been incurred for interest and other arrangement costs related to the raising of capital.

Revenue (MEUR)



Material margin, EBIT and net result (MEUR)



1) The material margin of the Renewable Energy unit cannot be calculated for 2022 because Savosolar does not report material margin by segment after the merger with Meriaura. For previous years, the material margin has been calculated on the basis of the profit and loss account by deducting the cost of materials and services from revenue.
Source: Savosolar and Inderes

Renewable Energy (4/7)

Delivered projects

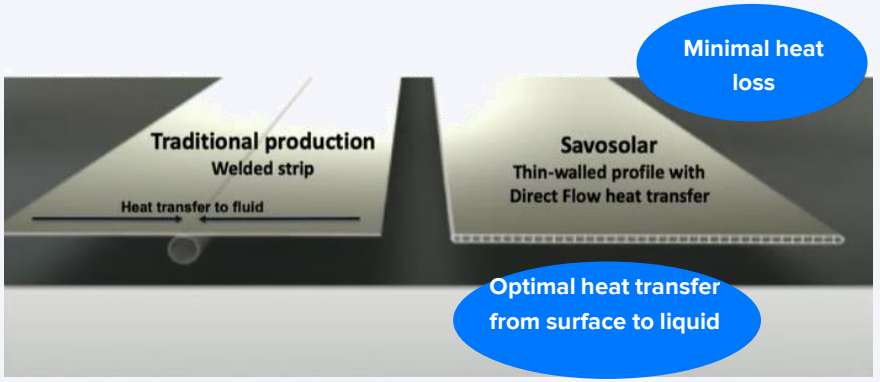
Site	Country	Delivered	Year	Revenue (estimate)
Verdun	France	Industrial process heat	2022	3.0
Guangzhou	China	Solar heating and cooling	2022	0.5
Cadaujac	France	District heating	2021	0.3
Issoudun	France	Industrial process heat	2021	4.0
Narbonne	France	District heating	2021	1.0
Pons	France	District heating	2021	0.7
Creutzwald	France	District heating	2020	1.4
Fernwärme Ettenheim	Germany	District heating	2020	0.8
Suur-Savon Sähkö	Finland	District heating	2019	0.2
Grenaa Varmeværk	Denmark	District heating	2018-2019	3.5
Condat-sur-Vezère	France	Industrial process heat	2018	2.0
Etelä-Savon Energia	Finland	District heating	2018	0.2
Oulun Seudun Sähkö	Finland	District heating	2018	0.1
Voreppe	France	District heating	2018	0.1
Consti Talotekniikka	Finland	Domestic water and space heating	2017	0.1
Voutilakeskus	Finland	Domestic water and space heating	2017	0.1
Ystad Energi AB	Sweden	District heating	2017	0.3
FORS A/S	Denmark	District heating	2016	1.5
Jelling Varmeværk	Denmark	District heating	2016	2.0
Kherson	Ukraine	Solar cooling	2016	
Kyyhkylä	Finland	Domestic water and space heating	2016	
Lolland Forsyning	Denmark	District heating	2016	
Berry farm in Valkeala	Finland	Domestic water and space heating	2016	
Løgumkloster Fjernvarme	Denmark	District heating	2015-2016	
Flecks Brauhaus	Austria	Brewery	2014	
Oulun Skuutti	Finland	Domestic water and space heating	2014	
Sakarinmäki school	Finland	Domestic water and space heating	2014	
Kirkkojärven aluelämpö	Finland	District heating	2013	
Onnelanpolun palvelutalo	Finland	Domestic water and space heating	2013	

Source: Savosolar and Inderes estimates

Customer reference: Issoudun, France (2021)

- Industrial process heat for a malting plant

Savosolar's absorber profile differs from traditional technology



Images: Savosolar

Renewable Energy (5/7)

The market consists of different segments

The market for solar thermal collectors and systems is divided into several segments, including:

- District heating and heating of commercial buildings
- Production of industrial process heat
- Heating of detached houses

The first two segments are key for Savosolar. We estimate the annual global revenue of Savosolar's key market segments to be EUR 71 million for collectors in 2021. Of this, approximately EUR 23 million was delivered to Savosolar's key market in Europe. The estimate is based on the installed collector area and an assumed revenue per collector area (EUR 300/m2), which roughly corresponds to Savosolar's average realization in 2020-22.

District heating and heating of commercial buildings

District heat producers can use solar heat as part of their heat production. During 2021, 44 new solar district heating systems (total capacity 142 MW) were built worldwide, including 20 in China and 14 in Europe. By the end of 2021, there were 299 solar district heating systems over 500m2 in operation worldwide, with a total installed capacity of 1,645 MW_{th}. The market for large solar thermal systems has traditionally been concentrated in Europe, but China has become the largest market during the 2010s.

Production of industrial process heat

Heat is needed in many industries such as food processing, primary production, mining, and process industries. The systems tested so far have mostly been quite small. In 2021, 78 new industrial solar thermal plants were documented, but most of which were systems of above 100 degrees, which are sub-optimal for Savosolar. By the end of 2021, there will be 975 industrial solar thermal systems worldwide, but the installed capacity will be less than half of the combined capacity and area of district heating plants.

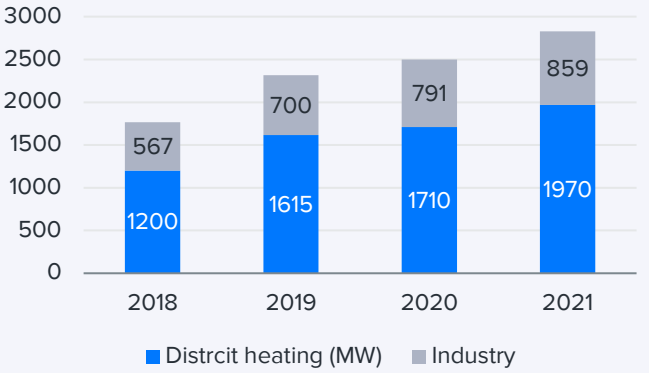
Heating of detached houses

Domestic space heating is a major sub-segment of the solar thermal market, accounting for the vast majority of all installations globally. Solar heat is used for heating domestic hot water and indoor air in houses, but also for heating swimming pools. However, according to the IEA report, photovoltaic and heat pump solutions have increasingly come to compete with small-scale solar thermal solutions in recent years, putting pressure on the overall solar thermal market.

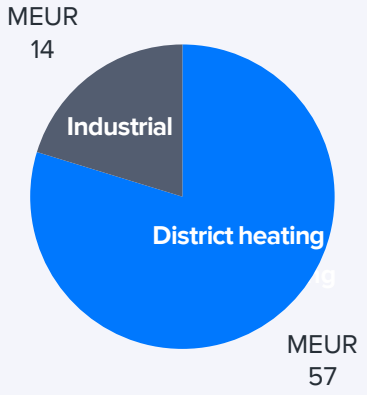
Drivers for market growth

Global installed solar thermal capacity has quadrupled in 15 years, although market growth has developed in varying degrees. The market for large-scale systems, which is critical for Savosolar, has developed more favorably than the mass market and the installed base of solar thermal systems has grown rapidly, especially for industrial applications. The main drivers for market growth are targets to reduce CO2 emissions, savings on fuel costs of conventional forms of heat production, and securing heat supply for critical sectors of society.

Cumulative solar thermal capacity in Savosolar's key segments (globally, MW)[1]



Estimated size of the target market in 2021 (MEUR)[2]



Source: 1) IEA Solar Heat Worldwide 2020-2022, Statista; 2) SHW 2022 and Inderes estimate

Renewable Energy (6/7)

The EU aims to more than double the share of renewable heat production between 2021-2030. Building heating is to be included in the EU emission trading from 2027, probably in a gradually manner. We estimate that this will improve the price competitiveness of solar thermal and support demand.

Regional differences in the operating environment

Local conditions such as established technology, legislation and support policies influence the competitiveness of solar thermal in different regions. We estimate that the vast majority of solar thermal systems built in Europe involve government support in the form of, e.g., direct investment subsidies or tax benefits. In addition to solar heat, other forms of heat production are also subsidized by tax money. In the Nordic countries, for example, the construction of biopower is subsidized, and in Germany, for example, even natural gas-fired generation has been supported in recent years. As a relatively little-known form of energy production, solar thermal energy can sometimes be overlooked in green transition support programs envisaged by politicians.

Available technologies

The most widely used technologies in the global solar thermal market are vacuum tube collectors (74% of new installations in 2019) and flat plate collectors (26%), which Savosolar too manufactures. While vacuum tube collectors are particularly popular in China, the opposite is true in Europe, where flat plate collectors accounted for up to 74% of new installations in 2019. On a global scale, the share of flat plate collectors has also been on the rise in the 2010s. The advantages of flat plate collectors are typically around 20-40% lower cost compared to vacuum tubes and a larger net heat collecting surface area. The advantage of vacuum tube collector technology is that it can heat water to over 100°C (212°F). In addition, vacuum tube collectors can produce more heat in cold and cloudy conditions due to their stronger insulation, although their inherent ability to melt snow falling on the collector may be weaker. The suitability of Savosolar's flat plate technology for heating systems below 100°C limits to some extent the applications for which it can be used. High-temperature district heating systems are particularly popular in German-speaking Europe. However, the shift in energy production from centralized fossil plants towards more decentralized, near-end-user heat production may over time lead to the use of lower temperatures in district heating systems, which would favor Savosolar's flat plate technology.

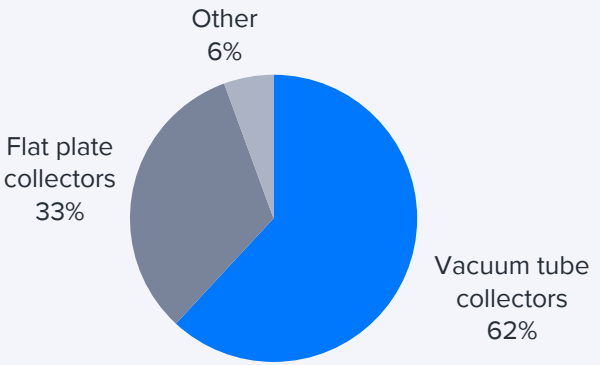
Competitive landscape

Savosolar's field of competitors includes integrators, collector manufacturers and combinations of the two. There are few competitors in the market for large-scale solar thermal systems. European manufacturers of collectors include GreenOneTec, Solarus, Consolar, Ritter Solar, Viessman and TVP Solar. One of the major players in Europe, Danish Arcon-Sunmark ceased operations in April 2020, as a result of which the company's production equipment and IPR rights were sold to Austrian GreenOneTec (G1T). G1T focuses mainly on small collectors and had an annual production volume of 451,000 m2 in 2021, almost twenty times that of Savosolar. Chinese operators have not been major players in Europe, at least so far, but have concentrated on serving their domestic markets.

Drivers and barriers to market growth

+ The need to reduce carbon dioxide and other emissions is also stimulated by regulation.
+ Savings on heating costs, highlighted by rising energy prices
+ Governments provide support for building renewable energy
+ Solar heat requires less surface area than heat from photovoltaics
– Not suitable as the only form of heat generation
– Finding funding for solar thermal projects can prove a challenge, especially for municipal operators
– Solar heat requires more building land compared to fossil or bio-based heat generation

Breakdown of solar collectors by technology (2019 new installations)[1]



1) IEA Solar Heat Worldwide

Renewable Energy (7/7)

Value chain in the industry

Production of materials and components

- Aluminum
- Glass
- Insulation
- Piping

Manufacture of collectors

In Europe

Savosolar

GREENoneTEC 1 SOLAR COLLECTORS

TVP SOLAR

CONSOLAR High Efficiency Solar Systems

SOLARUS

RITTER XL SOLAR

System deliveries

Developer-owner (possible*)

- Designs and finances the project
- Becomes the owner of the thermal power plant and sells heat to end users

newheat

AbSOLAR®

End user

- District heating companies
- Industrial companies
- Agricultural operators
- Owners of large properties

*The developer-owner is a possible intermediary, but solutions are also sold directly to end-customers such as district heating companies or industrial operators.

Marine Logistics (1/5)

Business in brief

The Marine Logistics business unit consists of Meriaura Oy, a company specializing in maritime transport, and its subsidiary VG-EcoFuel Oy, a manufacturer of renewable fuels. Together, the companies form an entity capable of serving freight customers in a way that reduces emissions. The Marine Logistics business is profitable but rather capital intensive. The Marine Logistics unit's pro forma revenue 2022 was EUR 69.4 million and the operating result was EUR 9.5 million.

Meriaura is a major carrier of dry bulk and general cargo in the Baltic Sea and the North Sea region. The history of the company started as a hobby in 1986, but the activities were soon taken in a more commercial direction under the leadership of founder Jussi Mälkiä. Meriaura focuses on freight that supports renewable energies and environmentally friendly solutions. The company aims to achieve carbon neutrality through energy efficiency, bio-based fuels and transport optimization, which will benefit its customers through lower emissions. The company operates 15 small cargo vessels averaging 4,000 tons (DWT), including 13 dry bulk vessels and 2 deck cargo vessels.

Of the 6 vessels owned by Meriaura itself, 5 were transferred to Meriaura's balance sheet following a business transaction at the end of 2021. Before then, they were on the balance sheet of the then parent company and current principal owner of Savosolar, Meriaura Invest Oy (formerly VG-Shipping Oy). In connection with the same transaction, Meriaura also acquired the financial and human resources functions previously purchased as a service from Aura Mare Oy under its own organization.

Dry bulk accounts for the majority of revenue

About 2/3 of Meriaura's revenue comes from bulk dry cargo. In the bulk business, it's essential to maximize vessel utilization rates, unload and load cargo efficiently and optimize costs. A typical bulk carrier makes more than 50 transports a year, bringing the annual transport volume of Meriaura's dry cargo vessels to almost 3 million tons. Meriaura operates its bulk business mainly with time-chartered fleet, which allows more flexibility in capacity in line with changes in customer demand and supports the optimization of fleet utilization rates. The company also has three dry cargo vessels of its own, one of which is optimized to use biofuel (VG EcoCoaster).

The vast majority of bulk transport services involve longer-term contracts. The most typical contract duration is 12 months, but there are also long contracts of 24-36 months and short contracts of 4 months. Long-term customer contracts bring stability to revenue and profitability. The contracts include separate fuel clauses to hedge Meriaura's profitability as fuel prices fluctuate. In addition, certain other price adjustment conditions have been agreed in the longest contracts to take account of changes in cost levels in the maritime freight market. In addition to contract transport, Meriaura aims to exploit the spot market to maximize utilization rates.

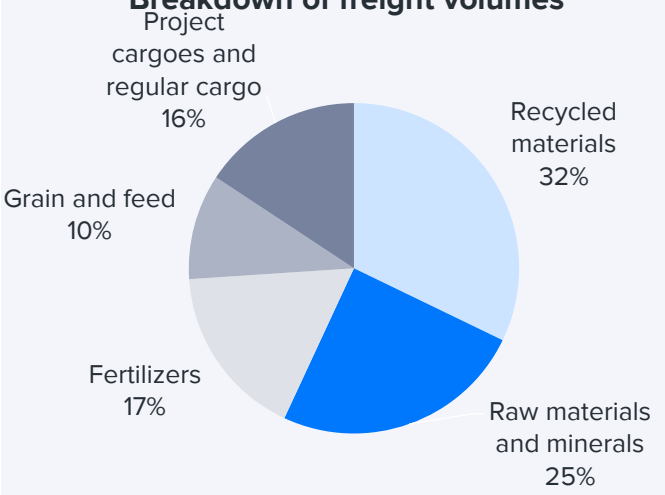
Transport of special cargo expands the revenue base

Project and special cargo transports make up a relatively smaller share of revenue (about 1/3), but are nevertheless an important part of Meriaura's business. Project business is carried out on two self-owned open deck carriers. The nature of the project and special cargo business differs from dry cargo, as individual project cargoes generate considerably more work for the company and the revenue from the cargoes is relatively high compared to the tonnage of the vessels.

Marine logistics is divided into two segments

	Dry bulk (bulk)	Project and special loads
Share of revenue[1]	Bulk 67%	Projekti 29%
Cargo capacity	Time-chartered and self-owned vessels	Only self-owned vessels
Business logic	Maximize utilization rates and efficiency	Lots of manual work, high prices
Market	Large, competitive and cyclical	Small and specialized

Breakdown of freight volumes



1) Breakdown of Meriaura's revenue in 2021
Source: Savosolar, Meriaura and Inderes estimate

Marine Logistics (2/5)

Project cargoes involve a lot of up-front preparation, which is done by the company's own planning department. Preliminary preparations, such as planning port handling and moorings, are often carried out months in advance. Transport of project cargo is mainly done on a spot basis, but in practice some customers repeat projects year after year, which brings continuity to the business.

Six vessels on own balance sheet

Meriaura's fleet consists of six self-owned vessels with a total capacity of 24 000 DWT. The two open deck carrier owned by the company, Meri and Aura, are suitable for highly demanding special cargo transport and offshore operations, making them essential for project business and enabling growth through, for example, offshore wind energy projects. In addition, the open deck carrier Meri is the first cargo ship in the world designed to use bio-oil as a power source, according to Meriaura. The VG EcoCoaster class vessels (2 of which are owned by Meriaura), on the other hand, are energy-efficient dry bulk vessels capable of using alternative fuels such as EcoFuel biofuel produced by a Meriaura subsidiary, making them strategically important for Meriaura. In addition, there are three dry bulk vessels on Meriaura's balance sheet, which we don't consider to be of particular strategic importance.

Nine time-chartered vessels in use

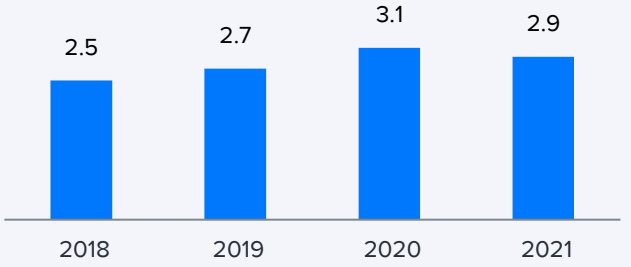
In addition to self-owned vessels, Meriaura operates nine time-chartered dry bulk carriers with a total capacity of around 35 000 DWT. The lease prices are fixed for the duration of the contract and will be updated with the new contract period according to the market situation and outlook. Vessels are leased from a few long-term partners under contracts of various lengths. Some of the time-chartered vessels are leased from a company in which Meriaura Invest, the largest shareholder in Savosolar, is also a co-owner.

Maintenance measures vary from year to year

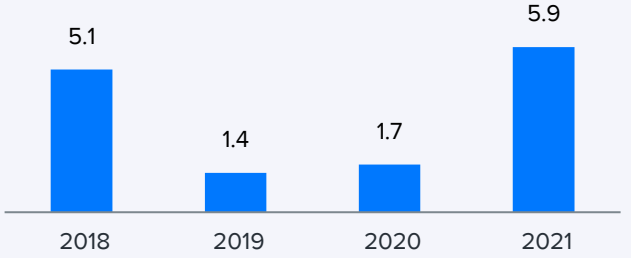
The typical lifespan of a cargo vessel is 20-30 years. Meriaura's own fleet has an average age of 15 years on a DWT-weighted basis, so it's roughly halfway through its service life. Maintenance and basic improvements can make lengthen a vessel's lifespan. Meriaura is responsible for the maintenance and basic improvements of its own vessels, while for time-chartered vessels the responsibility lies with the owner. Self-owned ships typically undergo major refits every five years, when the ship is taken to a shipyard and the refit can take about a month. Minor installations and maintenance work can usually be carried out while the ship is in operation, without a visit to the shipyard. On average, the ship is in cargo service for around 355 days a year, but this varies according to the docking plan, among other things. Additionally, for self-owned ships, any unexpected technical challenges pose a risk to the business.

Meriaura invested EUR 1.1 million in basic improvements during 2021. In the first half of 2022, both open deck carriers spent about a month in the shipyard, where they were fitted with ballast water cleaning systems. EUR 2.3 million was earmarked for these basic improvements. In practice, maintenance investments are usually well below depreciation (around 5 MEUR), but the purchase of new vessels brings investments above depreciation. In September 2022, Meriaura signed a letter of intent for the acquisition of a special ammonia-fueled cargo vessel.

Bulk cargo volumes (mt)



Meriaura's investments (MEUR)



Cargo fleet

Own fleet (total DWT)	Average age (y)[1]
2 x Open deck carrier (10,000)	13
1 x VG EcoCoaster (5 000)	7
3 x Dry bulk carrier (9,000)	25
Total (24,000)	15
Leased vessels	
9 x Dry bulk carrier (35,000)	21

1) DWT-weighted average
Source: Meriaura, Savosolar and Inderes

Marine Logistics (3/5)

A broad customer base smoothes out fluctuations in demand

Meriaura serves several different sectors, whose activity levels follow different trajectories. In dry bulk, Meriaura's cargoes consist of recycled materials, raw materials and minerals, grain and feed raw materials, and fertilizers. In particular, freight volumes in the food chain and recycled materials are developing independently of the general economic trend, which partly compensates for the cyclical nature of the business.

Project cargoes typically consist of large pieces that are challenging to transport. Project cargoes include transport of ship blocks for the shipyard industry, load handling machinery such as cranes and wind turbine components. Demand for project cargoes is more dependent on heavy investment than dry bulk. The company is a major player in both onshore and offshore wind power. We expect the acceleration of offshore wind power construction in the North Sea and the Baltic Sea to continue to support demand for Meriaura's project transports.

Global dry bulk market is cyclical

The global dry bulk market has been sluggish throughout the 2010s. Between 2003 and 2008, the market experienced a historic boom, with far more capacity ordered than the growth in world trade would have required. Between 2010 and 2013, a record number of vessels were delivered and the dry bulk market was left with heavy overcapacity, leading to a collapse in dry bulk prices. Global overcapacity is slowly melting away from the market, as the average age of ships is 20-30 years. However, the market has been on the road to recovery and, particularly in 2021-22, freight rates have risen sharply thanks to low levels of ship investment in previous years, logistical problems following the COVID pandemic and increased economic activity. In early 2023, we have seen global freight rates returning to relatively low levels, but we expect the unwinding of overcapacity to continue and the trend in freight rates to recover in the longer term. In addition, the development of freight rates in the Baltic Sea may differ from global freight rates.

Specific fleet requirements in the Baltic Sea

Widely monitored Baltic Dry Index provides an overall picture of developments in the global freight market. The index doesn't paint a complete picture of the development of the relevant markets for Meriaura, as the weight of Capesize vessels, which are clearly larger than Meriaura's fleet, is high in the index. Meriaura also typically enters into long-term contracts with its customers, which cushions the impact of changes in spot freight prices on the company's profitability. Meriaura also operates mainly in the Baltic Sea, where the specific fleet requirements make it a different market compared to the global market. The Baltic Sea requires ice-strengthened vessels for a significant part of the year and its ports are considerably shallower than the world's major ports.

Segment-specific market outlook

	Short term	Long term
Bulk		
Recycled materials	↗	↗
Raw materials and minerals	→	→
Fertilizers	→	↗
Grain and feed	↗	↘
Project cargoes		
Wind power	↑	↗
Heavy construction	→	→
Port logistics	→	→

The Baltic Dry Index

Source: 1) Statistics Finland and Inderes estimate, 2) Bloomberg

Marine Logistics (4/5)

Maritime transport to be covered by emissions trading from 2024

According to a preliminary decision, shipping will be included in the EU emissions trading scheme gradually from 2024 onwards. In 2024, only 20% of emissions from larger cargo and passenger ships (over 5,000 GT) will initially be covered by emissions trading, but this will increase to 100% by 2027. The inclusion of smaller vessels (400-5,000 GT), including the Meriaura fleet, in the emissions trading scheme will be assessed by 2026.

The inclusion of maritime transport in the emissions trading scheme will increase the price of freight and increase the operational costs and investment needs of maritime transporters. At a price of around EUR 85 per ton, emissions trading would increase intra-European freight prices in the long term by what we estimate to be around 40% relative to the cost of fuel for freight[1]. Thus, emissions trading could mathematically raise the price of maritime freight by about 15%, assuming that fuel costs account for about 35% of the total freight price. An increase in the price of emission allowances would amplify the effect. In practice, however, freight operators are taking measures to reduce CO2 emissions, which should partly limit the increase in freight rates. Reducing CO2 emissions will therefore become an important competitive factor in the industry. New environmentally friendly technologies will be introduced and old, uneconomical ships will be phased out.

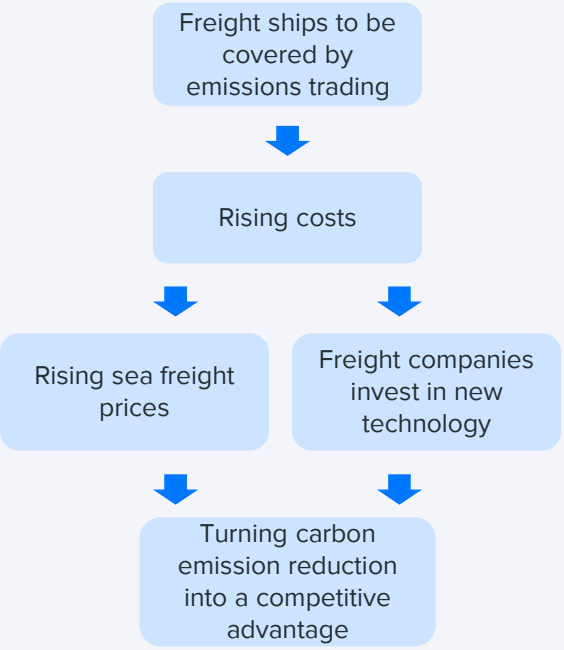
Considering the environment is a cornerstone of Meriaura's strategy

Environmental sustainability and CO2 reduction are a key part of the strategy of the Marine Logistics business unit. The aim is to reduce emissions by using renewable fuels, optimizing journeys, loads and speeds (a dedicated FleetRange application supports efficient operations). Meriaura aims to reduce emissions by 4%/volume/sea mile per year. The proactive reduction of emissions by the shipping industry may prove to be a significant competitive advantage with the start of emissions trading in maritime transport and thus support the company's profitability in the medium to long term.

Own biofuel supply and production unit

The business unit VG-EcoFuel produces VG Marine EcoFuel™ biofuel, which reduces CO2 emissions from operations by 60-97% compared to fossil fuels. EcoFuel produces fuel mainly for the business unit's own use, but it can also be sold to external operators. The biofuel is made from plant-based fats collected from Finnish restaurants that are classified as waste, which the company purifies at its production plant in Uusikaupunki. Additives are also used to modify the composition and properties of the fuel. The limited availability of raw materials can slow down business growth and increase costs, but the company is also exploring the use of alternative raw materials. We understand that there is a very strong global demand for fuels made from waste and renewable materials, due to the wide range of industries seeking to reduce CO2 emissions. Passing on the higher price of fuel to the freight rates paid by customers should become easier in the future due to customer needs and regulatory changes.

Impact of emissions trading on the freight market



Meriaura's means to reduce carbon emissions

- Own biofuel production
- Own ships specially developed to use biofuels
- Purchase of new environmentally friendly ships
- Efficient operation of ships and optimization of cargo flows

1) Calculations on the effects of emissions trading: Prepare for higher shipping costs but the EU ETS should be a manageable change, Will Fray, September 27, 2022

Marine Logistics (5/5)

Market demand and available capacity are the main revenue drivers

The revenue of the Maritime Logistics business area was fairly stable in 2017-2021, until the year 2022 brought significant growth to the company. Historically, the moderate variation in revenue has been influenced by, e.g., the development of market prices for sea freight, the tonnage available and the maintenance of self-owned vessels. Demand for sea freight fell significantly in the early stages of the COVID pandemic, and Meriaura brought its ships to the shipyard for maintenance ahead of schedule. Demand recovered in late 2020 and freight rates rose significantly in 2021. Globally high demand for sea freight in 2021-2022 has reduced competition in the Baltic Sea and supported freight rates, which has been visible in the short term especially in spot rates but is also reflected in longer contracts. During 2022, Marine Logistics' revenue increased by around 30% compared to the comparison period, driven in particular by strong demand in the bulk segment, high fuel prices and a well-built customer portfolio. In addition, revenue was affected by changes in the structure of Meriaura, so the growth in revenue is not fully comparable. The growth in revenue was limited by the long-term maintenance of two open deck special cargo carriers for about a month and an accident on the Meri vessel at the end of the year. The Meri vessel was under maintenance for just over a month, but insurance covered costs and loss of income related to the accident.

VG-EcoFuel aims to increase production volume

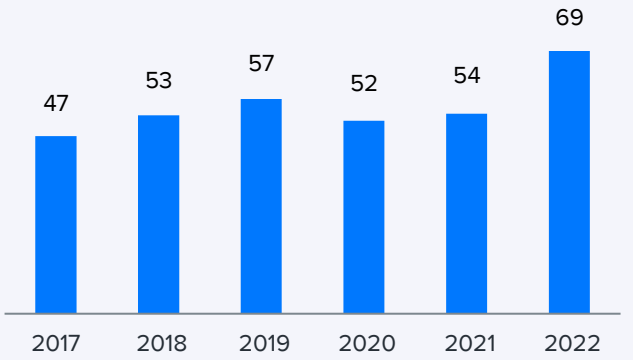
The revenue of VG-EcoFuel, which produces biofuels, has grown consistently, partly as a result of higher volumes. The production volume in 2021 was 1,600 tons and the aim is to increase it to 2,000 tons in 2023. Most of the fuel is sold to Meriaura, so the revenue is chiefly internal and doesn't have a significant impact on the reported revenue of the Marine Logistics unit. In recent years, the development of the biofuel has been partly incomplete, which is why a part of the raw material collected has been not converted into fuel but sold on to other refiners as such. We estimate that the turnover of VG-EcoFuel is only 2% of the revenue of the Marine Logistics business unit.

Performance has improved in recent years

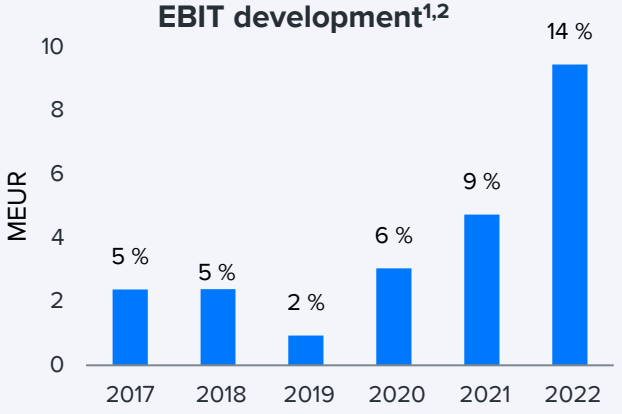
The profitability of the Marine Logistics unit has improved dramatically during 2021-2022. In 2018-2020, the profitability level varied between 2% and 6% as a percentage of revenue. In 2021, the margin already rose to 9% and in 2022 to almost 14%. The increased profitability is mainly due to the higher price level and good demand situation in the marine freight market. In addition, Meriaura has worked to improve the utilization rates and logistics of its fleet, which has helped to improve operational efficiency. Among other things, the company abandoned the planned larger time-chartered vessels (6000-8000 DWT) and decided to focus on the smaller vessel size, as the utilization rates and other efficiencies of the larger vessels weren't reaching the desired levels.

The maritime freight business is taxed by tonnage tax, which means that the amount of tax paid is very low and doesn't depend much on the actual result. The annual cost of capital has historically been around 5%, which corresponds to an annual financing cost of around EUR 1 million on the current balance sheet.

Revenue development (MEUR)[1]



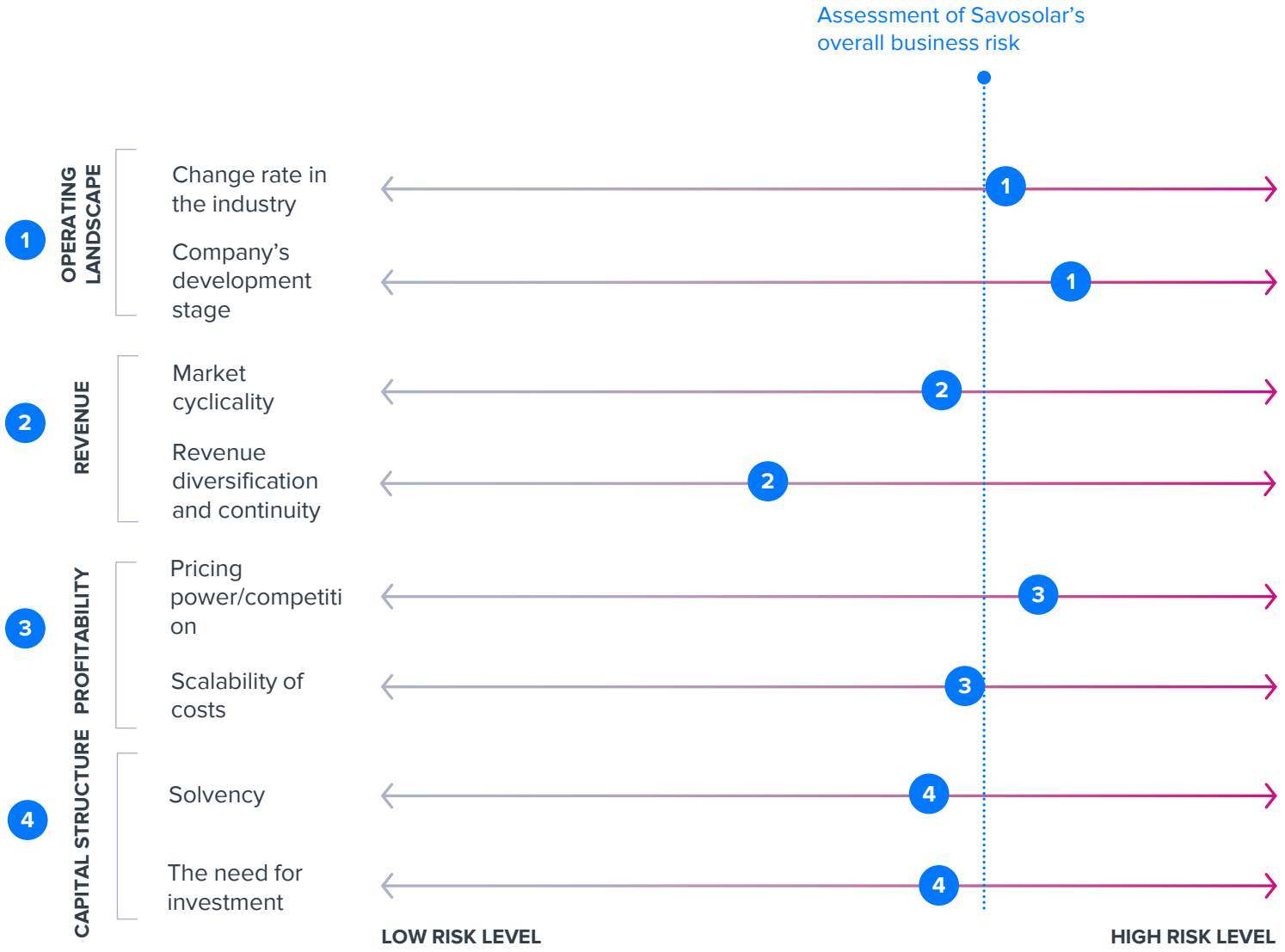
EBIT development[1,2]



1) Reflects the revenue of the unit mainly before the merger with Savosolar, which took place on 11/30/2022. The figures for 2022 aren't fully comparable with previous years due to an acquisition at the turn of 2021-2022.
2) The 2017-2021 figures represent the EBIT from the consolidated financial statements of Meriaura's former parent company Meriaura Invest (formerly VG-Shipping Oy). In addition to Meriaura Invest, Meriaura also had another subsidiary of lesser importance, so the figures are indicative.

Source: Financial statements and Inderes estimate

Risk profile of the business model



The regulatory changes will change both of the company's main activities in a positive direction for Savosolar, but the scale of the impact is difficult to estimate.

The profitability of the Renewable Energy unit is still a question mark. The post-merger direction and strategy will become clearer in the coming years.

Marine logistics is a cyclical industry. Renewable Energy has a lower level less cyclicality, and it's visible through interest rates and material prices.

Marine Logistics has a large customer base and mostly long-term contracts. Selling solar thermal systems is a project-based business.

For Renewable Energy, pricing power is currently low, but regulation could improve the situation. In Marine Logistics, pricing power depends on cyclicality and the future ability to reduce emissions.

Relatively high fixed costs for Renewable Energy. In Marine Logistics, in the event of a weak market, leased shipping capacity can be reduced.

The result should turn positive with the merger and the balance sheet is in moderately good shape.

In the Renewable Energy segment, growth can be pursued on a capital-light basis. In Marine Logistics, growth may require significant investments, depending on the operating model.

Source: Inderes

Strategy (1/2)

New strategy only on the drawing board

Savosolar merged with Meriaura at the end of November 2022 through a share exchange. The strategic reasons for the merger were said to be accelerating businesses supporting the green transition, including growth in large-scale solar thermal, low-carbon marine logistics and other projects. Savosolar has not yet published a more detailed strategy or financial targets after the merger. Therefore, this strategy section consists mainly of Inderes' own reflections on a possible strategy for the company. We think it's likely that the company will develop a more detailed strategy during 2023.

The Renewable Energy unit needs a profitability turnaround

Savosolar's Renewable Energy unit, which has traditionally consisted of supplying solar thermal collectors and systems, has been clearly loss-making for years. Turning around the direction of the business unit is likely to be a key focus of the Group's future strategy. In the future, the company will consider using not only solar heat but also other clean energy sources as part of its systems. Megatrends such as carbon reduction and regulation underpin the segment's long-term outlook, which is why the business unit is still worth investing in if the company believes it has the right measures in place to turn around its performance.

In our view, turning around the Renewable Energy business unit's performance will require a wide range of measures, from increasing volumes to improving material margins and possibly also cutting fixed costs. The production location in Mikkeli isn't quite optimal in terms of logistics costs, as the majority of subcontractors and customers are located in Central Europe. If volumes could be increased significantly, even beyond current production capacity, building additional capacity closer to the supply chain and the end market could become an option. In this scenario, we estimate that business profitability could turn positive in the long term. However, in the current situation, the realization of this scenario can be considered rather remote and uncertain, as it would require a revenue several times higher than the current level.

The merger with Meriaura may open up new ways to realize revenue growth. A stronger balance sheet may, for example, allow the sale of larger system or the development of systems initially partly on the company's own balance sheet. However, this would make the business model more capital-intensive, where the key issue is the return on investment relative to the cost of financing. Other ways to accelerate growth could be to increase R&D investments and develop new types of applications that leverage Savosolar's existing expertise.

Meriaura continues on its chosen path

We believe that the cornerstones of Meriaura's strategy are the reduction of carbon emissions from ocean freight, the long-term development of customer relationships and the continuous improvement of logistical efficiency. The company's business is very profitable, especially in the current market situation, although this hasn't always been the case historically. We estimate that profitability in previous years has been weighed down by the development phase of forward-looking growth projects and unsuccessful trials on larger size vessels. Moreover, customers haven't yet been prepared to pay a sufficient premium for reducing CO2 emissions. However, the measures taken to reduce emissions will allow the company to benefit from tightening regulation and increasing customer-driven emission reduction targets.

Sea freight emissions trading, which will come into force in 2024, doesn't yet apply to Meriaura vessels, but the EU is considering extending emissions trading to smaller vessels by 2026. In addition, we believe that some of the price increases on larger vessels will also be reflected on smaller vessels. We expect the front-loading of carbon emission reduction to be beneficial in the future, when emissions reduction becomes a clear competitive factor in the industry. Own biofuel production and VG EcoCoaster vessels capable of using it can give the company a competitive advantage as customer needs and regulations change. The company has also signed a letter of intent to acquire a renewable ammonia-fueled ship, which could increase its emissions reduction toolbox.

In addition to reducing emissions, Meriaura will continue to develop customer relationships and improve logistics. The company aims to improve logistics efficiency by optimizing cargo sizes, routes and speeds, among other things. More efficient logistics also supports the objective of reducing emissions. Increasing capacity is also being considered to enable growth. Time-chartering is a good capital-light way to seek growth, but building ships or buying second-hand can also be an option. We expect that in the future, the company will mainly have on its balance sheet special vessels that support the strategy, such as special cargo vessels and vessels using renewable fuels such as biodiesel and ammonia.

Strategy (2/2)

Growth can also be pursued through acquisitions

The merger brochure of Savosolar and Meriaura mentioned that business can also be increased through acquisitions. Acquisitions could be used, for example, to acquire new shipping capacity on the company's own balance sheet or to acquire entire business operations, including customer relationships and skilled staff. In our view, maritime freight is quite fragmented as an industry, which could offer potential for consolidation. Increased regulation in the market will increase the pressure for market consolidation. The merger will also allow the Marine Logistics division to make better use of its own listed share for M&A.

Inderes' assessment of Savosolar's future strategy

Common themes in the strategy

Reducing emissions **Regulation** **Innovations**

Renewable Energy

- Increasing sales of solar thermal systems as part of the global shift towards low-carbon energy production
- The strengthened balance sheet resulting from the merger will enable the larger system deliveries
- A turnaround would require significant volume growth and an improvement in the material margin
- Building production closer to end customers in the future would slightly support the margin level

Marine Logistics

- Reducing emissions supports pricing and improves competitiveness as regulation tightens
- Reducing emissions through, e.g., renewable fuels and logistical efficiency
- Special cargo capacity enables growth, e.g., in offshore wind projects in the Baltic Sea and North Sea
- Market consolidation through M&A using own share

Balance sheet and financial position

Savosolar's balance sheet has historically been capital-light

Before the merger with Meriaura, Savosolar's balance sheet was relatively capital-light. Based on the figures reported at the end of June 2022, the assets side consisted mainly of cash and cash equivalents and working capital, such as inventories and receivables. There were very few tangible assets on the balance sheet, as the company's production facilities in Mikkeli are rented and even the production equipment doesn't tie up large amounts of capital. The single most important piece of production equipment, the solar collector coating machine, is quite old and therefore has a low book value. The liabilities side was also almost debt-free and the equity ratio at a reasonable 58%.

Loss-making operations have been financed by share issues

Since the IPO in 2015, Savosolar has organized annual share issues to finance its loss-making business. The amount of interest-bearing debt on the balance sheet has been low or moderate, but financing arrangements have nevertheless resulted in an average annual net financing cost of EUR 1.3 million in 2018-2021. At the end of June 2022, Savosolar had only EUR 2.5 million in cash, which we estimate wouldn't have been enough to run the business for more than a year, so the company needed more capital again.

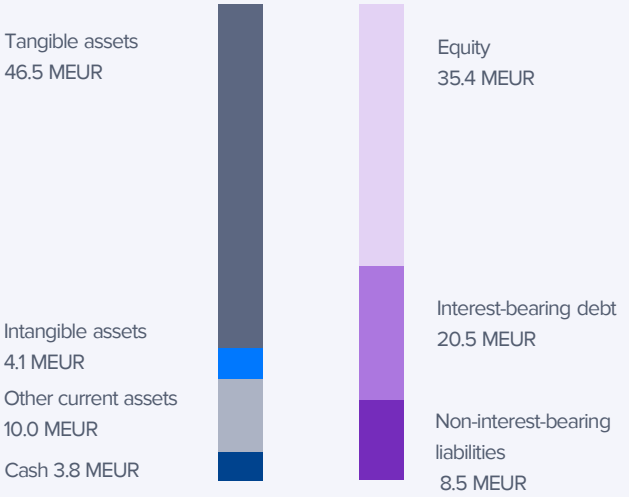
The merger resulted in a stronger and more capital-intensive balance sheet

The merger with Meriaura at the end of 2022 strengthened the Group's balance sheet and significantly changed its composition. Meriaura's business is highly capital-intensive, with EUR 46 million of cargo vessels on its balance sheet in June 2022. According to an external evaluator, the market value of the vessels was EUR 51 million. However, the relative amounts of working capital and cash decreased as a result of the merger. With Meriaura came a significant amount of interest-bearing debt, bringing the Group's net debt to EUR 16.7 million at the end of 2022. At the same time, Meriaura's debt servicing capacity was also strengthened thanks to its profitable and cash-flow generating business. We estimate the cost of debt to be around 5%/year and the hedging mechanisms used by the company limit the impact of interest rate increases on the cost of debt.

Investments and depreciation will increase

Historically, Savosolar's investments have been very low, practically close to zero in 2018-2021. The situation will change with the capital-intensive Marine Logistics business unit, as maintaining and growing the business will require higher investments in the future. The annual depreciation of the Marine Logistics unit is around EUR 5 million. Investments can be well above or below depreciation, depending on both the timing of maintenance and investment in new equipment. Self-owned equipment is typically financed by significant debt financing. Up to 80% of the investment in a new vessel can be financed by debt, while for second-hand ships, debt financing is typically around 50%.

Balance sheet at the end of 2022



Balance sheet total 64.4 MEUR

Source: Savosolar

Estimates (1/4)

Renewable Energy

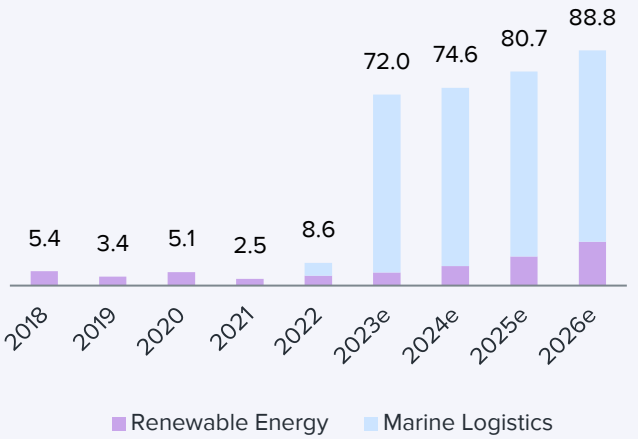
In our estimates, we expect the business based on the supply of solar thermal collectors and systems to turn to steady growth in the coming years. We forecast revenue to grow to EUR 4.9 million in 2023 (+30% y/y) and for 2024-2026 we assume an annual growth rate of 50%. Our growth estimates are high relative to the historical growth trend, as revenue hasn't grown consistently in recent years, but has remained at low levels. Emissions reductions and related regulation support the segment's medium-term growth prospects. The planned inclusion of building heating in the EU's emissions trading scheme from 2027 onwards should provide concrete support for the demand for solar thermal energy. However, the turbulent energy market and uncertainty about the economic outlook have delayed customer decision-making towards the end of 2022, according to the company. The order book at the end of 2022 was modest (0.3 MEUR), so we don't consider the growth prospects for 2023 to be particularly strong so far, even though the company has many projects in the bidding and planning phase (2022: 42 MEUR, 2021: 15 MEUR). The strengthened balance sheet resulting from the merger can also help to create new types of project financing models. The growth that we project is steep in percentage terms, but individual large projects can have a significant impact on the segment's growth prospects and there is considerable uncertainty in the estimates. The company's current production capacity enables an annual revenue of up to EUR 25-30 million in the Renewable Energy business.

In terms of profitability development, the outlook for the Renewable Energy segment is challenging, as covering fixed costs would require either significant cost savings, high material margins or strong revenue growth. Fixed costs in 2021 amounted to EUR 4.3 million without depreciation and EUR 4.7 million with depreciation. In practice, covering fixed costs of EUR 5 million with a material margin of 25% would require a revenue of at least EUR 20 million. Profitability turnaround would therefore require an increase in production volume to the maximum capacity of the company's plant without a significant increase in fixed costs. This may prove challenging, as an increase in production would increase wage costs or, conversely, depreciation due to investments in automation. We estimate fixed costs for 2023 to be EUR 4.3 million (no depreciation), but we forecast costs to grow in line with revenue to EUR 5.0 million by 2026. We forecast the material margin to improve to 15% in 2023 and 25% from 2025 onwards (the historical maximum has been 18% in 2020). Volume growth is likely to provide economies of scale in production and thus support material margins. Under these assumptions, the operating result for 2026 would remain negative at EUR -1.4 million, and there is no clear path to profitability in the short term.

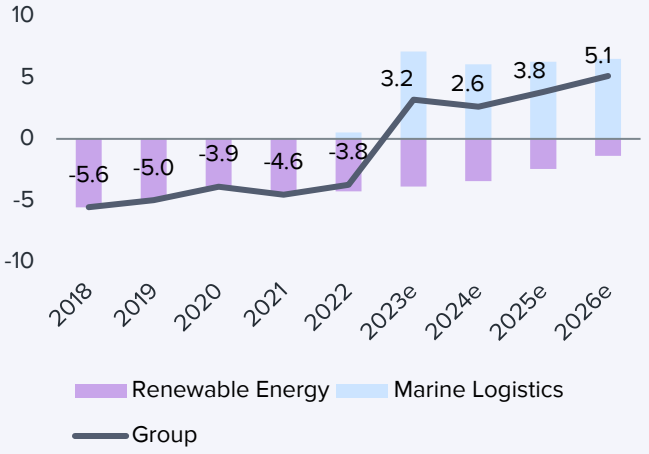
Marine Logistics

Savosolar recognized revenue and profit from the Marine Logistics business unit for only one month in 2022, as the merger with Meriaura Oy and VG-EcoFuel was completed on November 30, 2022. In our view, the unit's profitability is currently exceptionally high due to high demand for sea freight capacity, especially in the bulk segment. We forecast Marine Logistics' 2023 revenue to be EUR 67 million, a 3% decrease compared to last year's pro forma level.

Revenue development (MEUR)



EBIT development (MEUR)



Source: Inderes' estimate

Estimates (2/4)

We also forecast EBIT to decline to EUR 7.1 million (2022 pro forma: 9.5 MEUR). In our view, the profitability level for 2022-2023 is not sustainable, but the normalization of demand for bulk freight capacity is likely to bring the profitability level of Marine Logistics down from the current high level (2022 pro forma EBIT: 13.6%). We forecast the EBIT margin to fall to 10.6% in 2023 and further to 9.0% in 2024. However, we expect Marine Logistics' EBIT to remain higher in the future compared to the average comparable level of around 5% in 2017-2021, thanks to, among other things, operational efficiency and a more optimal fleet. The profitability estimates are subject to uncertainty, as it's unclear at what level and how quickly freight rates will settle after the 2021-2023 boom. According to the company's financial statement release published on 03/06/2023, the business outlook remains good, so it's possible that the profitability level will remain high beyond our estimates.

The inclusion of maritime freight in the EU's emissions trading scheme could gradually support freight rates over the 2024-2027 period, but also increase the need for investment. Although emissions trading will initially not apply to vessels of less than 5,000 gross tonnage (Meriaura's vessels are smaller than this), we believe that the price effect will also be partly reflected in smaller vessels. In addition to the rise in market prices due to emissions trading, the project business is also expected to see growth, led by, e.g., offshore wind projects.

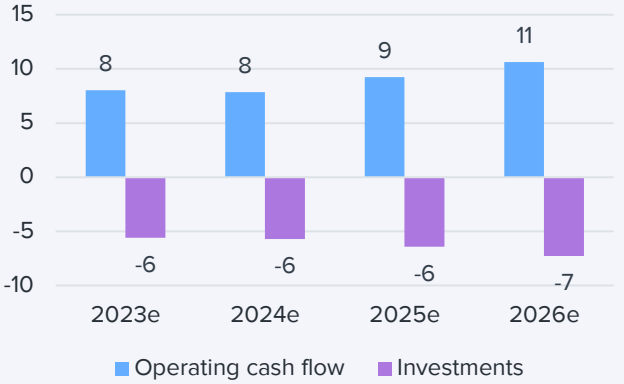
Summary of growth and operating result estimates

At the group level, we forecast revenue for 2023 to reach EUR 72 million (2022 pro forma: 73 MEUR) and an operating result of EUR 3.2 million (2022 pro forma: 5.2 MEUR). The negative development relative to the 2022 pro forma figures is largely explained by an estimated weakening of bulk freight demand and a gradual decline in freight rates. We expect further downward pressure on Marine Logistics' results in 2024, but the Group's results are expected to turn positive in 2025-2026. We see upside potential for the Renewable Energy unit's performance in the coming years as demand grows with regulation and the green transition, but our baseline scenario assumes the unit's performance remain negative in the medium term. For 2026, we forecast a group-level EBIT of EUR 5.1 million and EBITDA of EUR 11.0 million.

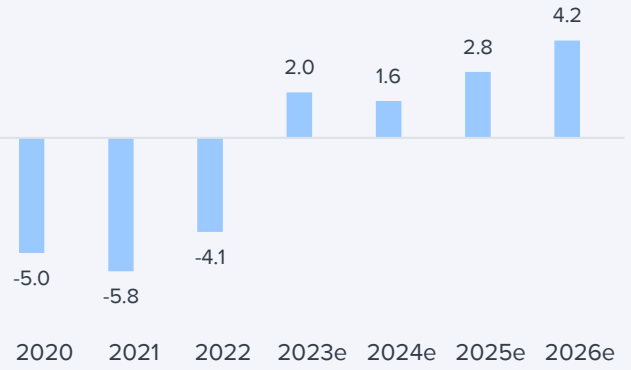
New vessels are the most likely major investment target

We forecast the group's depreciation and amortization for 2023 at EUR 5.3 million, of which EUR 5.0 million is allocated to the Maritime Logistics unit, mainly vessels. At the Group level, we estimate that total investments in 2023-2026 will be around 12% higher than depreciation, which is explained by growth investments in Marine Logistics. The company currently has an acquisition of an ammonia-fueled special cargo vessel on the table, which could be delivered in 2024. However, the order is not yet binding and other options are being considered for low-carbon growth. In Renewable Energy, contrastively, we expect investments to be low, as the current capacity of the company's plant allows for significant volume growth without major investments. Possible investments in the Renewable Energy unit are likely to be small efficiency-enhancing purchases, for example in automation. Operating cash flow exceeds investment by EUR 2-4 million per year in our estimates.

Cash flow from operations and investments (MEUR)



Net result (MEUR)



Source: Inderes' estimate

Estimates (3/4)

Net result to turn positive in 2023

We forecast the group's net financial expenses to rise to an annual level of around EUR 1 million with the interest expenses of Meriaura. Rising interest rates may increase financing costs in the medium term, but we believe that in the short term the company will benefit from interest rate hedging. Under our current assumptions, the balance sheet will strengthen over time, which in turn argues in favor of lower financing costs. We assume a long-term cost of debt of 5%. We expect the taxes paid by the group to be minimal in the future, as Marine Logistics has a very low tonnage tax and the Renewable Energy unit is expected to remain negative in the coming years. We estimate the long-term effective tax rate to be 2%. After financial costs and taxes, the company's net profit would be EUR 2.0 million in 2022, EUR 1.6 million in 2024 and EUR 2.8-4.2 million in 2025-2026.

We do not expect dividends

The company hasn't adopted a dividend policy or decision to pay a dividend in the near future. In principle, we expect the company to focus on financing the growth and development of the group's business in the coming years. We forecast that no dividends will be paid, at least in the medium term. The dividend outlook may change with a possible new strategy.

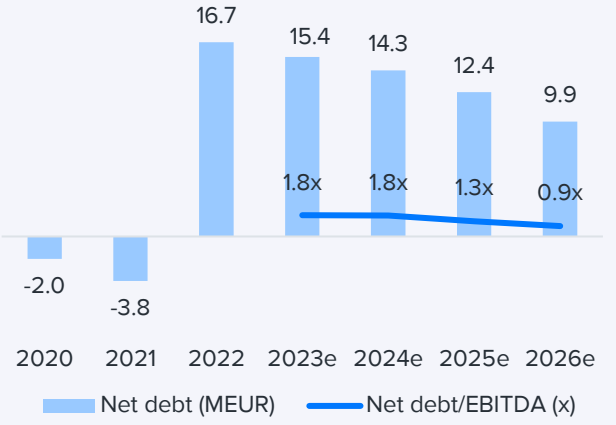
Balance sheet stabilized with the merger

At the end of 2022, the net gearing ratio was 47% and the equity ratio 55%, which indicate that the company's balance sheet position is good. The amount of net debt at the end of 2022 was EUR 17 million. The ratio of net debt to 2022 pro forma EBITDA is 1.7x, but the projected decline in Meriaura's profitability in 2023-2024 puts the ratio of net debt to EBITDA at around 1.8x. Determining the appropriate level of debt for a company like Savosolar, which consists of different businesses, is challenging. The group solvency ratio of Meriaura's former parent company averaged 45% in 2017-2021, well below the current level of Savosolar. At the peak of the cycle, leverage should be reasonably low, because a turnaround in the shipping cycle could be reflected in a sharp deterioration in the group's EBITDA margin. We believe that the balance sheet allows the company to expand its fleet. Assuming a price of EUR 20 MEUR for one open deck carrier and a debt financing ratio of 80%, such an investment decision should be possible based on the current assets and strong cash flows in the near future. Of course, the company's earnings performance is subject to cyclical uncertainty, which may also be reflected in its ability to service debt and invest in the future.

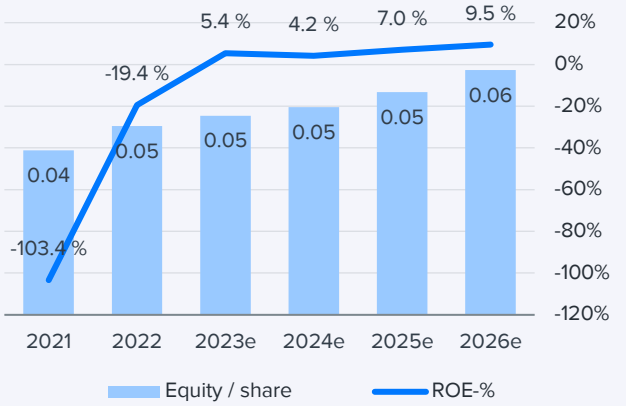
Return on capital at a low level due to Renewable Energy's losses

Savosolar's return on capital is at a relatively low level, mainly due to the loss-making result of the Renewable Energy unit. We estimate a return on invested capital of 16% for Marine Logistics in 2022, supported by strong market demand and favorable freight rates. We expect Marine Logistics' ROIC to decline to 12% in 2023 and 10% in 2024. At the group level, we forecast a ROIC of 5.6% in 2023 and 4.5% in 2024 and a ROE of 5.4% in 2023 and 4.2% in 2024.

Net debt development



Equity / share and ROE-%



Source: Inderes' estimate

Estimates (4/4)

Business unit estimates

Renewable Energy	2018	2019	2020	2021	2022	2023e	2024e	2025e	2026e
Revenue	**5.4**	**3.4**	**5.1**	**2.5**	**3.8**	**4.9**	**7.4**	**11.1**	**16.6**
-growth	553%	-37%	50%	-51%	51%	30%	50%	50%	50%
Material margin	**-0.5**	**0.1**	**0.9**	**0.1**	**0.2**	**0.7**	**1.5**	**2.8**	**4.1**
-% of revenue	-9%	2%	18%	5%	5%	15%	20%	25%	25%
Fixed costs	**-4.4**	**-4.4**	**-4.4**	**-4.3**	**-4.2**	**-4.3**	**-4.5**	**-4.7**	**-5.0**
-% of revenue	-0.8	-1.3	-0.9	-1.7	-1.1	-0.9	-0.6	-0.4	-0.3
EBITDA	**-4.9**	**-4.4**	**-3.4**	**-4.2**	**-4.0**	**-3.6**	**-3.0**	**-2.0**	**-0.8**
-% of revenue	-90%	-128%	-67%	-167%	-105%	-72%	-41%	-18%	-5%
Depreciation	-0.7	-0.6	-0.5	-0.4	-0.3	-0.4	-0.4	-0.5	-0.6
EBIT	**-5.6**	**-5.0**	**-3.9**	**-4.6**	**-4.3**	**-3.9**	**-3.4**	**-2.5**	**-1.4**
-% of revenue	**-103%**	**-146%**	**-76%**	**-182%**	**-113%**	**-80%**	**-47%**	**-22%**	**-8%**

Marine Logistics[1]	2018	2019	2020	2021	2022	2023e	2024e	2025e	2026e
Revenue	**52.4**	**56.7**	**51.0**	**52.9**	**69.4**	**67.1**	**67.3**	**69.7**	**72.2**
-growth		8%	-10%	4%	31%	-3%	0%	4%	4%
EBITDA			**1.3**	**4.2**	**13.9**	**12.1**	**11.1**	**11.5**	**11.9**
-% of revenue			2.5%	8.0%	20.0%	18.0%	16.4%	16.4%	16.4%
Depreciation			-0.1	0.0	-5.0	-5.0	-5.0	-5.2	-5.4
EBIT	**0.8**	**-1.1**	**1.2**	**4.2**	**9.5**	**7.1**	**6.1**	**6.3**	**6.5**
-% of revenue	**1.6%**	**-2.0%**	**2.4%**	**8.0%**	**13.6%**	**10.6%**	**9.0%**	**9.0%**	**9.0%**
ROI[2]	4%	2%	6%	8%	16%	12%	10%	11%	11%

Group total	2018	2019	2020	2021	2022	2023e	2024e	2025e	2026e
Revenue	**5.4**	**3.4**	**5.1**	**2.5**	**8.6**	**72.0**	**74.6**	**80.7**	**88.8**
-growth		-37%	50%	-51%	246%	734%	4%	8%	10%
EBITDA	**-4.9**	**-4.4**	**-3.4**	**-4.2**	**-3.6**	**8.5**	**8.0**	**9.5**	**11.0**
-% of revenue	-89.7%	-128.1%	-66.6%	-167.2%	-41.4%	11.8%	10.8%	11.8%	12.4%
Depreciation	-0.7	-0.6	-0.5	-0.4	-0.2	-5.3	-5.4	-5.7	-5.9
EBIT	**-5.6**	**-5.0**	**-3.9**	**-4.6**	**-3.8**	**3.2**	**2.6**	**3.8**	**5.1**
-% of revenue	-102.9%	-146.4%	-76.2%	-182.4%	-43.6%	4.4%	3.5%	4.7%	5.7%

1) Marine Logistics became part of the group as of November 11/30/2022

2) The ROI for 2018-2021 is based on the consolidated financial statements of Meriaura's previous parent company Meriaura invest (formerly VG-Shipping Oy) and the figures can only be considered indicative, as the group included another - albeit smaller - subsidiary.

Source: Savosolar, VG-Shipping and Inderes estimate

Valuation (1/3)

Valuation summary

The fact that Savosolar consists of two very different business units makes it a challenging investment to evaluate. We view the Renewable Energy unit as a potential relatively capital-intensive growth business. However, its cash flows are unlikely to turn positive in the near term and even long-term growth would require a significant positive turnaround in the company's business. The long-term performance of Renewable Energy is highly uncertain, which makes it challenging to value. The Marine Logistics business unit, on the other hand, we consider as a capital-intensive preserver of value, whose performance fluctuates due to the cyclical nature of the maritime freight market. The valuation of Marine Logistics can therefore be more easily approached through a normalized performance level. In both business areas, efforts are being made to adapt to the green translation before regulation forces to do so. This may create benefits or competitive advantages in the future as regulation tightens, which we have also tried to take into account to some extent in our estimates.

The sum of the parts below the current share price

We believe that the sum-of-the-parts valuation method is the most appropriate for determining the value of Savosolar. In the baseline scenario of our sum-of-the-parts method, the Renewable Energy unit would be valued at EUR 0 million and Marine Logistics at EUR 54 million (EV/EBIT 9.0x or 1.1x the market value of vessels as of 06/14/2022). Taking into account the net debt of EUR 17 million in 2022, this would give a fair market value of EUR 38 million and a share value of EUR 0.048.

Elevated valuation multiples

The current share price level also looks expensive when looking at group-level earnings-based valuation multiples. EV/EBIT multiples at group level are very high (2023-24: 24-29x), as Renewable Energy is weighing on earnings and Marine Logistics has high depreciation. EV/EBITDA multiples are more moderate (2023-24: ~9x), but the capital-intensive nature of Marine Logistics means that a large part of EBITDA will be spent over time on investments required for fleet maintenance and replacement. As regards the balance sheet, Savosolar is valued at a P/B ratio of 1.6x (2023e). The median P/B ratio for freight shipping companies is 1.0x, so Savosolar's valuation can't be based purely on the value of its current assets.

Value per share EUR 0.04-0.06

Based on the sum of the parts and earnings-based and balance sheet valuation multiples, we estimate the fair value of the stock at EUR 0.040-0.06 (EV/EBITDA 6-8x, P/B 0.8-1.3x at 2023 estimates). Justifying the current share price would require better visibility of the performance of the Renewable Energy business. In our view, a turnaround would require a significant improvement in the competitiveness of the business relative to the past. Emission reduction targets and tighter regulation are likely to support the long-term competitiveness of the Renewable Energy segment, but growth trends and cost structures in recent years suggest that a turnaround is not yet around the corner. The clarification of the strategy following the merger of Savosolar and Meriaura may provide new perspectives on the company's business and valuation. We initiate coverage of Savosolar with a Sell recommendation and a EUR 0.06 target price.

Valuation	2023e	2024e	2025e
Share price	0.08	0.08	0.08
Number of shares, millions	783.1	783.1	783.1
Market cap	61	61	61
EV	77	76	74
P/E (adj.)	31.3	38.7	21.6
P/E	31.3	38.7	21.6
P/FCF	25.0	28.7	21.8
P/B	1.6	1.6	1.5
P/S	0.9	0.8	0.8
EV/Sales	1.1	1.0	0.9
EV/EBITDA	9.0	9.4	7.8
EV/EBIT (adj.)	24.1	29.0	19.3
Payout ratio (%)	0.0 %	0.0 %	0.0 %
Dividend yield-%	0.0 %	0.0 %	0.0 %

Source: Inderes

Factors supporting the valuation of Savosolar:

- Emissions reduction and regulation create demand for company's solutions
- Proprietary technology and experience in solar thermal
- Marine Logistics prepared to reduce emissions even before emissions trading started

Factors negatively affecting the valuation of Savosolar:

- Renewable Energy unit's turnaround not yet in sight
- Marine Logistics earnings likely to fall after the cyclical peak in 2022

Valuation (2/3)

Sum of the parts and scenarios

There is significant uncertainty about the long-term performance of the Renewable Energy unit. Therefore, we find it useful to look at the fair value of Savosolar through different scenarios. The value of the Renewable Energy unit varies between scenarios, but the value of Marine Logistics is the same in all scenarios.

Sum of the parts - Renewable Energy

We find it challenging to value the Renewable Energy business unit due to the high degree of uncertainty involved in forecasting its future performance. The historical development of the unit's revenue and profit as well as the challenging cost structure don't suggest a high probability of a turnaround in the near future. However, it should be noted that the progress of the green transition, particularly regulation and the inclusion of building heating in the EU ETS (possibly from 2027 onwards) are drivers that will improve the competitiveness of solar heating in the long term.

In a negative scenario, Renewable Energy's performance would remain at its current weak level and its 2026 revenue and EBIT would be at the average level of 2018-2021 (revenue: 4 MEUR, EBIT: -5 MEUR). This scenario could occur if revenue were not to increase from current levels and the cost structure were also to remain unchanged deteriorate slightly. In a negative scenario, shutting down the business could also be an option, which would cut off negative cash flows. We assume that this would happen after 2026, resulting in a cumulative cash flow value of 2023-2026 of EUR -20 million (4x annual EBIT).

The baseline scenario assumes a clearly positive business trend with an increase in revenue and an improvement in the material margin, but EBIT would still be negative in 2026 (-1.4 MEUR). Even in the baseline scenario, the business is a burden on the Group's cash flows, but on the other hand, a positive development would raise hopes for a long-term turnaround in the profitability of the business. We value the business at EUR 0 million in the baseline scenario, consisting of negative cash flows of EUR -12 million in 2023-2026 and a residual value of EUR 12 million in 2026. The residual value of EUR 12 million assumes that the profit outlook in 2026 would be clearly upward and the business could be turned profitable within a few years, although in the first years, cash flow would still suffer from small losses and expansion investments.

In a positive scenario, a strong increase in revenue is achieved, which also contributes significantly to operational efficiency. In 2026, revenue would be EUR 50 million, material margin 25%, fixed costs EUR 10 million and EBIT EUR 2.5 million. Fixed costs would roughly double from current levels, largely corresponding to an increase in production capacity relative to current levels (current capacity allows for a revenue of 25-30 MEUR). In this scenario, a high EV/EBIT ratio of 15x would also be acceptable for the business, as the operations are relatively capital-intensive and the market growth prospects remain good, supported by megatrends. In this case, the value of the business could be EUR 38 million. However, we believe the probability of this scenario materializing is low, as it would require a 13-fold increase in revenue from 2022 levels and, moreover, revenue growth hasn't been unambiguously bullish in recent years.

Sum of the parts MEUR	Scenario		
	Negative	Baseline	Positive
Renewable Energy			
Revenue 2026e	4	16.6	50
EBIT 2026e	-5	-1.4	2.5
EBIT-% 2026e	-125%	-8%	5%
EV/EBIT (x)	4.0x	0.0x	15.0x
Enterprise value (EV)	**-20**	**0**	**38**
✚			
Marine Logistics			
Revenue 2024e		67	
EBIT 2024e		6.1	
EBIT-% 2024e		9.0%	
EV/EBIT (x)		9.0x	
Enterprise value (EV)	**54**	**54**	**54**
EV/Market value of ships 06/14/2022	1.1x	1.1x	1.1x
=			
Total enterprise value (EV)	**34**	**54**	**92**
Net debt 2022e	-17	-17	-17
Fair market value*	**18**	**38**	**75**
Fair share price*	**0.023**	**0.048**	**0.096**
Current share price	0.079	0.079	0.079
Market capitalization now	62	62	62
Change*	-71%	-39%	22%

Valuation (3/3)

Sum of the parts - Marine Logistics

We seek to determine the value of Marine Logistics by looking at the estimated normalized earnings level and the normalized earnings-based valuation multiples. As sea freight rates have been exceptionally high in 2021-2022, we expect earnings to gradually decline in the coming years as market prices return to normal levels, although the company says the business outlook remains good.

The marine logistics industry is capital-intensive and cyclical, which is why we believe the business should be valued at a relatively moderate EV/EBIT of 9x relative to normalized earnings. The median valuation for 2024e of the peer group of global sea freight companies is around 8x EV/EBIT and just over 5x EV/EBITDA. The multiples are currently below their long-term averages due to the strong business cycle. Multiples have historically fluctuated strongly with the level of earnings, being very high at the bottom of cycles and low at the top. Our accepted valuation multiple is slightly higher than peers because we estimate that the 2024 estimates of the peer companies still contain a positive impact from the 2021-2023 boom, and the valuation of the peers doesn't match the normalized earnings level.

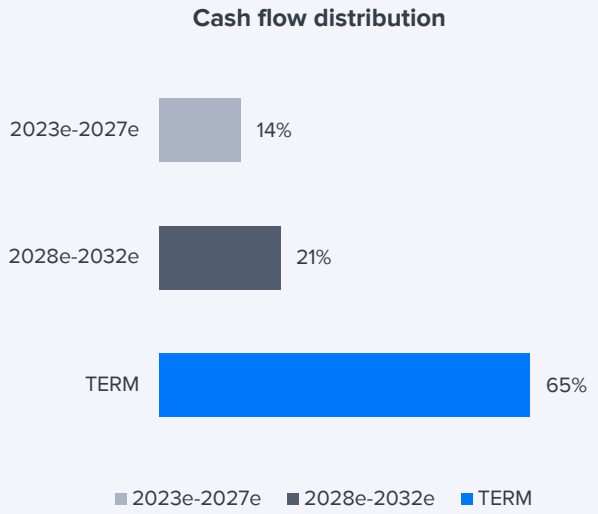
We forecast Meriaura's operating result to normalize in 2024 and use this as the base year for the valuation, as we expect the 2023 result to still clearly benefit from the current strong stage of the cycle. For 2024, we forecast a revenue of EUR 67 million and an EBIT of EUR 6.1 million (9.0% of revenue), whereby a 9x EV/EBIT multiple would give an operating value of EUR 54 million, which is about 1.1 times the market value of the company's ships on 07/14/2022 (EUR 50.8 MEUR). At 2023 earnings, a fair enterprise value of EUR 54 million would correspond to an EV/EBIT multiple of 7.7x, which is slightly below the peer group median (8.4x) for 2023.

DCF

In our view, the cash flow-based valuation method isn't well suited for the valuation of Savosolar, as we believe that the earnings turnaround of the Renewable Energy business unit won't materialize in the foreseeable future and the earnings forecasts are highly uncertain. Thus, the company's cash flows are difficult to predict. We have assumed in the DCF model projections that the Renewable Energy unit would make a zero EBIT from 2027 onwards, with the long-term result mainly coming from Marine Logistics.

The DCF model indicates Savosolar a market value of EUR 52.3 million and a share value of EUR 0.067. We have set Savosolar's average cost of capital at 9.1%, which is the cost of capital weighted by projected 2026 revenues for Renewable Energy (separate WACC assumption of 12%) and Marine Logistics (separate WACC assumption of 8.5%).

Our DCF model assumes that the Group's operating margin will improve after the estimate period of the next few years to 6.7% by 2027-2029. For the terminal period, the margin estimate is 6%. Revenue growth is assumed to be 5% in 2027-2031 and 2.5% in the terminal period. We expect investments to exceed depreciation over the estimate period, as we forecast capacity and revenue growth for Marine Logistics. We assume that depreciation and investment are roughly equal in the long run.



Investment profile

1. **Two very different types of business units with different profitability profiles**
2. **Trends and regulation favor low-carbon solutions that are at the heart of the company**
3. **The profitability turnaround of Renewable Energy is uncertain, which may depress cash flows**
4. **Good profitability in Marine Logistics right now, but the industry is cyclical and capital-intensive**
5. **Balance sheet in reasonably good shape, but no dividend will be paid and money is channeled into growth**

Potential

- Growing demand for environmentally friendly solutions that reduce greenhouse gas emissions
- Unwinding the overcapacity in the global maritime cargo market
- Regulation, such as emissions trading, will make reducing CO2 emissions a competitive factor in both heat production and maritime freight
- Savosolar is well positioned to reduce emissions in both business units

Risks

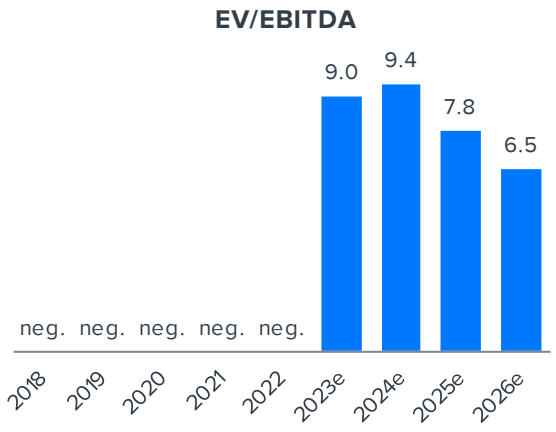
- The profitability turnaround of the Renewable Energy unit is unlikely to materialize in the next few years, which will eat into cash flow
- The market for Marine Logistics is cyclical and the industry's price level will be under downward pressure after the peak years 2021-2022

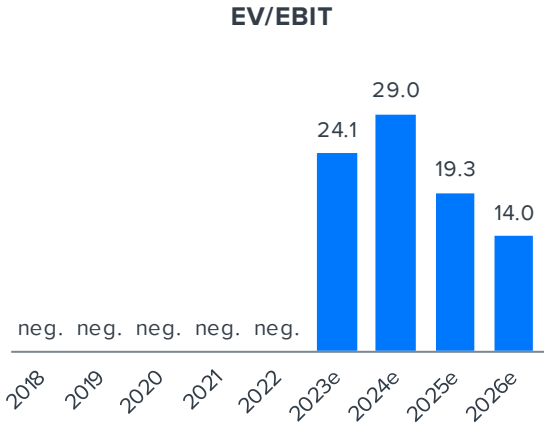
Source: Inderes

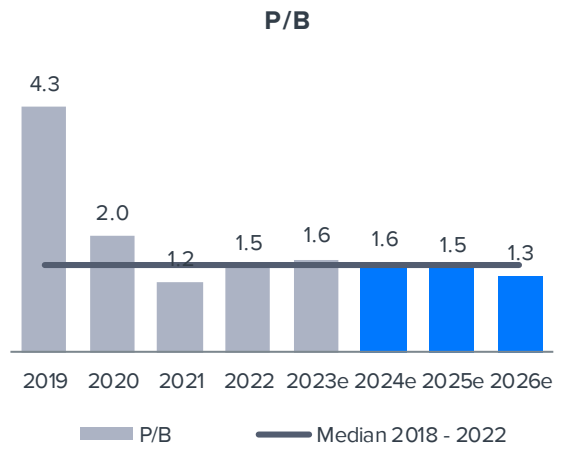
Valuation table

Valuation	2018	2019	2020	2021	2022	2023e	2024e	2025e	2026e
Share price	0.60	0.90	0.15	0.05	0.07	**0.08**	**0.08**	**0.08**	**0.08**
Number of shares, millions	3.53	17.2	62.9	165.2	783.1	**783.1**	**783.1**	**783.1**	**783.1**
Market cap	2.1	16	9.5	8.0	53	**61**	**61**	**61**	**61**
EV	3.9	15	7.6	4.1	70	**77**	**76**	**74**	**71**
P/E (adj.)	neg.	neg.	neg.	neg.	neg.	**31.3**	**38.7**	**21.6**	**14.7**
P/E	neg.	neg.	neg.	neg.	neg.	**31.3**	**38.7**	**21.6**	**14.7**
P/FCF	neg.	neg.	neg.	neg.	neg.	**25.0**	**28.7**	**21.8**	**18.2**
P/B	1.6	4.3	2.0	1.2	1.5	**1.6**	**1.6**	**1.5**	**1.3**
P/S	0.4	4.5	1.9	3.2	6.2	**0.9**	**0.8**	**0.8**	**0.7**
EV/Sales	0.7	4.3	1.5	1.7	8.1	**1.1**	**1.0**	**0.9**	**0.8**
EV/EBITDA	neg.	neg.	neg.	neg.	neg.	**9.0**	**9.4**	**7.8**	**6.5**
EV/EBIT (adj.)	neg.	neg.	neg.	neg.	neg.	**24.1**	**29.0**	**19.3**	**14.0**
Payout ratio (%)	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	**0.0 %**	**0.0 %**	**0.0 %**	**0.0 %**
Dividend yield-%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	**0.0 %**	**0.0 %**	**0.0 %**	**0.0 %**

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**
Safe Bulkers	425	705	4.8	4.3	3.5	3.2	2.2	2.0	3.6	3.2	5.4	10.2	369.0
Eurodry	51	93	40.8	8.5	7.9	4.7	1.7	1.6	11.2	5.9	2.2		0.4
Start Bulk Carriers	2254	3164	8.4	7.2	5.9	5.3	3.7	3.5	8.0	6.1	12.4	16.8	1.1
Kawasaki Kisen Kaisha	6522	6627			7.0	6.7	1.0	1.1	1.3	6.5	10.8	4.2	0.6
Golden Ocean Group	1928	2960		11.1	7.5	7.3	4.5	4.3	9.3	8.7	11.2	14.5	1.0
Savosolar (Inderes)	**61**	**77**	**24.1**	**29.0**	**9.0**	**9.4**	**1.1**	**1.0**	**31.3**	**38.7**	**0.0**	**0.0**	**1.6**
Average			**18.0**	**7.8**	**6.4**	**5.4**	**2.6**	**2.5**	**6.7**	**6.1**	**8.4**	**11.4**	**74.4**
Median			**8.4**	**7.9**	**7.0**	**5.3**	**2.2**	**2.0**	**8.0**	**6.1**	**10.8**	**12.3**	**1.0**
Diff-% to median			***186%***	***269%***	***28%***	***78%***	***-52%***	***-50%***	***292%***	***539%***	***-100%***	***-100%***	***63%***

Source: Refinitiv / Inderes

The peer group is presented to support the valuation of Meriaura.

Income statement

Income statement	2020	2021	2022	Q1'23e	Q2'23e	Q3'23e	Q4'23e	2023e	2024e	2025e	2026e
Revenue	**5.1**	**2.5**	**8.6**	**18.1**	**17.8**	**17.6**	**18.5**	**72.0**	**74.6**	**80.7**	**88.8**
Renewable Energy	0.0	0.0	3.8	0.9	1.4	1.3	1.4	4.9	7.4	11.1	16.6
Marine Logistics	0.0	0.0	4.9	17.2	16.4	16.4	17.1	67.1	67.3	69.7	72.2
EBITDA	**-3.4**	**-4.2**	**-3.6**	**2.3**	**2.4**	**2.1**	**1.6**	**8.5**	**8.0**	**9.5**	**11.0**
Depreciation	-0.5	-0.4	-0.2	-1.3	-1.4	-1.4	-1.2	-5.3	-5.4	-5.7	-5.9
EBIT (excl. NRI)	**-3.9**	**-4.6**	**-3.8**	**1.0**	**1.0**	**0.7**	**0.5**	**3.2**	**2.6**	**3.8**	**5.1**
EBIT	**-3.9**	**-4.6**	**-3.8**	**1.0**	**1.0**	**0.7**	**0.5**	**3.2**	**2.6**	**3.8**	**5.1**
Renewable Energy			-4.3	-1.1	-1.0	-0.8	-1.0	-3.9	-3.4	-2.5	-1.4
Marine Logistics			0.5	2.1	2.0	1.5	1.4	7.1	6.1	6.3	6.5
Net financial items	-1.1	-1.2	-0.3	-0.3	-0.3	-0.3	-0.3	-1.2	-1.0	-0.9	-0.9
PTP	**-5.0**	**-5.8**	**-4.1**	**0.7**	**0.7**	**0.4**	**0.2**	**2.0**	**1.6**	**2.9**	**4.2**
Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Net earnings	**-5.0**	**-5.8**	**-4.1**	**0.7**	**0.7**	**0.4**	**0.2**	**2.0**	**1.6**	**2.8**	**4.2**
EPS (rep.)	**-0.08**	**-0.03**	**-0.01**	**0.0009**	**0.0009**	**0.0005**	**0.0002**	**0.0025**	**0.0020**	**0.0036**	**0.0053**

Key figures	2020	2021	2022	Q1'23e	Q2'23e	Q3'23e	Q4'23e	2023e	2024e	2025e	2026e
Revenue growth-%	49.8 %	-51.2 %	245.8 %	1150.0 %	########	2100.0 %	224.9 %	734.0 %	3.6 %	8.2 %	9.9 %
Adjusted EBIT growth-%									-18.1 %	46.2 %	33.6 %
EBITDA-%	-66.6 %	-167.2 %	-41.4 %	12.9 %	13.8 %	12.1 %	8.7 %	11.8 %	10.8 %	11.8 %	12.4 %
Adjusted EBIT-%	-76.2 %	-182.4 %	-43.6 %	5.5 %	5.7 %	4.0 %	2.5 %	4.4 %	3.5 %	4.7 %	5.7 %
Net earnings-%	-97.3 %	-231.2 %	-47.1 %	3.8 %	4.0 %	2.2 %	0.9 %	2.7 %	2.1 %	3.5 %	4.7 %

Source: Inderes

Balance sheet

Assets	2021	2022	2023e	2024e	2025e
Non-current assets	**1.4**	**50.6**	**50.9**	**51.1**	**51.9**
Goodwill	0.0	0.0	0.0	0.0	0.0
Intangible assets	0.5	4.1	4.1	4.1	4.1
Tangible assets	0.5	46.5	46.8	47.1	47.8
Associated companies	0.2	0.0	0.0	0.0	0.0
Other investments	0.0	0.0	0.0	0.0	0.0
Other non-current assets	0.2	0.0	0.0	0.0	0.0
Deferred tax assets	0.0	0.0	0.0	0.0	0.0
Current assets	**6.8**	**13.8**	**19.8**	**20.3**	**21.7**
Inventories	1.9	3.4	6.5	6.6	6.9
Other current assets	0.0	0.0	0.0	0.0	0.0
Receivables	0.8	6.6	8.3	8.5	9.1
Cash and equivalents	4.1	3.8	5.0	5.2	5.7
Balance sheet total	**8.2**	**64.4**	**70.7**	**71.4**	**73.6**

Source: Inderes

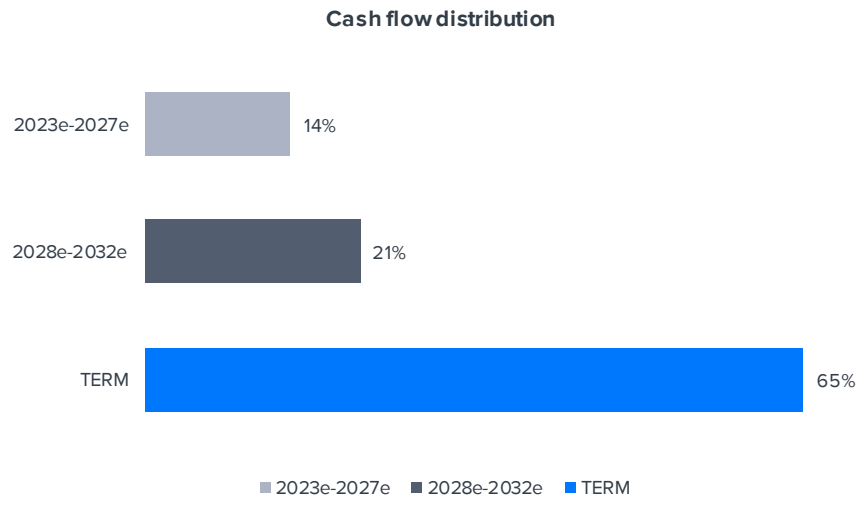
Liabilities & equity	2021	2022	2023e	2024e	2025e
Equity	**6.5**	**35.4**	**37.4**	**39.0**	**41.8**
Share capital	0.5	0.5	0.5	0.5	0.5
Retained earnings	-45.9	-50.0	-48.1	-46.5	-43.6
Hybrid bonds	0.0	0.0	0.0	0.0	0.0
Revaluation reserve	0.0	0.0	0.0	0.0	0.0
Other equity	51.9	84.9	84.9	84.9	84.9
Minorities	0.0	0.0	0.0	0.0	0.0
Non-current liabilities	**0.3**	**17.5**	**10.4**	**10.0**	**9.2**
Deferred tax liabilities	0.0	0.0	0.0	0.0	0.0
Provisions	0.2	0.2	0.2	0.2	0.2
Long term debt	0.1	17.3	10.2	9.8	9.0
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	**1.3**	**11.4**	**22.8**	**22.5**	**22.6**
Short term debt	0.1	3.2	10.2	9.8	9.0
Payables	1.2	8.2	12.6	12.8	13.6
Other current liabilities	0.0	0.0	0.0	0.0	0.0
Balance sheet total	**8.2**	**64.4**	**70.7**	**71.4**	**73.6**

DCF calculation

DCF model	2022	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	TERM
Revenue growth-%	245.8 %	734.0 %	3.6 %	8.2 %	9.9 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	2.5 %	2.5 %
EBIT-%	-43.6 %	4.4 %	3.5 %	4.7 %	5.7 %	6.7 %	6.7 %	6.7 %	6.7 %	6.0 %	6.0 %	6.0 %
EBIT (operating profit)	**-3.8**	**3.2**	**2.6**	**3.8**	**5.1**	**6.2**	**6.6**	**6.9**	**7.2**	**6.8**	**7.0**	
+ Depreciation	0.2	5.3	5.4	5.7	5.9	6.1	6.3	6.5	6.6	6.8	7.0	
- Paid taxes	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
- 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	
+ 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	
- Change in working capital	-0.3	-0.4	-0.2	-0.2	-0.3	-0.1	-0.1	-0.2	0.1	0.1	-0.1	
Operating cash flow	**-3.8**	**8.0**	**7.8**	**9.3**	**10.6**	**12.1**	**12.6**	**13.1**	**13.8**	**13.6**	**13.8**	
+ 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	
- Gross CAPEX	-49.5	-5.6	-5.7	-6.4	-7.3	-7.5	-7.6	-7.8	-8.0	-8.2	-7.3	
Free operating cash flow	**-53.4**	**2.5**	**2.1**	**2.8**	**3.4**	**4.7**	**5.0**	**5.3**	**5.8**	**5.3**	**6.5**	
+/- Other	36.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FCFF	-16.9	2.5	2.1	2.8	3.4	4.7	5.0	5.3	5.8	5.3	6.5	101
Discounted FCFF		**2.3**	**1.8**	**2.2**	**2.4**	**3.1**	**3.0**	**2.9**	**2.9**	**2.5**	**2.8**	**43.1**
Sum of FCFF present value		69.0	66.7	64.9	62.7	60.3	57.2	54.2	51.3	48.4	45.9	43.1
Enterprise value DCF		**69.0**										
- Interesting bearing debt		-20.5										
+ Cash and cash equivalents		3.8										
-Minorities		0.0										
-Dividend/capital return		0.0										
Equity value DCF		**52.3**										
Equity value DCF per share		**0.067**										

Wacc	
Tax-% (WACC)	20.0 %
Target debt ratio (D/(D+E)	10.0 %
Cost of debt	5.0 %
Equity Beta	1.50
Market risk premium	4.75%
Liquidity premium	0.00%
Risk free interest rate	2.5 %
Cost of equity	**9.6 %**
Weighted average cost of capital (WACC)	**9.1 %**

Source: Inderes



Summary

Income statement	2020	2021	2022	2023e	2024e
Revenue	5.1	2.5	8.6	**72.0**	**74.6**
EBITDA	-3.4	-4.2	-3.6	**8.5**	**8.0**
EBIT	-3.9	-4.6	-3.8	**3.2**	**2.6**
PTP	-5.0	-5.8	-4.1	**2.0**	**1.6**
Net Income	-5.0	-5.8	-4.1	**2.0**	**1.6**
Extraordinary items	0.0	0.0	0.0	**0.0**	**0.0**

Balance sheet	2020	2021	2022	2023e	2024e
Balance sheet total	7.0	8.2	64.4	**70.7**	**71.4**
Equity capital	4.7	6.5	35.4	**37.4**	**39.0**
Goodwill	0.0	0.0	0.0	**0.0**	**0.0**
Net debt	-2.0	-3.8	16.7	**15.4**	**14.3**

Cash flow	2020	2021	2022	2023e	2024e
EBITDA	-3.4	-4.2	-3.6	**8.5**	**8.0**
Change in working capital	0.3	-0.5	-0.3	**-0.4**	**-0.2**
Operating cash flow	-3.2	-4.7	-3.8	**8.0**	**7.8**
CAPEX	-0.7	0.2	-49.5	**-5.6**	**-5.7**
Free cash flow	-3.9	-4.5	-16.9	**2.5**	**2.1**

Per share data	2020	2021	2022	2023e	2024e
EPS (reported)	-0.08	-0.03	-0.01	**0.00**	**0.00**
EPS (adj.)	-0.08	-0.03	-0.01	**0.00**	**0.00**
OCF / share	-0.05	-0.03	0.00	**0.01**	**0.01**
FCF / share	-0.06	-0.03	-0.02	**0.00**	**0.00**
Book value / share	0.07	0.04	0.05	**0.05**	**0.05**
Dividend / share	0.00	0.00	0.00	**0.00**	**0.00**

Growth and profitability	2020	2021	2022	2023e	2024e
Revenue growth-%	50%	-51%	246%	**734%**	**4%**
EBITDA growth-%	-22%	22%	-14%	**-338%**	**-6%**
EBIT (adj.) growth-%	-22%	17%	-17%	**-185%**	**-18%**
EPS (adj.) growth-%	-80%	-56%	-85%	**-148%**	**-19%**
EBITDA-%	-66.6 %	-167.2 %	-41.4 %	**11.8 %**	**10.8 %**
EBIT (adj.)-%	-76.2 %	-182.4 %	-43.6 %	**4.4 %**	**3.5 %**
EBIT-%	-76.2 %	-182.4 %	-43.6 %	**4.4 %**	**3.5 %**
ROE-%	-120.6 %	-103.4 %	-19.4 %	**5.4 %**	**4.2 %**
ROI-%	-77.7 %	-76.2 %	-12.0 %	**5.6 %**	**4.5 %**
Equity ratio	66.2 %	79.5 %	55.0 %	**52.9 %**	**54.5 %**
Gearing	-41.9 %	-58.8 %	47.2 %	**41.3 %**	**36.7 %**

Valuation multiples	2020	2021	2022	2023e	2024e
EV/S	1.5	1.7	8.1	**1.1**	**1.0**
EV/EBITDA (adj.)	neg.	neg.	neg.	**9.0**	**9.4**
EV/EBIT (adj.)	neg.	neg.	neg.	**24.1**	**29.0**
P/E (adj.)	neg.	neg.	neg.	**31.3**	**38.7**
P/B	2.0	1.2	1.5	**1.6**	**1.6**
Dividend-%	0.0 %	0.0 %	0.0 %	**0.0 %**	**0.0 %**

Source: Inderes

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Buy	The 12-month risk-adjusted expected shareholder return of the share is very attractive
Accumulate	The 12-month risk-adjusted expected shareholder return of the share is attractive
Reduce	The 12-month risk-adjusted expected shareholder return of the share is weak
Sell	The 12-month risk-adjusted expected shareholder return of the share is very weak

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Recommendation history (>12 mo)

Date	Recommendation	Target price	Share price
3/9/2023	Sell	0.06 €	0.08 €

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