

A challenger in the ballast water treatment market

Initiation of Coverage

5 October 2023



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Bawat

BAWAT SS | Circular Economy | Initiation of Coverage | 05 October 2023 | 18:29

A challenger in the ballast water treatment market

The IMO and U.S. Coast Guard require all ships to treat their ballast water by September 2024, creating a EUR 1bn short-term market opportunity for Bawat to provide ship systems to vessels in its priority market. In addition, there is a longer-term addressable market for mobile treatment systems in ports of EUR ~3bn with further upside in the company's Ballast Water Treatment as a Service offering. Bawat has developed a heat-based technology that is IMO certified and offers a 50% lower total cost of ownership and higher compliance compared to established technologies. We estimate >50% sales CAGR towards 2030 and an EBITDA breakeven in '25 even with a conservative market share of 2-3%. We initiate coverage with a fair valuation range between SEK 0.6-4.9 per share, yielding 3-4x upside in our high case scenario, with further upside in a full adoption scenario.

The IMO and U.S. Coast Guard require all ships to treat their ballast water by Sept-24

Ballast water is essential for vessel operations, but also poses environment challenges when discharged into the ocean, leading to the harmful spread of marine organisms. Therefore, the International Maritime Organization (IMO) and U.S. Coast Guard have implemented a convention, requiring 60-70k ships to treat their ballast water from September 2024. Around 20,000 ships have still not installed a treatment system (~8,000 in Bawat's priority market), creating a EUR >1bn retrofit market short term and EUR 200m annually from newbuilds. Additionally, there is a EUR ~3bn market potential for mobile solutions in ports and yards, with further upside through Bawat's Ballast Water as a Service offering.

Capital light business model and a validated technology with strong value propositions

Bawat is a clean tech company offering IMO certified ballast water treatment systems with ~50% lower total cost of ownership compared to established competing technologies. The pasteurisation technology has proven to be 10-25x more efficient than required, in contrast to established

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Buy
Hold
Sell

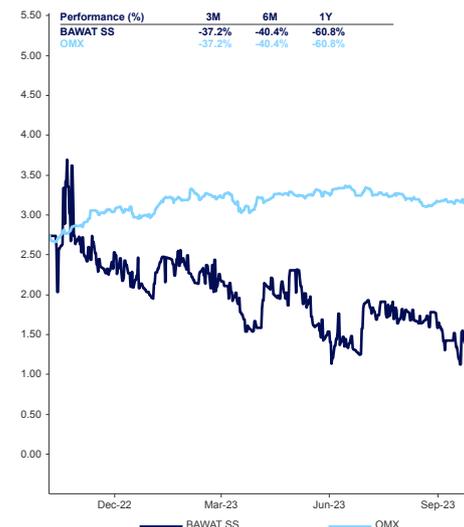
Financials and estimates changes

Target **NA**

Key Figures (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Revenue	15.9	19.5	61.0	124.0
EBITDA	(28.2)	(23.2)	(19.9)	0.1
EBIT	(37.3)	(30.0)	(23.2)	(2.9)
EPS	(0.98)	(0.76)	(0.65)	(0.29)
Adj. EBITDA	(28.2)	(23.2)	(19.9)	0.1
Adj. EBITDA margin (%)	(177.7)	(119.4)	(32.7)	0.1
Adj. EPS	0.00	0.00	0.00	0.00
Revenue growth (%)	48.0	22.6	213.7	103.3
EPS growth (%)	(5.7)	(23.1)	(14.6)	(54.4)
Dividend yield (%)	0.0	0.0	0.0	0.0
Net interest bearing debt	24.7	45.3	78.0	92.8
ROE (%)	(5,811.5)	4,670.6	121.6	29.4
ROACE (%)	(110.6)	(87.7)	(67.5)	(8.4)
FCFF yield (%)	(29.5)	(19.2)	(16.0)	(1.6)
EV / Sales (x)	5.5	5.5	2.3	1.3
EV / EBIT (x)	(2.3)	(3.6)	(6.0)	(54.4)
P/E (x)	(1.1)	(1.5)	(1.7)	(3.8)
EV	87.6	107.7	140.4	155.2

Highlights	
Recommendation	Not Rated
Target Price	NA
Share Price	SEK 1.13
Market cap (SEKm)	58
Enterprise Value (SEKm)	108
Number of shares (m)	51

12 months share price performance:



technologies, where studies have shown non-compliance in 25-30% of cases. Bawat also offers containerised mobile systems suitable for ports and shipyards, enabling ships without onboard treatment systems to comply with IMO regulations. Bawat designs and engineers ballast water treatment systems and holds no inventory or production facility, which makes the business model scalable and capital light.

We estimate a sales CAGR > 50% towards 2030 and EBITDA breakeven in '25

With SEK 20.5m in order intake in H1/23, we believe the company is well on its way to reach its FY-2023 guidance of SEK 40-60m. We expect 2024 to mark the start of significant revenue growth with a CAGR > 50% towards 2030. We estimate the company to reach EBITDA breakeven levels around SEK 120-140m in revenues, depending on the sales mix, which in our base case occurs in 2025. Bawat is a challenger to more established companies such as Wartsila and Alfa Laval, as reflected in our estimates, with an implied market share of below 3% of newbuilds beyond 2024 and < 2% of the addressable market for Mobile systems.

We initiate coverage with a fair value range of SEK 0.6-4.9 per share

Our fair valuation range is based on a combination of multiple and DCF analysis derived from low-, base- and high-case scenarios, yielding a fair valuation range of SEK 0.6-4.9 per share, with SEK 1.7 as the midpoint in our base case, which compares favourably to the current share price of SEK 1.2 (trading at 0.3x invested capital). Consequently, we see the risk/reward profile tilted towards the upside.

Investment case summary: A challenger in a regulatory driven market

All ships must comply with ballast water convention by Sept 2024...

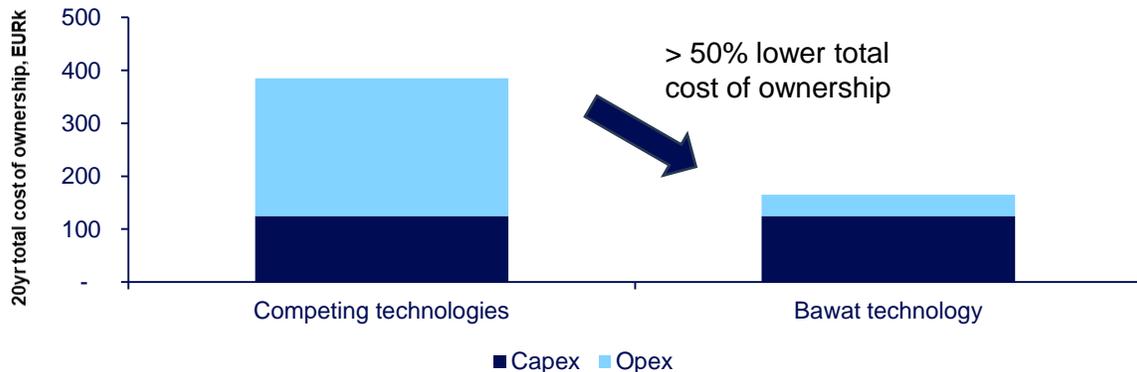
- Applies to all vessels (60-70k ships)
- ~20k ships have still not installed a treatment system
- Regulation also applies to 1,700 newbuilds per year
- The convention requires all ships to treat their ballast water to prevent the spread of marine organisms.
- Fines will be given to vessels that don't comply



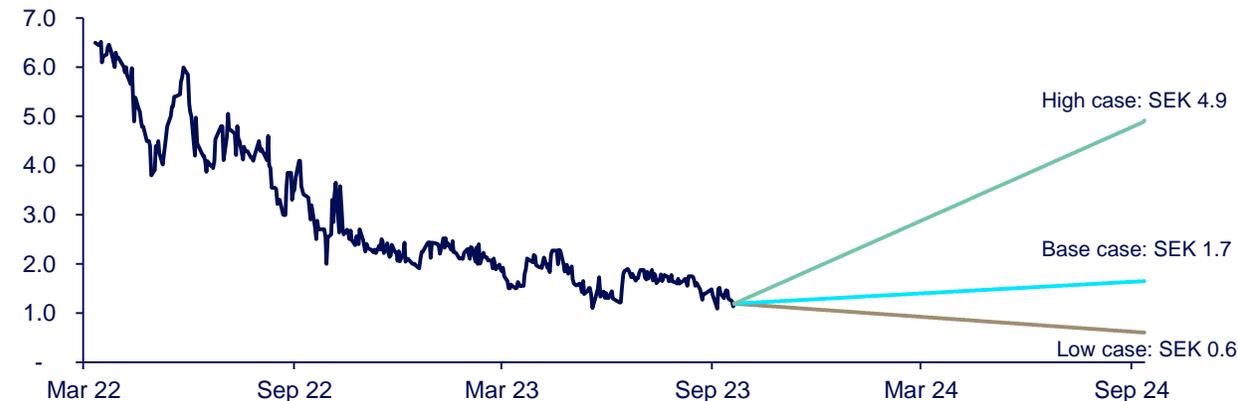
...creating a EUR ~4bn market for both existing vessels, newbuilds and Mobile systems for ports and yards.



Bawat's technology offers 50% lower total cost of ownership than competing technologies



Share price has been hammered since the IPO and we find a 3-4x upside in our high case scenario.



Bawat: Maritime green tech company with market ready solutions certified by the IMO

Offering Ship Systems, containerised Mobile Units and Ballast Water treatment as a Service



Capital light business model

- Bawat engineers and designs systems from standard equipment.
- No production facilities or inventory, lowering working capital.
- Revenues from sale of systems and aftermarket services.
- 20-40% gross margins, dependent on sales mix.
- High projected cash conversion.

Only heat-based solution on the market with the lowest opex

- Type approval from both the IMO and U.S. Coast Guard
- Works in all waters, independent on salinity and temperature
- Lowest total cost of ownership on the market
- The system fits most ship types
- Only company offering containerised mobile systems for ports
- Scandinavian shipowners owns 12%, industrial stamp of approval

Partnership agreements acting as sales agents and JV partners

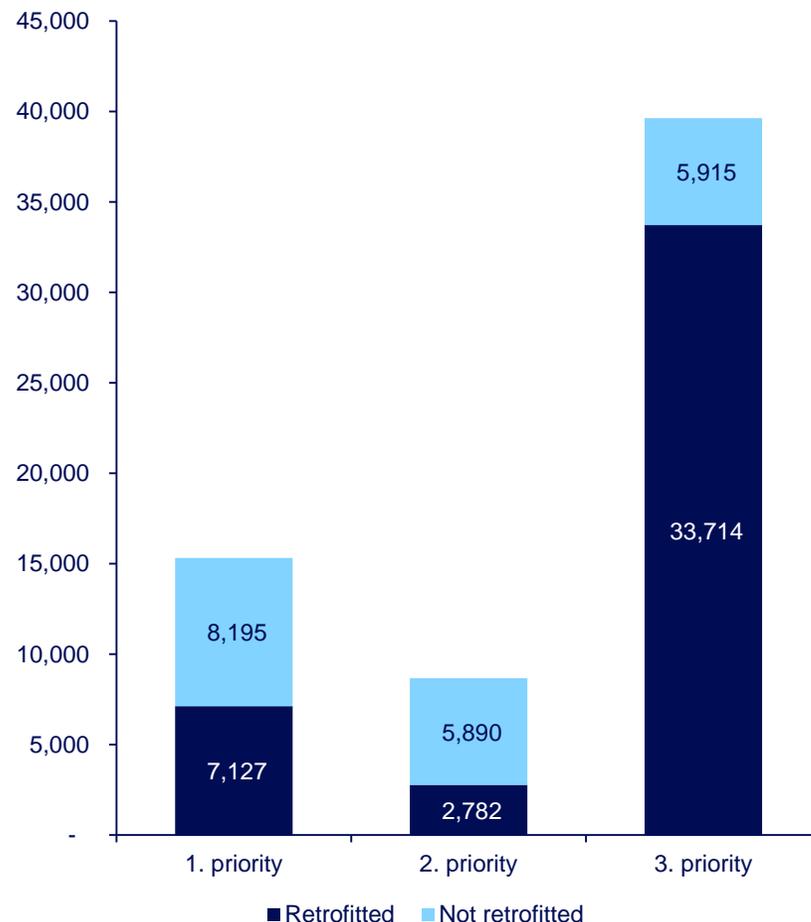
- **Damen Shipyards:** Operates > 35 shipyards, delivered 175 newbuilds in 2022. Damen will promote Bawat technology and created a JV on Mobile systems.
- **Green Swan Partners:** Green venture capital company, financing partner for the Ballast Water Treatment as a Service offering called Freedom Ballast.
- **Global sales agents:** Bawat's sales representatives cover the main maritime markets.

We estimate a market potential of EUR ~4bn from ship and mobile systems

Comments

- **Retrofit market:** ~8,000 ships in Bawat's priority market have not installed BWMS, implying an EUR ~1bn opportunity.
- **Default systems add upside:** Non-compliance among 25-30% of established systems could increase priority market for retrofits by EUR ~250m if fleet owners must change their system.
- **Newbuild market:** An avg of 1,700 ships are built per year, creating a EUR > 200m market per year.
- **Mobile systems:** There are 800 large ports and 300 yards globally. Based on a reasonable assumption of 5 Mobile units per port and 2 units per yard, the addressable market is EUR ~3bn. Bawat's BaaS business adds upside to this figure.

> 8,000 ships in priority market have not retrofitted, creating a...



...EUR 1bn short-term demand + EUR ~200m PA from newbuilds

Market/segment	Existing ships (priority 1 market)	Newbuilds
Number of vessels	~8,000	1,700 per year
Price per treatment system	EUR 125k	EUR 125K
Addressable market	EUR ~1bn	EUR ~200m per year

800 ports and 300 yards implies EUR ~3bn addressable market

Market/segment	Ports	Yards	Sum
Number of ports/yards	800	300	1,100
Mobile systems per port/yards, avg	5	2	
Price per mobile system	EUR 600k	EUR 600k	
Addressable market	EUR ~2.4bn	EUR 0.4bn	EUR 2.8bn

The global shipping fleet continues to grow as global trade increases

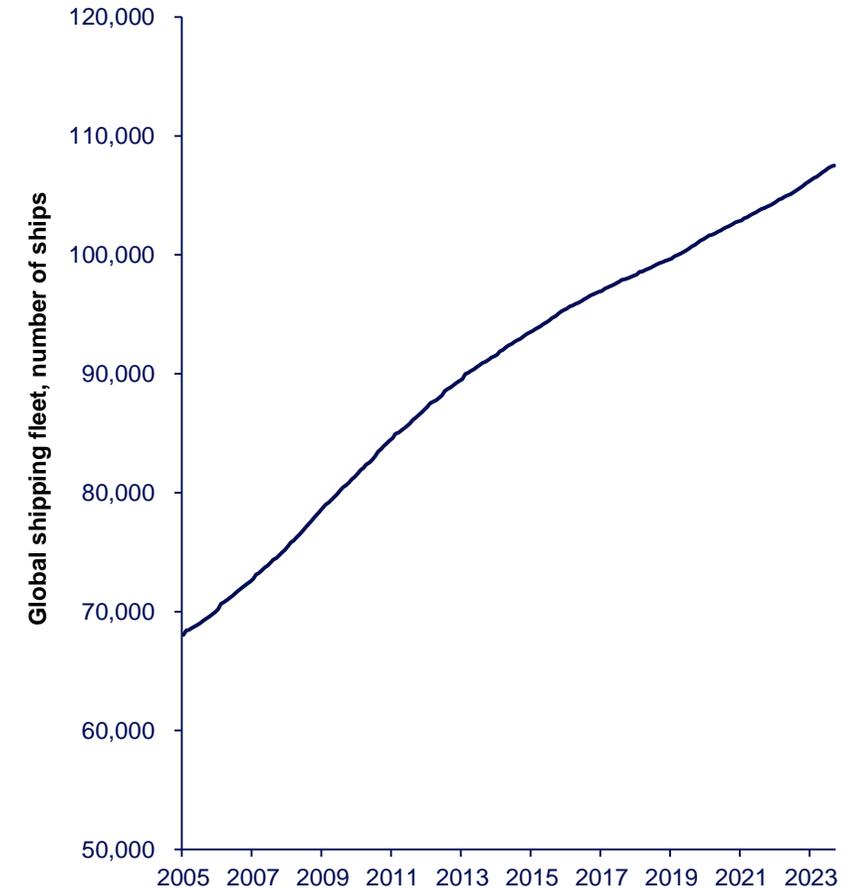
Comments

- **Fleet growth DWT:** The global shipping fleet has grown by an avg. of 3.3% measured in dead weight tonnes in the last 10 years. The highest growth was in 2011 with 9.2%, while the low point was in 2018 at 2.7%.
- **Number of ships:** The total number of ships on the water has grown by 58% since 2005, with no years of negative growth.
- **Key drivers for fleet growth:** Fleet growth is primarily driven by economic growth and technology advances, leading to increased trade volume, which increases the demand for ships.

The global shipping fleet has grown 3.3% on average in the last 10 years

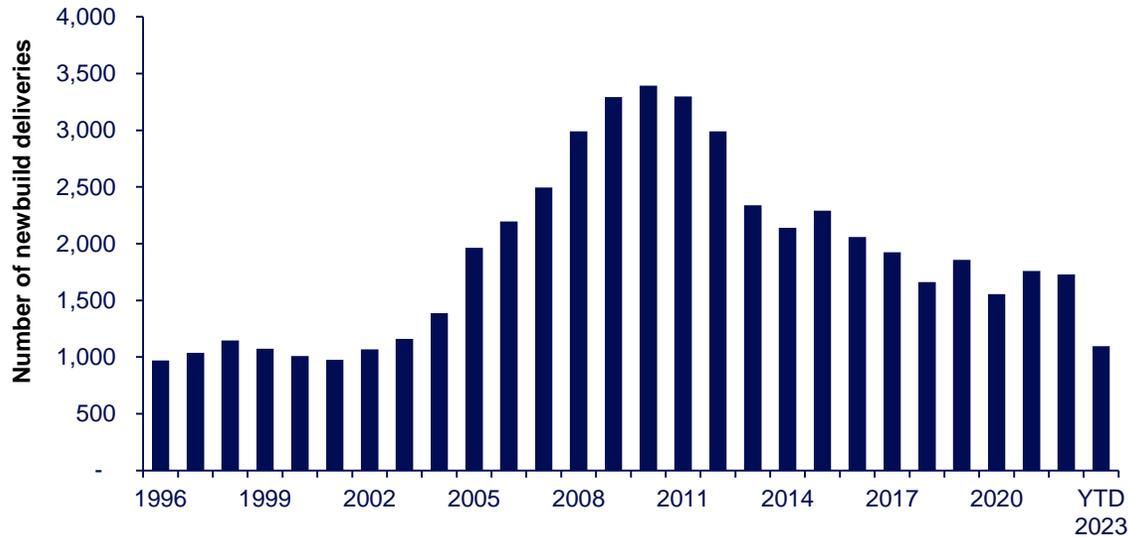


Number of ships on the water has grown ~60% since 2005



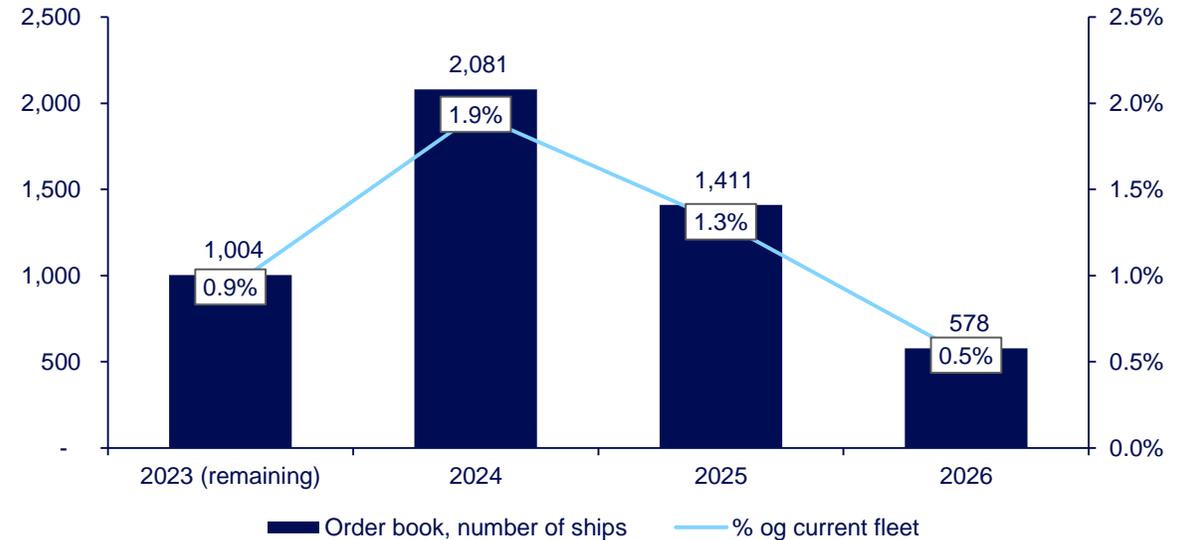
Continuous fleet growth adds demand for newbuilds and ballast water treatment services

Avg. newbuild deliveries of ~1,700 per year since 2018



- **Historical newbuilds:** 5yr avg. of ~1,700, 10yr avg. of ~1,900 and 20yr avg. of 2,200 ships.
- **Reasons for lower orderbooks in recent years:** Rising newbuild prices and uncertainties around future technology choices have dampened newbuild orders in recent years.
- **Scrapping leads newbuild orders:** Even in a scenario with flat fleet growth, (which is highly unlikely), newbuild orders are needed to replace old ships sent to the scrapyards (avg. scrapping age 25-30 years).

>2,000 ships scheduled for delivery in 2024, supportive for growth beyond the retrofit market



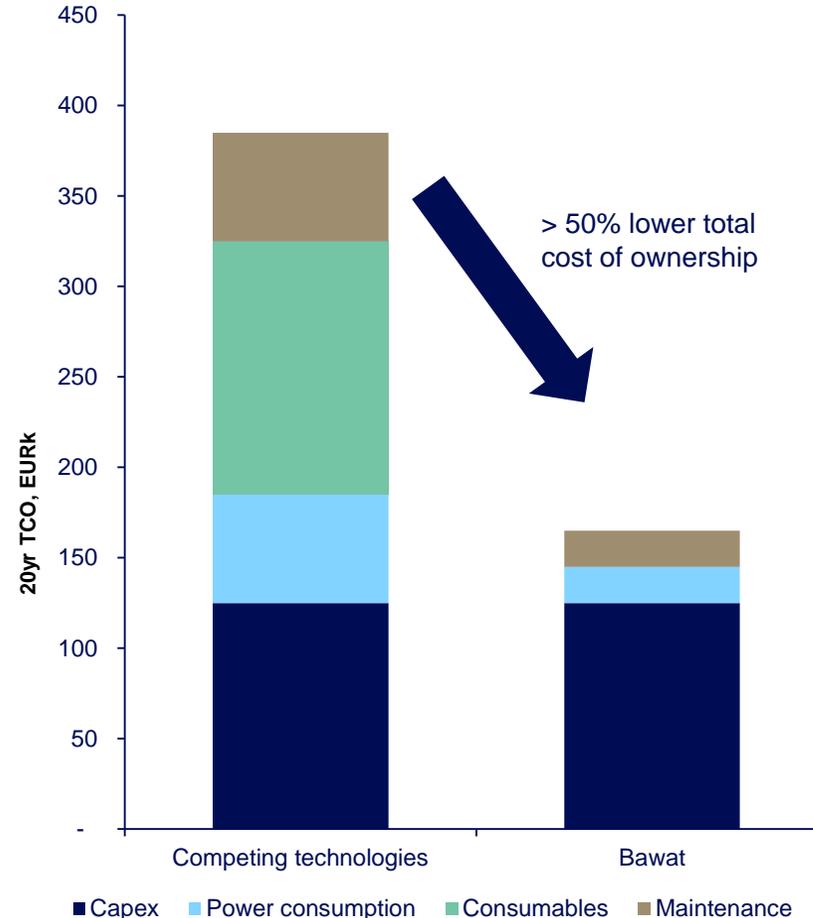
- **2024 orderbook at its highest in 10 years:** >2,000 ships scheduled for delivery in 2024, which is a 10-year high, supportive for ballast water treatment providers such as Bawat.
- **High visibility 2 years forward:** It takes ~2 years to build a ship, and consequently the order book beyond 2025 is not that relevant at this point in time.

Bawat's technology: Strong value proposition for customers with lower cost of ownership and highest compliance

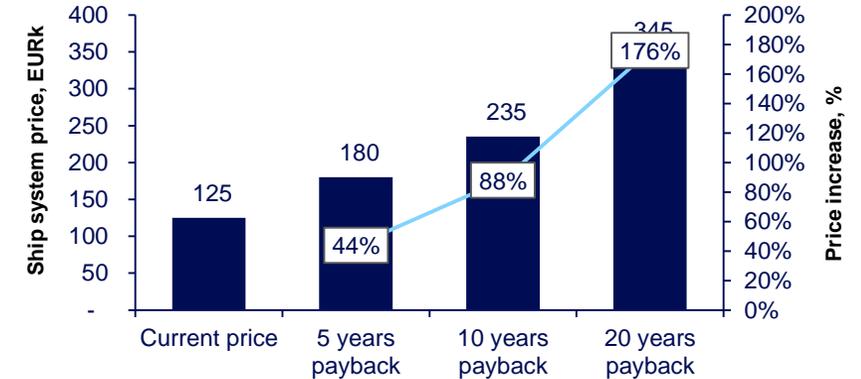
Comments

- Lower cost of ownership:** Bawat's technology offers > 50% lower cost of ownership due to significantly lower opex. Bawat utilises excess heat from the engine, which lowers the energy cost. Further, it does not require costly consumables such as filters and chemicals, also leading to lower maintenance need.
- Pricing power:** If Bawat's technology is adopted on a large scale, we estimate that it could increase Ship System prices by > 40% and still be competitive based on 5 years payback on the additional capex for the customers.
- Best in class compliance:** Bawat's treatment system is 100% compliant vs 70-75% for competing systems. Default systems add further upside to the retrofit market.

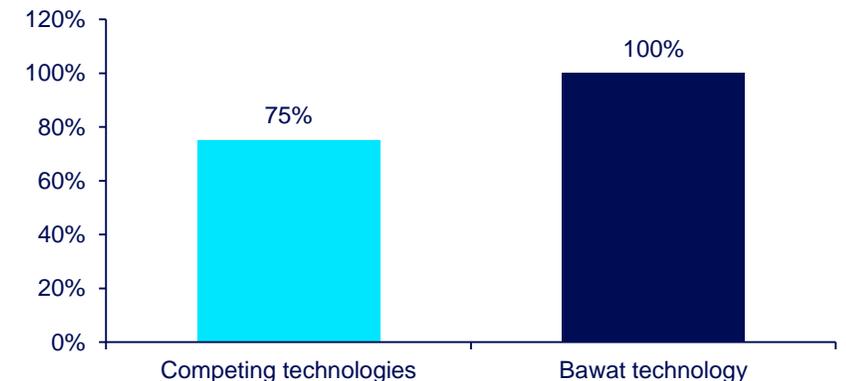
Bawat's offers >50% reduction in total cost compared to competing technologies...



...implying that it could increase Ship System prices > 40% and still be competitive



Existing technologies has shown non-compliance in 25-30% of cases



We estimate > 50% sales CAGR towards 2030 and EBITDA breakeven in 2025 in base case

• Base case scenario:

- I. **Revenues:** Implies 2.7% avg. market share within Ship Systems and 1.7% of addressable market for Mobile Systems (50% going into the BaaS offering)
- II. **EBITDA:** Breakeven in 2025 and SEK 79m in 2030, implying a steady state EBITDA margin of 20%.

• High case:

- I. **Revenues:** Implies 4% avg. market share within Ship Systems and 2.2% of addressable market for Mobile Systems (60% going into the BaaS offering).
- II. **EBITDA:** Breakeven in 2025 and SEK 126m in 2030, implying a steady state EBITDA margin of 23%.

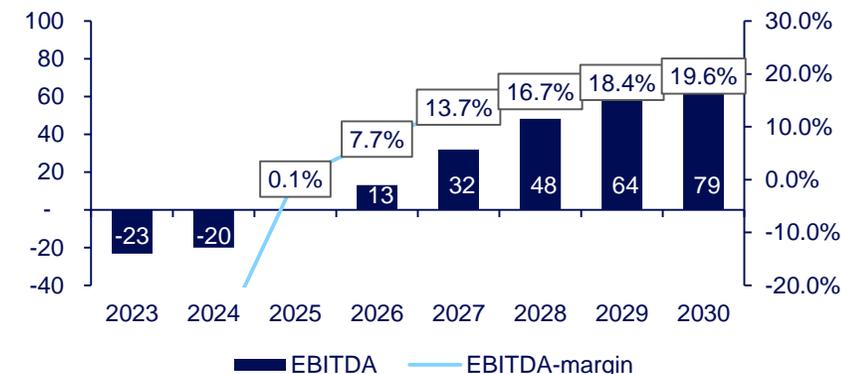
• Low case:

- I. **Revenues:** Implies 2.5% avg. market share within Ship Systems and 1.3% of addressable market for Mobile Systems (40% going into the BaaS offering).
- II. **EBITDA:** Breakeven in 2026 and SEK 48m in 2030, implying a steady state EBITDA margin of 16%.

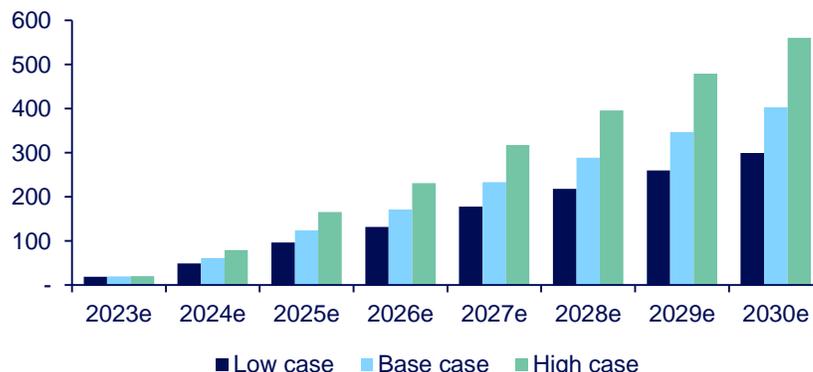
Revenues in base case scenario, SEKm



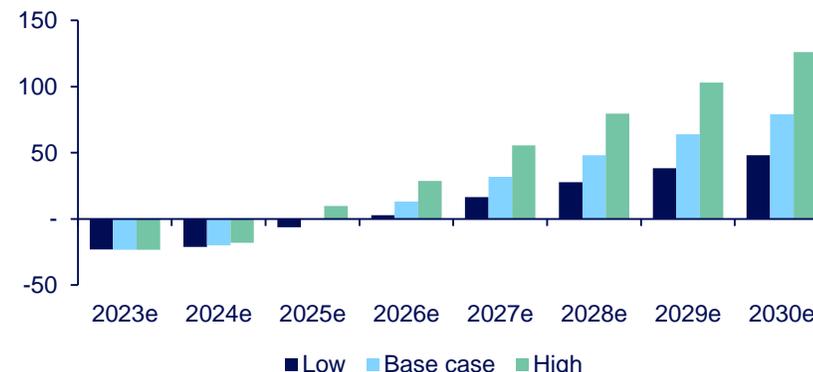
Base case EBITDA development, SEKm



Revenue scenario analysis, SEKm



EBITDA scenario analysis, SEKm

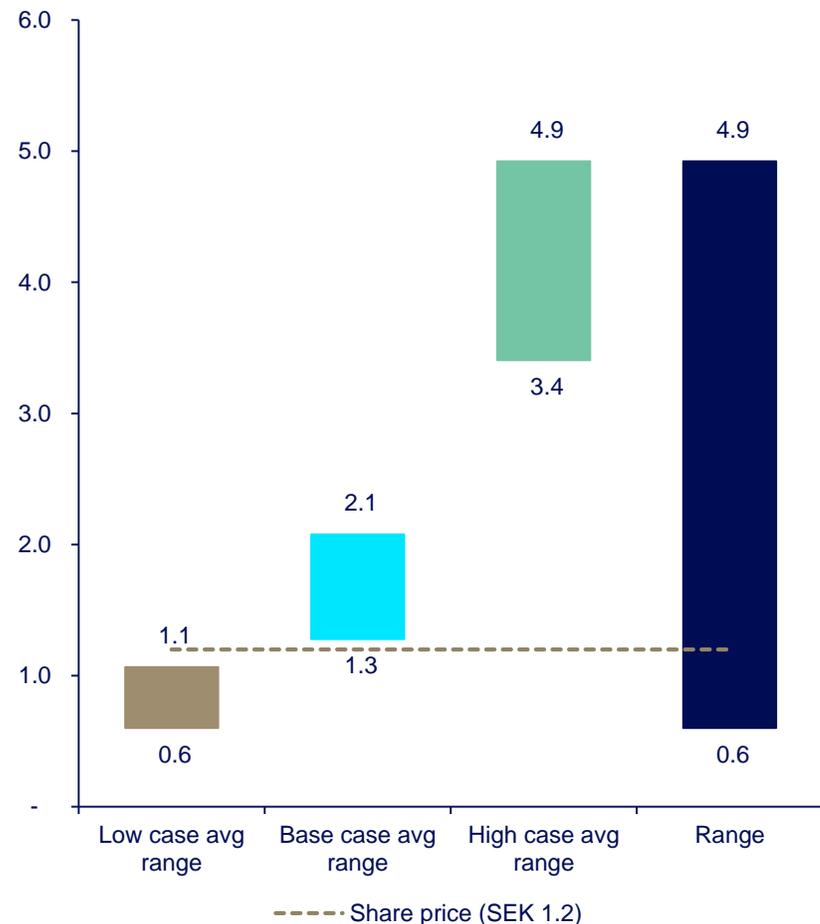


We initiate coverage with a fair value range of SEK 0.6-4.9 per share and view the risk/reward profile tilted towards the upside.

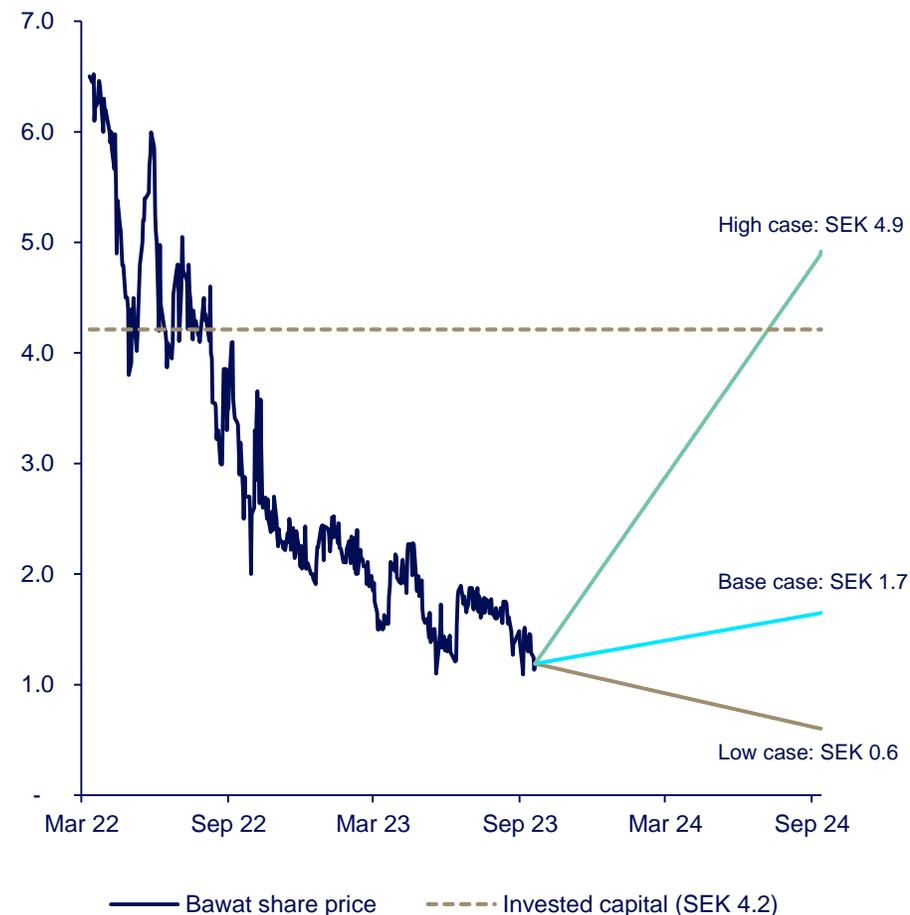
Comments

- **Valuation range SEK 0.6-4.9:** Our fair range is based on a combination of multiple and DCF analysis derived from a low-, base- and high-case scenarios, yielding a fair valuation range of SEK 0.6-4.9 per share, with SEK 1.7 as the midpoint in our base case.
- **Trading at depressed levels:** Our range compares favourably to the current share price of SEK 1.2 (trading at < 0.3x invested capital).
- **Upside potential beyond our range:** Even our high case scenario may be too conservative in a full adoption scenario with a higher market share.
- **Consequently, we see the risk/reward profile tilted towards the upside.**

ARCe fair valuation range, SEK per share



Share price performance and estimated value range (trading at 0.3x invested capital)



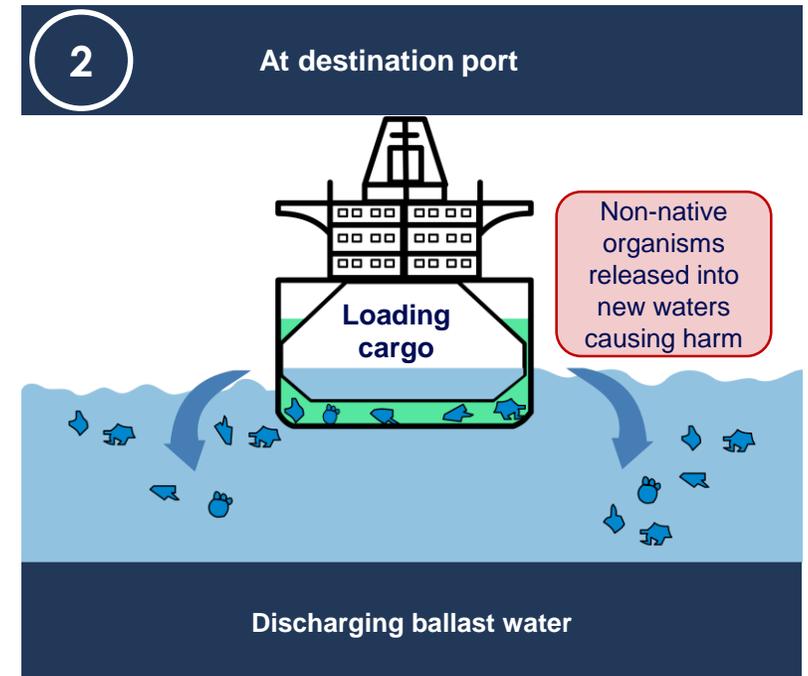
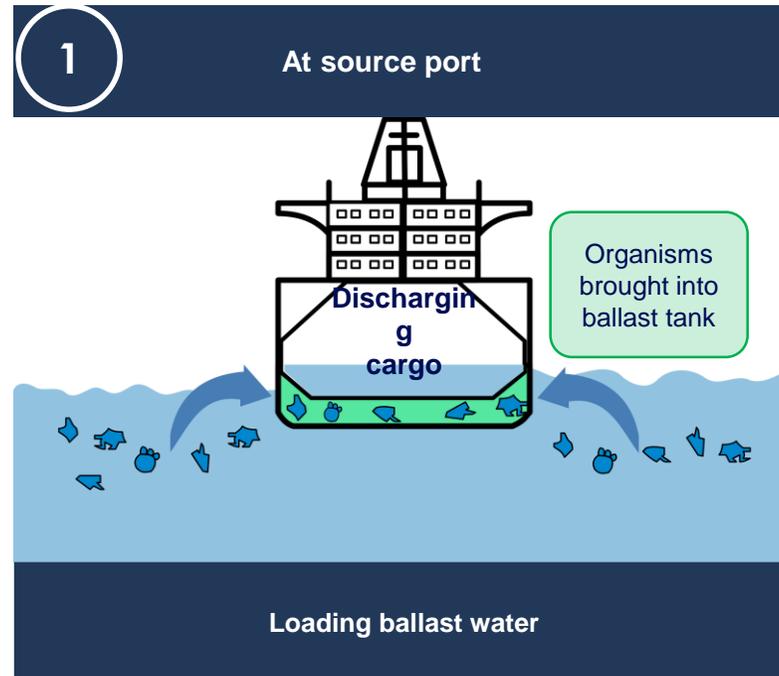
The Ballast Water Management Convention

What is ballast water and why do ships need treatment systems

Comments

- Larger vessels use ballast water to stabilize them at sea when sailing without cargo or partially laden.
- Ballast water is essential for vessel operations, but also poses environment challenges when ballast water is dumped into the ocean, as it leads to the spread of marine organisms.
- The transferred species may survive and establish in the new environment, disrupting the marine ecosystem.
- Therefore, the International Maritime Organisation (IMO) has implemented a convention forcing all ships to treat their ballast water.

Ballast water is essential for ship operations, but causes challenges to marine ecosystems

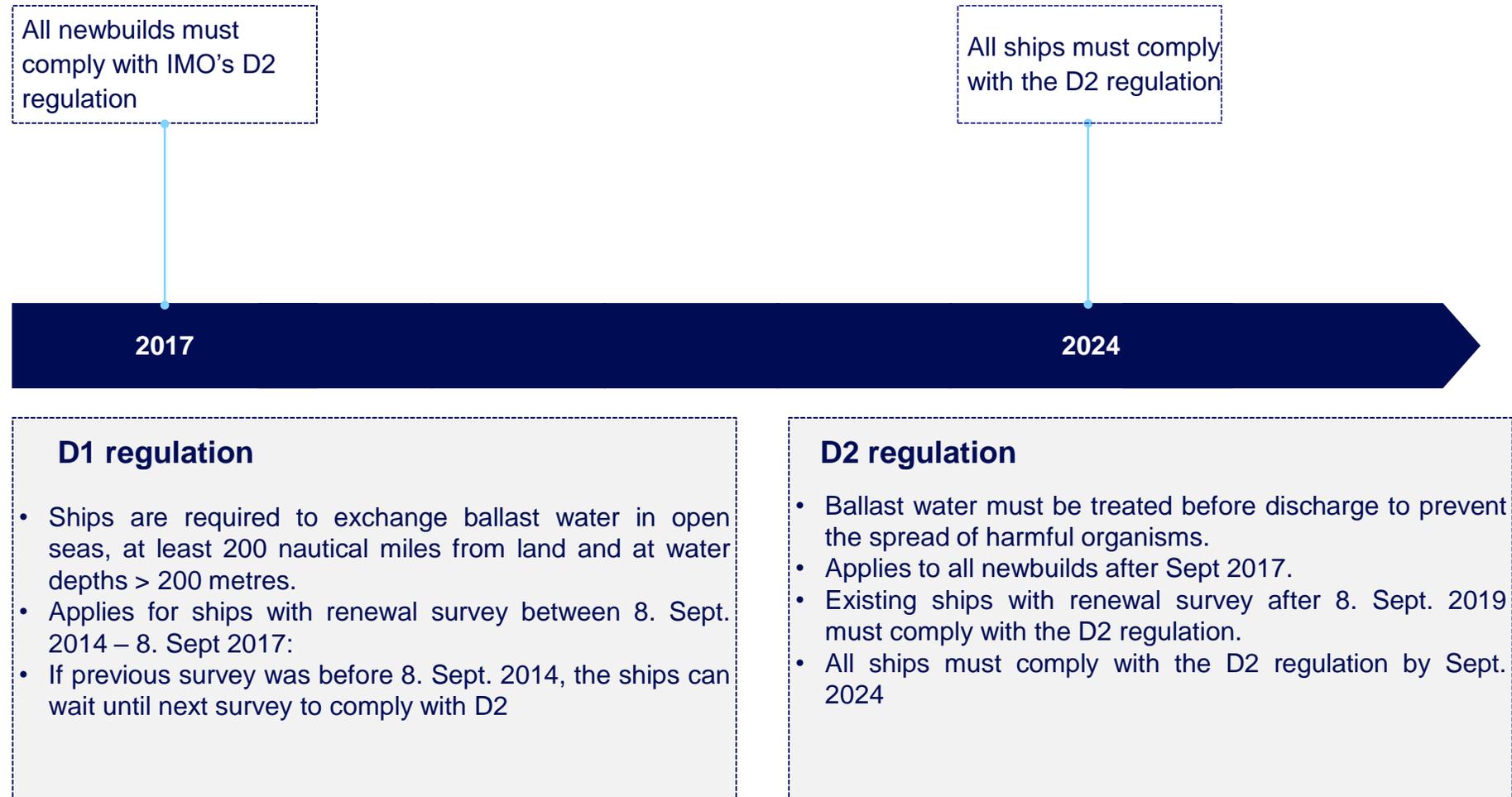


By September 2024, all vessels must be able to treat their ballast water under the IMO regulation

Comments

- The International Maritime Organisation (IMO) and the U.S. Coast Guard has adopted legislation requiring all ships to treat their ballast water by September 2024.
- All existing ships must comply by September 2024.
- Newbuilds must already comply with the standard.
- The regulation in total applies to 60-70k ships, of which ~20,000 ships have not retrofitted and ~8,000 are in Bawat's priority market.

Timeline Ballast Water Management Convention



Non-compliance with the ballast water management convention will lead to fines

Comments

- Vessels that don't treat their ballast water according to the requirements and/or are not able to monitor and sample discharge water with a complete report will be fined by local state authorities.
- Authorized Port Officers may inspect the ballast water record book on board the vessel to determine the status of exchange completed.
- ~20,000 existing vessels have still not installed ballast water treatment systems, one year before all ships must comply.
- Fines given so far range between USD ~50-200k. In comparison, a Bawat system costs USD 125k.
- **Consequently, not complying is not an option.**

Non-compliant vessels have already been fined



USCG's Joseph Gerczak at Pago Pago: Clean Water Act extends to American Samoa (source: USCG)

Vessels fined for US Clean Water Act violations

19 Jul 2023 by Craig Jallal

The companies associated with two MR tankers, two container ships and a dry bulk carrier have been fined following claims of violations of the Clean Water Act



Two shipping companies, Swire Shipping and MMS, have come to an agreement with the US Environmental Protection Agency (EPA) to settle claims of breaching the agency's Vessel General Permit, which falls under the Clean Water Act.

The settlements involve severe penalties imposed upon the companies for their failure to conform to specific regulations related to ballast water discharge, inspection procedures, monitoring protocols and timely reporting.

In one of the settlements, Swire Shipping, a privately owned entity based in Singapore, has agreed to pay US\$137,000 in penalties in relation to its vessels, notably 2015-built, 1,600-TEU container ship *Papuan Chief*, a sister vessel *New Guinea Chief*, and 2015-built, 39,999-dwt Handysize dry bulk carrier *Lintan*.

The screenshot shows the EPA website header with the logo and navigation links. Below the header is a search bar and a 'News Releases: Region 09' link. The main headline reads 'EPA Settles with World's Third Largest Shipping Container Company over Claims of Clean Water Act Violations'. The date is August 3, 2023. Contact information for Michael Brogan is provided. A short summary of the settlement is visible, mentioning CMA CGM and a \$165,000 penalty.

EPA Settles Ballast Water Violation Claims

June 29, 2023



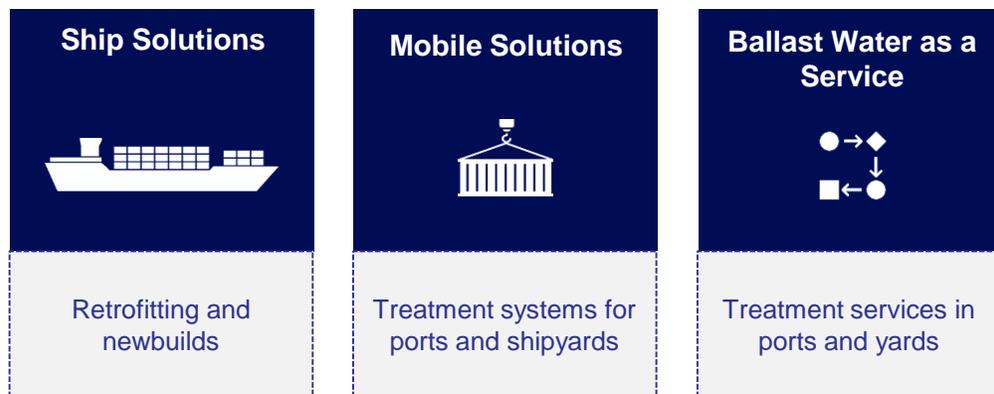
The U.S. Environmental Protection Agency has settled with two shipping companies over claims of violating the Vessel General Permit issued under the Clean Water Act.

Under the terms of the settlements, Swire Shipping will pay \$137,000 in penalties and MMS \$200,000 in penalties for claims of ballast water discharge, inspection, monitoring, and reporting violations.

Brief company and technology overview

Bawat: Maritime green tech company with market ready solutions certified by the IMO

Offering Ship Systems, containerised Mobile Units and Ballast Water treatment as a Service



Capital light business model

- Bawat engineers and designs systems from standard equipment.
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- High projected cash conversion.

Only heat-based solution on the market with the lowest opex

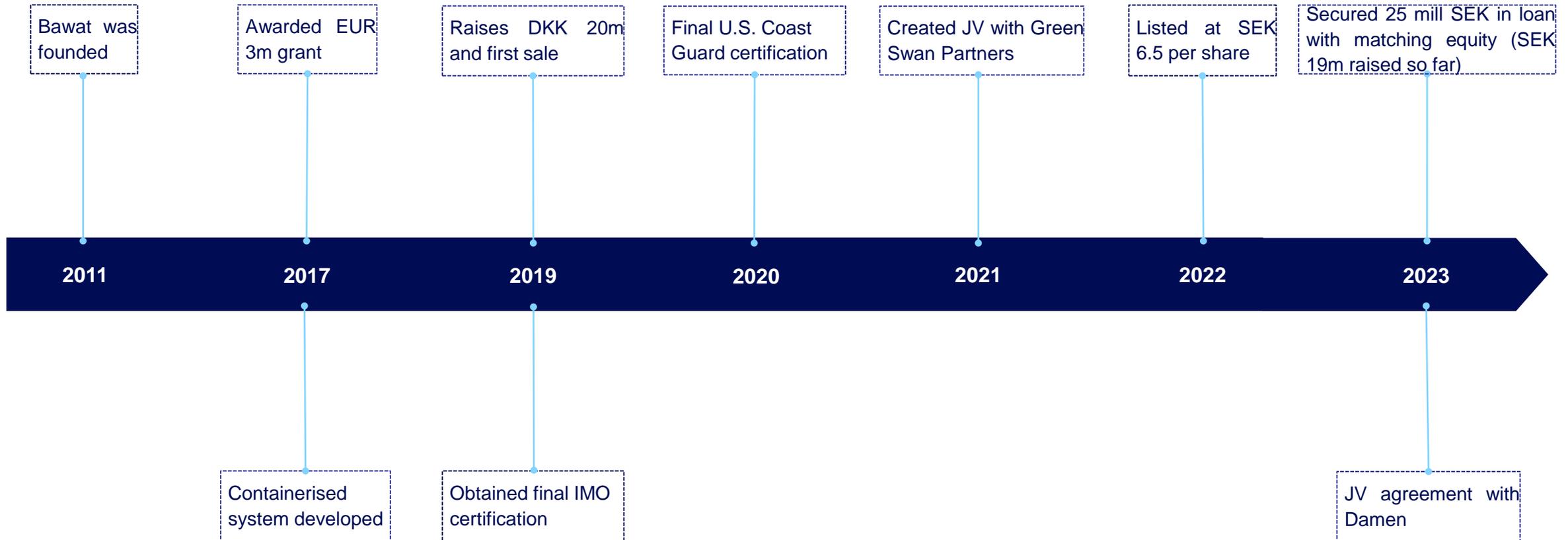
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Partnership agreements acting as sales agents and JV partners

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Company history

Bawat was founded in 2011 and listed on Nasdaq First North Premier Growth in 2022

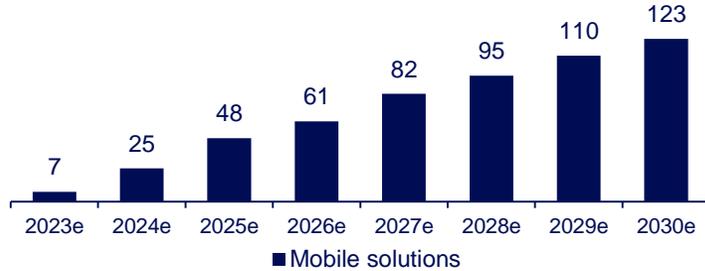
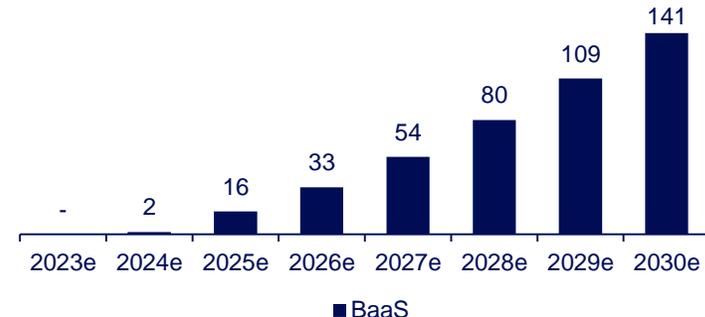


Source: Arctic Securities Research, Bawat

*BaaS: Ballast-Water-Treatment-as-a-Service

*BWMS: Ballast Water Management Systems

Offering both ship systems, containerised mobile systems and treatment as a service

Segment	About	Order value	Gross margins	ARCe revenue per segment, SEKm																		
Ship solution 	<ul style="list-style-type: none"> Direct sale of systems for treatment of the ballast water onboard. Utilises excess heat from engine, reducing operating expenses for the vessel owners. Available for both newbuilds and retrofit. Fits most vessel types, but first priority market is LPGs, heavy lift, containers, feeders. 	<ul style="list-style-type: none"> Company guiding: SEK 1-2m. ARCe: SEK 1.5m. 	<ul style="list-style-type: none"> ARCe 20%. Lower margins than Mobile systems due to higher competition 	 <table border="1"> <caption>ARCe revenue per segment, SEKm - Ship solutions</caption> <thead> <tr> <th>Year</th> <th>Revenue (SEKm)</th> </tr> </thead> <tbody> <tr><td>2023e</td><td>12</td></tr> <tr><td>2024e</td><td>31</td></tr> <tr><td>2025e</td><td>50</td></tr> <tr><td>2026e</td><td>65</td></tr> <tr><td>2027e</td><td>81</td></tr> <tr><td>2028e</td><td>94</td></tr> <tr><td>2029e</td><td>106</td></tr> <tr><td>2030e</td><td>115</td></tr> </tbody> </table>	Year	Revenue (SEKm)	2023e	12	2024e	31	2025e	50	2026e	65	2027e	81	2028e	94	2029e	106	2030e	115
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Mobile solution 	<ul style="list-style-type: none"> Fixed installation, suitable treatment of ballast water in ports, terminals and offshore platforms Enables vessels to avoid fixed installations onboard. Several vessels can be serviced per unit, reducing the shipowners total cost. Can use the energy source available, not linked to an energy system. 	<ul style="list-style-type: none"> Company guiding: SEK 6-10m. ARCe: SEK 7.2m. 	<ul style="list-style-type: none"> ARCe 40%. 	 <table border="1"> <caption>ARCe revenue per segment, SEKm - Mobile solutions</caption> <thead> <tr> <th>Year</th> <th>Revenue (SEKm)</th> </tr> </thead> <tbody> <tr><td>2023e</td><td>7</td></tr> <tr><td>2024e</td><td>25</td></tr> <tr><td>2025e</td><td>48</td></tr> <tr><td>2026e</td><td>61</td></tr> <tr><td>2027e</td><td>82</td></tr> <tr><td>2028e</td><td>95</td></tr> <tr><td>2029e</td><td>110</td></tr> <tr><td>2030e</td><td>123</td></tr> </tbody> </table>	Year	Revenue (SEKm)	2023e	7	2024e	25	2025e	48	2026e	61	2027e	82	2028e	95	2029e	110	2030e	123
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2030e	123																					
BaaS 	<ul style="list-style-type: none"> Ballast water treatment in ports where the customers pay a fee for the treatment. Financed through a JV unit. Enables vessel owners to comply with the IMO regulations without acquiring ballast water treatment systems. Suitable as back-up capacity, failing ship solutions. We argue that the BaaS business could be the most revenue generating segment as it provides ARR which grows year by year in parallel with growth in units deployed. 	<ul style="list-style-type: none"> Upfront payment: SEK 6-10m (ARCe SEK 7.2m). Revenue per treatment: ARCe USD 50K. 	<ul style="list-style-type: none"> ARCe 40% on upfront system and treatment as a service 	 <table border="1"> <caption>ARCe revenue per segment, SEKm - BaaS</caption> <thead> <tr> <th>Year</th> <th>Revenue (SEKm)</th> </tr> </thead> <tbody> <tr><td>2023e</td><td>-</td></tr> <tr><td>2024e</td><td>2</td></tr> <tr><td>2025e</td><td>16</td></tr> <tr><td>2026e</td><td>33</td></tr> <tr><td>2027e</td><td>54</td></tr> <tr><td>2028e</td><td>80</td></tr> <tr><td>2029e</td><td>109</td></tr> <tr><td>2030e</td><td>141</td></tr> </tbody> </table>	Year	Revenue (SEKm)	2023e	-	2024e	2	2025e	16	2026e	33	2027e	54	2028e	80	2029e	109	2030e	141
Year	Revenue (SEKm)																					
2023e	-																					
2024e	2																					
2025e	16																					
2026e	33																					
2027e	54																					
2028e	80																					
2029e	109																					
2030e	141																					

Source: Arctic Securities Research, Bawat

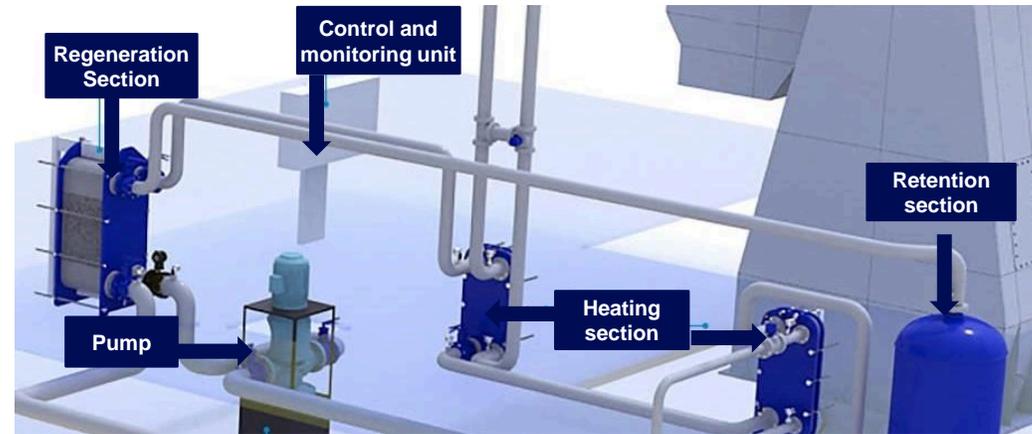
*ARCe revenue per segment: Service revenues is not included in this slide

Bawat's heat technology applies to both ships and Mobile systems

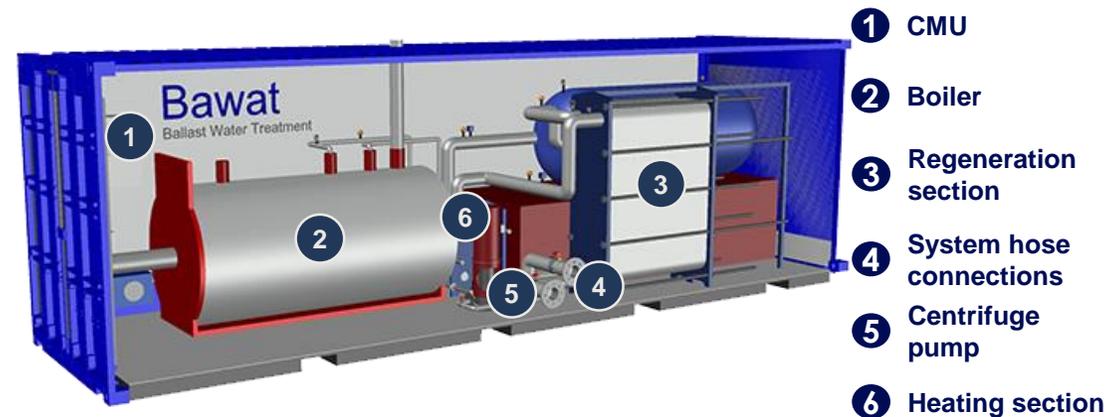
The Bawat process:

- The untreated ballast water is heated to between 64-72° by the heat exchanger, where it is kept in the retention tank for a given time to disinfect the ballast water.
- The heat exchanger utilises excess heat from the engine on Ship Systems or coupled with an available energy source for Mobile Systems.
- Before the heated discharge water is directed into the ballast water tanks or pumped overboard, the residual heat is utilised to heat incoming ballast water, increasing the energy efficiency. The regeneration section also cools down the outgoing water.

Ship System process:



Mobile System process:



Benefits

1. Works in all waters, independent on salinity and temperature.
2. Lowers energy consumption.
3. No use of filters, UV light or chemicals.
4. Easy to operate and maintain.
5. Operational flexibility: The ballast water can either be treated on the intake, during a voyage or in connection with discharge.

The Bawat system is approved by IMO and more efficient against organisms than required

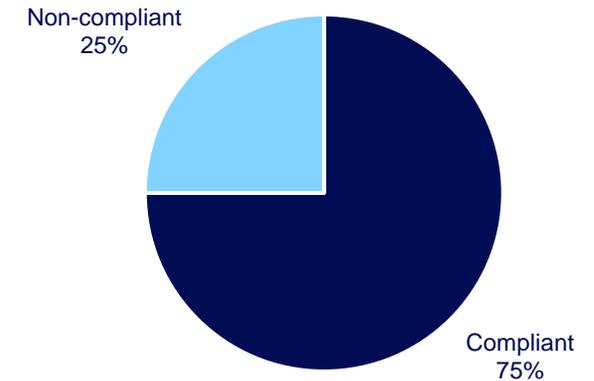
Comments

- **More efficient than required:** Studies has shown that Bawat's heat process are 10-25x more efficient against organisms than required. The pasteurisation (heating) leads to death of all organisms, independent of size.
- **Certified by IMO and the U.S. Coast Guard:** To receive the approval significant development and testing is required with long lead times.
- **Patent protection:** Bawat holds 6 patent families with focus on Port and vessel with patents in phases from published to granted in a multitude of jurisdictions.
- **25-30% non-compliance among competing technologies:** According to IMO documents, more established competing technologies have 25-30% non-compliance.

Bawat's technology is 10-25x more efficient than required...

Test cycle	Pre-treatment		Post-treatment	
	Organisms > 50µm	Organisms 10-50µm	Organisms > 50µm	Organisms 10-50µm
1	81,431	99	0	0.83
2	206,321	992	0	0
3	50,925	302	0	0.33
4	93,907	1,334	0	0
5	155,330	2,181	0	0
6	98,071	329	0	0
Requirements	< 10	< 10	< 10	< 10

...while competing technologies show non-compliance in 25-30% of cases



IMO studies:



Summary of findings and experience gained

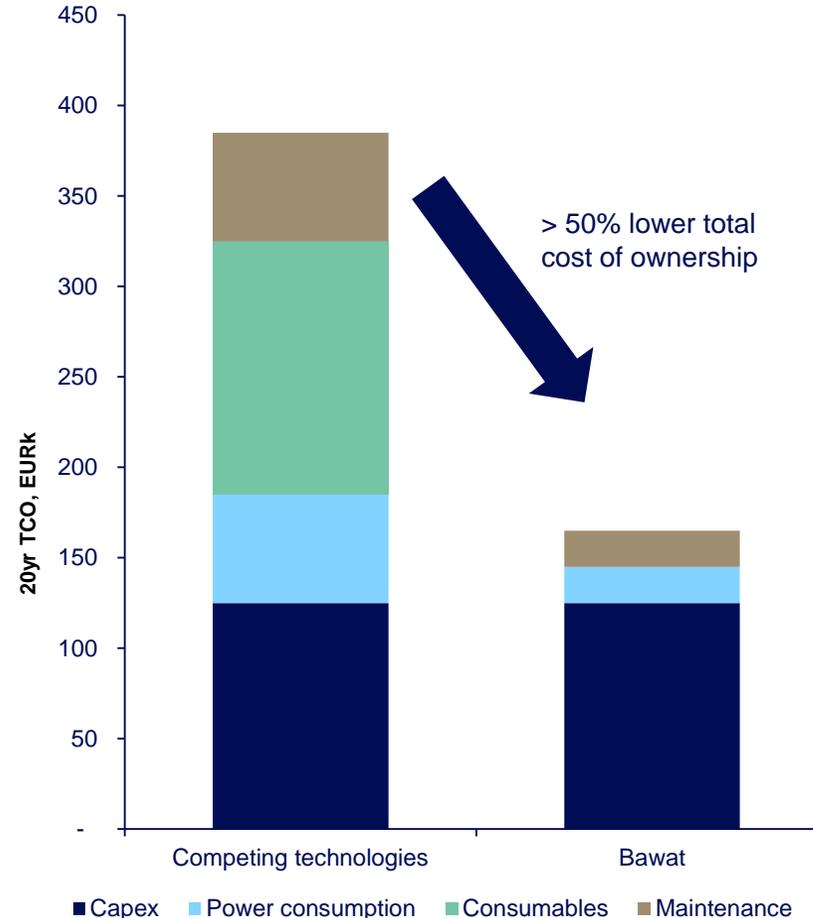
6 All observed non-compliances (33% or 10 out of 31 representative discharges) were found in the largest size class of organisms in the discharge standard ($\geq 50 \mu\text{m}$ in minimum dimension). This outcome indicates that organisms in this size class are more prone than other analyses showed a likelihood of non-compliance. In 67% of the tests, the analyses were stopped after the indicative analyses, and in 25% of the tests, additional detailed analyses were carried out after the indicative tests showed likely non-compliance (Figure 7).

Strong value proposition for customers with lower cost of ownership and highest compliance

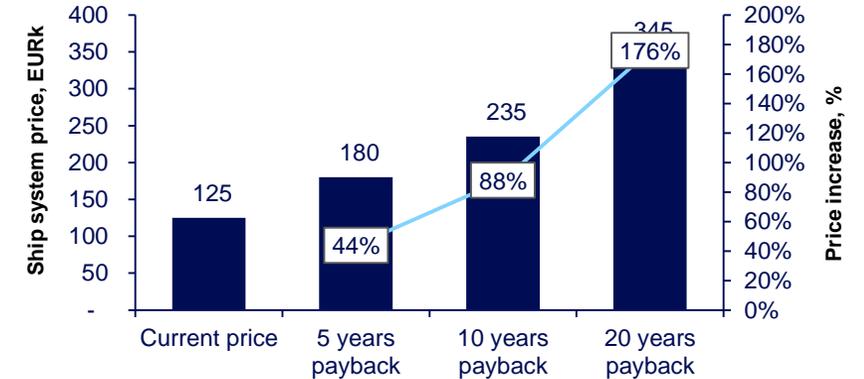
Comments

- **Lower cost of ownership:** Bawat's technology offers > 50% lower cost of ownership due to significantly lower opex. Bawat utilises excess heat from the engine, which lowers the energy cost. Further, it does not require costly consumables such as filters and chemicals, also leading to lower maintenance need.
- **Pricing power:** If Bawat's technology is adopted on a large scale, we estimate that it could increase Ship System prices by > 40% and still be competitive based on 5 years payback on the additional capex for the customers.
- **Best in class compliance:** Bawat's treatment system is 100% compliant vs 70-75% for competing systems. Default systems add further upside to the retrofit market.

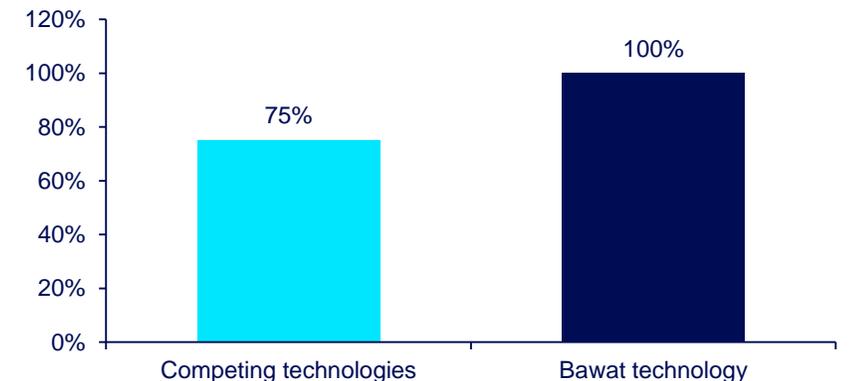
Bawat's offers >50% reduction in total cost compared to competing technologies...



...implying that it could increase Ship System prices > 40% and still be competitive



Existing technologies has shown non-compliance in 25-30% of cases

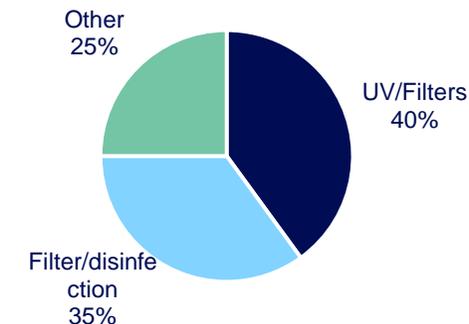


Bawat has the only heat-based solution on the market, which we argue makes it an attractive acquisition candidate given the high barriers to entry

Competitive landscape

Type of system	Process	Companies
Heat-based systems	Heat/Pasteurisation	 Bawat
Electro-chlorination systems	<ul style="list-style-type: none"> Filters Chemicals 	   
UV Light systems	<ul style="list-style-type: none"> Filters UV light bulbs 	   
Other systems	<ul style="list-style-type: none"> Deoxygenation Ozone or chemical injection Filters 	   

Market share by technologies



Comments

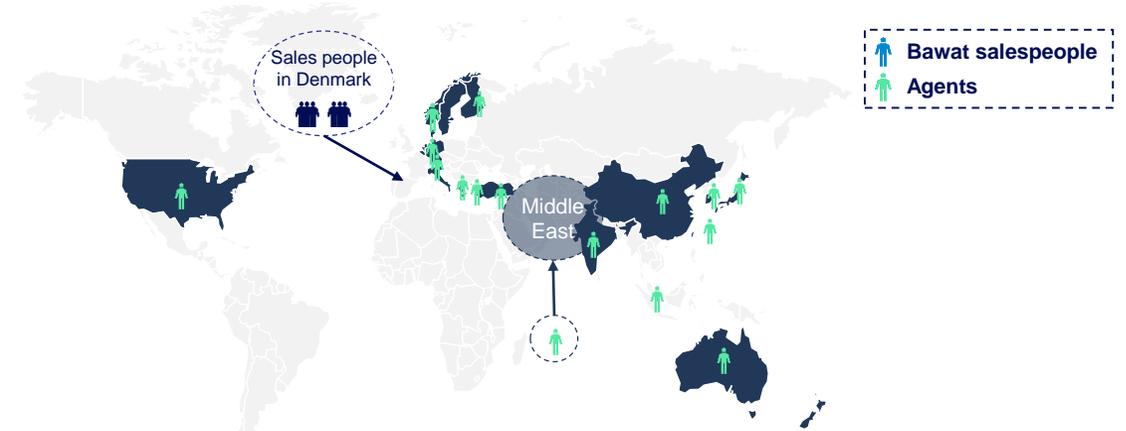
- **Only heat-based technology:** To our understanding, Bawat has the only heat-based technology on the market, which offers a clear cost advantage and higher compliance.
- **Barriers to entry make Bawat an acquisition candidate:** Bawat has invested EUR 18m. Developing a similar system is costly, has long lead times and needs IMO certification, which takes at least 2-4 years.

Bawat has a global approach with sales representatives spread across the main maritime markets

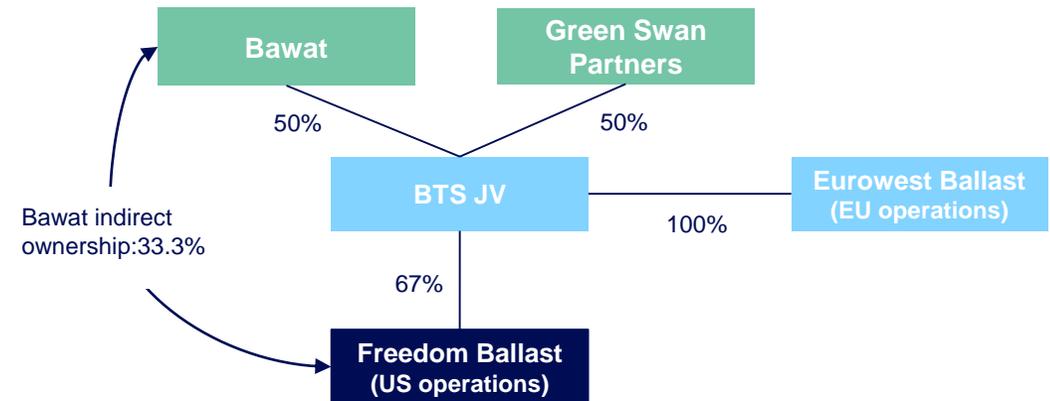
Bawat's partnership agreements

Partner	About	Partnership structure	Comments
<ul style="list-style-type: none"> Damen 	<ul style="list-style-type: none"> Operating 35 shipyards globally > 175 ships delivered yearly EUR 2.5bn turnover in 2022 	<ul style="list-style-type: none"> JV for containerized Mobile solution Collaboration agreement where Damen promotes Bawat's BWMS. 	<ul style="list-style-type: none"> Bawat and Damen have signed a term sheet to establish a JV by merging Damen and Bawat's system technology to the brand InvaSave powered by Bawat Technology.
<ul style="list-style-type: none"> Green Swan Partners 	<ul style="list-style-type: none"> Green venture capital company 	<ul style="list-style-type: none"> 50/50 JV for ballast water treatment services (BTS) 	<ul style="list-style-type: none"> Bawat and Green Swan Partners have formed a JV called Ballast Technology Services (BTS). BTS will finance and operate the treatment systems for EU waters. BTS further owns 67% of the Freedom Ballast JV.
<ul style="list-style-type: none"> Monstrant Viam 	<ul style="list-style-type: none"> A US company created to provide ballast water treatment services for US ports 	<ul style="list-style-type: none"> The BTS JV owns 67% of Freedom Ballast and Monstrant the remaining share. 	<ul style="list-style-type: none"> Bawat and Monstrant Viam have formed a JV called Freedom Ballast, which will deploy containerized ballast water treatment systems in US ports based on Bawat's technology. The JV expects to first deploy equipment in the Mississippi River. The service offering enables ships without a BWMS to be compliant.

Bawat's sales representatives cover the main maritime markets



BaaS structure: Bawat indirectly owns 33.3% of the Freedom Ballast service offering and 50% of JV for EU ports



ESG profile – Bawat Water Technologies

ESG snapshot and disclosures

- Bawat is well-positioned with regard to ESG though its ballast water treatment system offering, helping shipowners to clean their ballast water before discharge.
- The International Maritime Organisation (IMO) and the U.S. Coast Guard have adopted legislation that all ships must treat their ballast water by Sept 2024.
- The legislation is implemented to prevent the spread of marine species, which is harmful to the marine ecosystem.
- Bawat’s ballast water treatment offering has a positive impact on the SDG number 14: Life below water.
- Bawat does not report ESG metrics or targets.

Selected Sustainable Development Goals



Sustainalytics ESG risk rating

Taxonomy eligible activities

Disclosed ESG Targets

n.a

n.a

No

*0-100 where 0 is best

Source: Arctic Securities Research, Company information

Key ESG risks

Key risks	How Bawat is positioned
System efficiency and approvals	<ul style="list-style-type: none"> • Bawat’s heat-based solution has received both IMO and U.S Coast Guard approval. • Studies have shown that Bawat’s heating system is 10-25x more efficient than required.
Energy intensity: Ballast Water Treatment systems need energy to operate.	<ul style="list-style-type: none"> • Bawat’s ship system utilises excess heat from the engine, which makes the process energy efficient compared to UV/filter technologies. Bawat’s Mobile systems can use the energy available at the port.
Supply chain risks: Bawat is dependent on third parties to deliver its products.	<ul style="list-style-type: none"> • We view the risk related to third parties is relatively low as the company use standard marine components. We view it as likely that it will be able to change sourcing partners.
Health, Safety and Environment risks: A failure to maintain adequate HSE procedures and requirements may result in Bawat being held liable.	<ul style="list-style-type: none"> • The Company believe that the risk that it will inadvertently fail to comply with applicable HSE requirements is low.

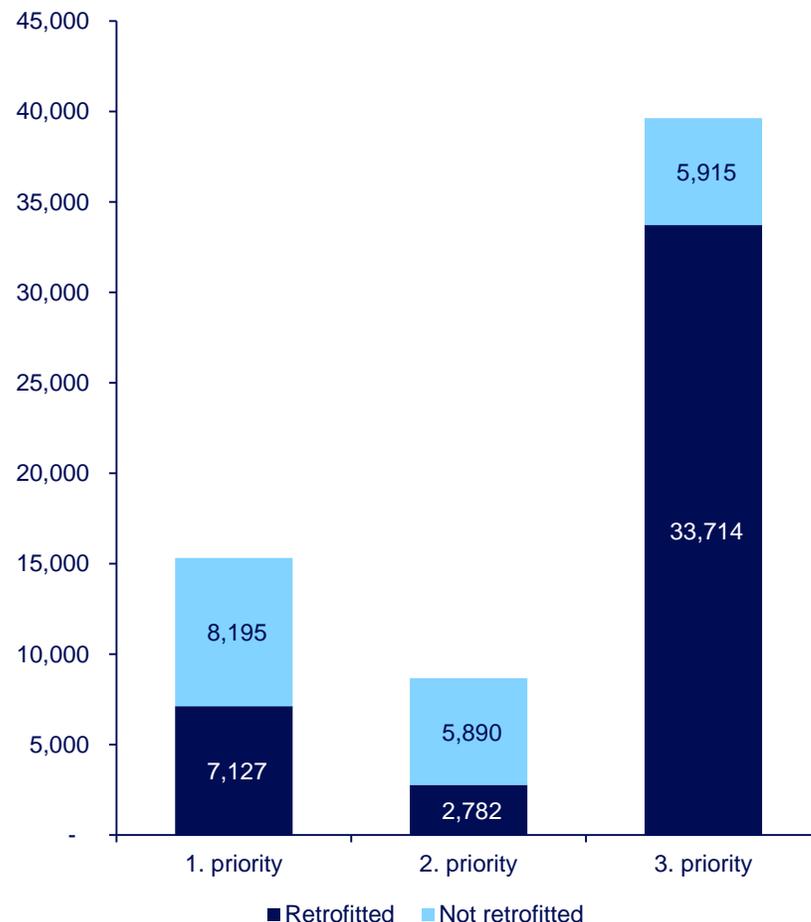
Market overview

We estimate a market potential of EUR ~4bn from ship and mobile systems

Comments

- **Retrofit market:** ~8,000 ships in Bawat's priority market have not installed BWMS, implying an EUR ~1bn opportunity.
- **Default systems add upside:** Non-compliance among 25-30% of established systems could increase priority market for retrofits by EUR ~250m if fleet owners must change their system.
- **Newbuild market:** An avg of 1,700 ships are built per year, creating a EUR > 200m market per year.
- **Mobile systems:** There are 800 large ports and 300 yards globally. Based on a reasonable assumption of 5 Mobile units per port and 2 units per yard, the addressable market is EUR ~3bn. Bawat's BaaS business adds upside to this figure.

> 8,000 ships in priority market have not retrofitted, creating a...



...EUR 1bn short-term demand + EUR ~200m PA from newbuilds

Market/segment	Existing ships (priority 1 market)	Newbuilds
Number of vessels	~8,000	1,700 per year
Price per treatment system	EUR 125k	EUR 125K
Addressable market	EUR ~1bn	EUR ~200m per year

800 ports and 300 yards implies EUR ~3bn addressable market

Market/segment	Ports	Yards	Sum
Number of ports/yards	800	300	1,100
Mobile systems per port/yards, avg	5	2	
Price per mobile system	EUR 600k	EUR 600k	
Addressable market	EUR ~2.4bn	EUR 0.4bn	EUR 2.8bn

The global shipping fleet continues to grow as global trade increases

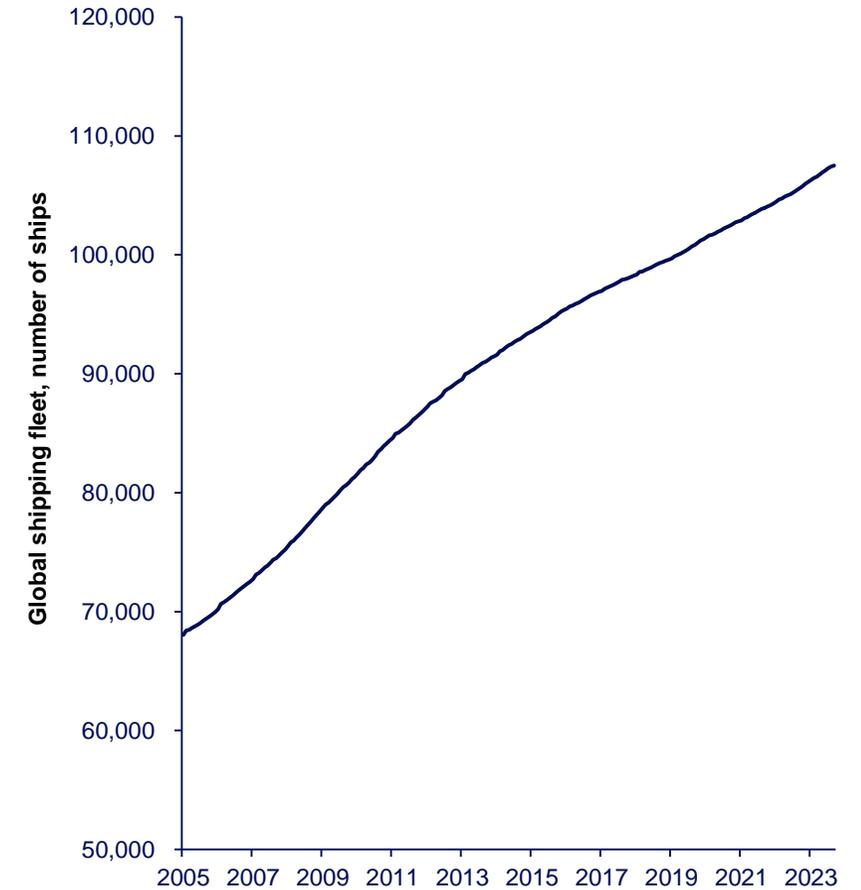
Comments

- **Fleet growth DWT:** The global shipping fleet has grown an avg. of 3.3% measured in dead weight tonnes in the last 10 years. The highest growth was in 2011 with 9.2%, while the low point was in 2018 at the low point in 2018 at 2.7%.
- **Number of ships:** The total number of ships on the water has grown by 58% since 2005, with no years of negative growth.
- **Key drivers for fleet growth:** Fleet growth is primarily driven by economic growth and technology advances, leading to increased trade volume, which increases the demand for ships.
- **Robust demand base as global trade increases.**

3.3% average fleet growth in the last 10 years



Ships on the water has grown ~60% since 2005

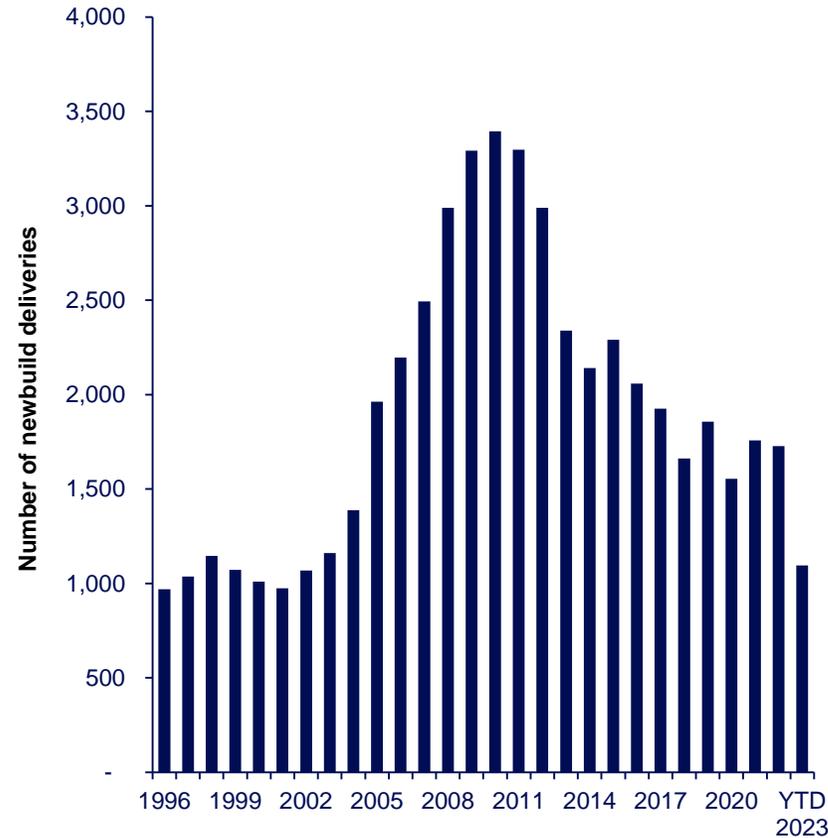


Continuous fleet growth adds demand for newbuilds and ballast water treatment services

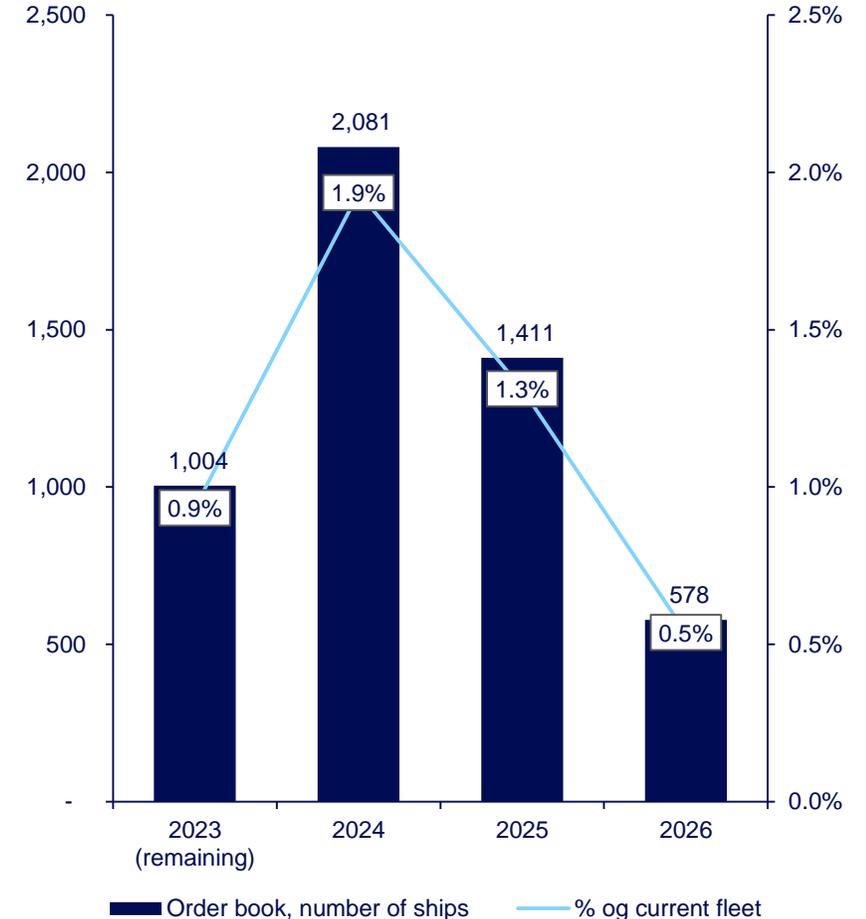
Comments

- **Historical newbuilds:** 5yr avg. of ~1,700, 10yr avg. of ~1,900 and 20yr avg. of 2,200 ships.
- **Reasons for lower orderbooks in recent years:** Rising newbuild prices and uncertainties around future technology choices have dampened newbuild orders in recent years.
- **2024 orderbook at its highest in 10 years:** >2,000 ships scheduled for delivery in 2024, which is a 10-year high, supportive for ballast water treatment providers such as Bawat.
- **High visibility 2 years forward:** It takes ~2 years to build a ship, and consequently the order book beyond 2025 is not that relevant at this point in time.

Avg. newbuild deliveries of ~1,700 per year since 2018



>2,000 ships scheduled for delivery in 2024, supportive for growth beyond the retrofit market



Estimates and valuation

Base case: 50% of ARCe 2023 order intake secured, conservative market share needed to meet order intake towards 2030

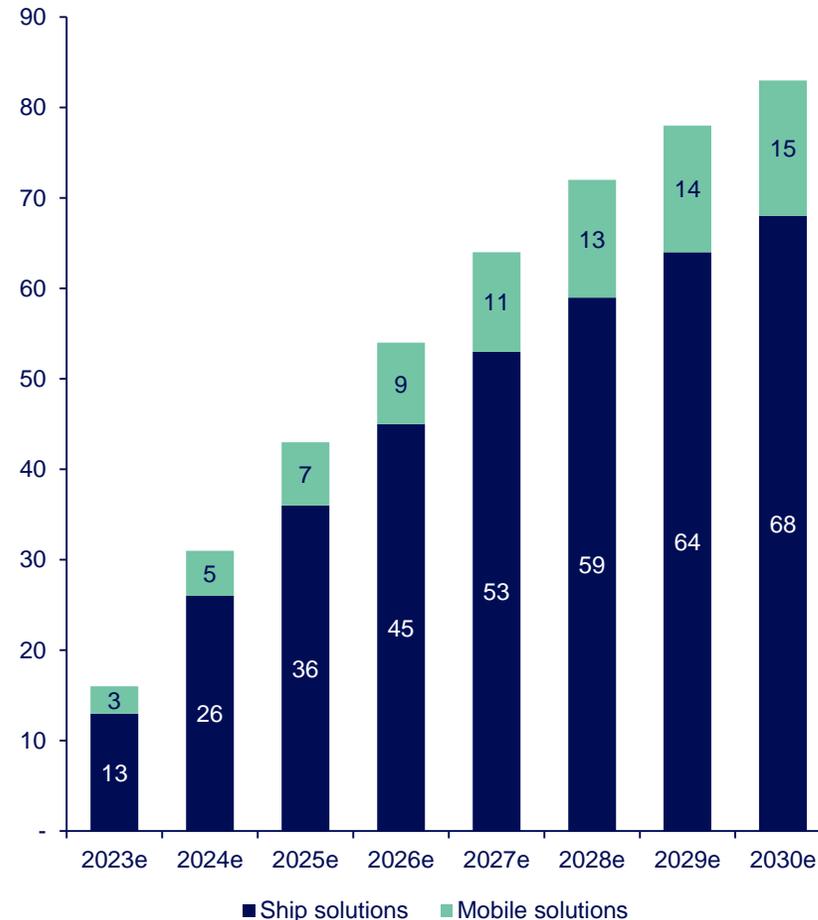
Assumptions and comments

Order intake 2023: We estimate an order intake of SEK 40m for 2023 (50% covered), which is the lower end of company guiding of SEK 40-60m. For Ships Systems, our 2023-24 order intake implies ~0.5% market share of the priority retrofit market.

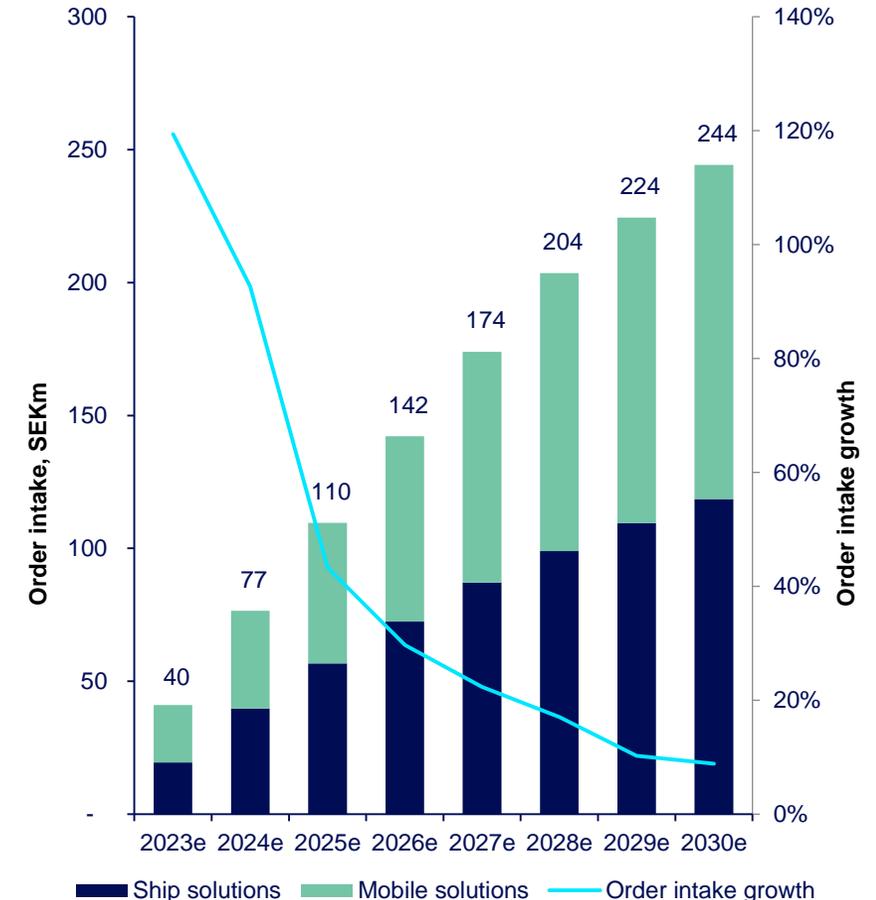
Conservative implied market share: To meet our estimated order intake beyond 2024, our estimates imply < 3% avg. market for Ship solutions and < 2% of addressable market for Mobile Systems.

Order intake growth: We estimate an avg order intake growth of 30% towards 2030 for Ship and Mobile Systems.

Number of orders by segment



ARCe system order intake by segment, SEKm

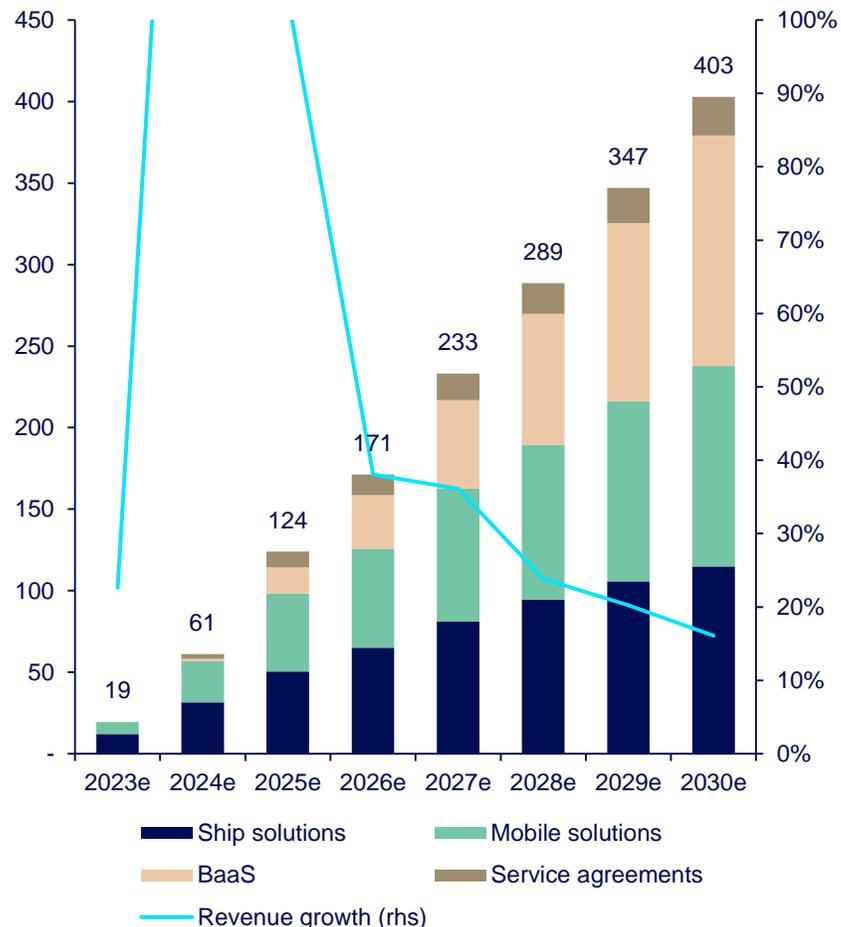


Base case: We estimate > 50% sales CAGR towards 2030 and EBITDA breakeven in 2025

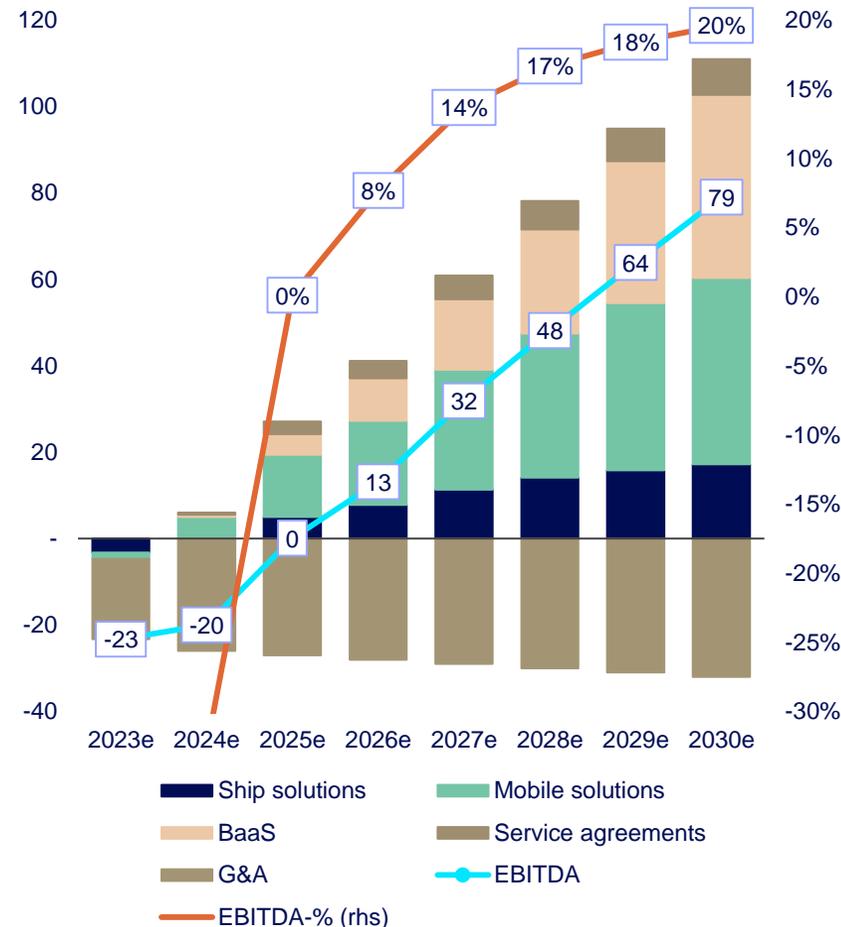
Assumptions and comments

- **Revenue growth to accelerate in '24:** With 1-2 quarters lead time from order to delivery, We expect 2024 to mark the start of significant revenue growth, driven by Ship and Mobile sales.
- **ARCe >50% sales CAGR:** Towards 2030, we estimate a sales CAGR of 54%, where Ship and Mobile Systems are the largest contributors short term, while the BaaS business becomes the largest segment from 2028 with a growing ARR base.
- **EBITDA breakeven in 2025:** We estimate breakeven levels around SEK 120-140m in revenues, which in our base case occurs in 2025. Mobile Systems and BaaS accounts for > 70% of EBITDA contribution.

ARC revenue, SEKm



ARCe EBITDA, SEKm



Arctic base case: > 50% revenue growth between 2023 and 2030 with ~35% ARR share of revenues in 2030 from the BaaS business

Assumptions

- **Revenue split:** We model a fairly even distribution between Ship and Mobile Systems, with 50% of the latter going into the BaaS offering, contributing to almost 35% ARR for the group by 2030.
- **EBITDA:** With 20%/40% GM in Ship and Mobile Systems/BaaS, respectively and the projected sales mix, we estimate EBITDA to grow to SEK 79m in 2030, implying a long-term EBITDA margin of 20%.
- **Opex:** We estimate opex to grow as a function of increased sales, but scale effects will reduce the opex% of revenues from >30% in 2025 to ~15% in 2030.
- **Financing:** Secured 25 mill SEK in loan with matching equity (SEK 19m raised so far). We have assumed an additional SEK 25m debt/equity need towards 2025.

Estimate overview in base case scenario, ARCe

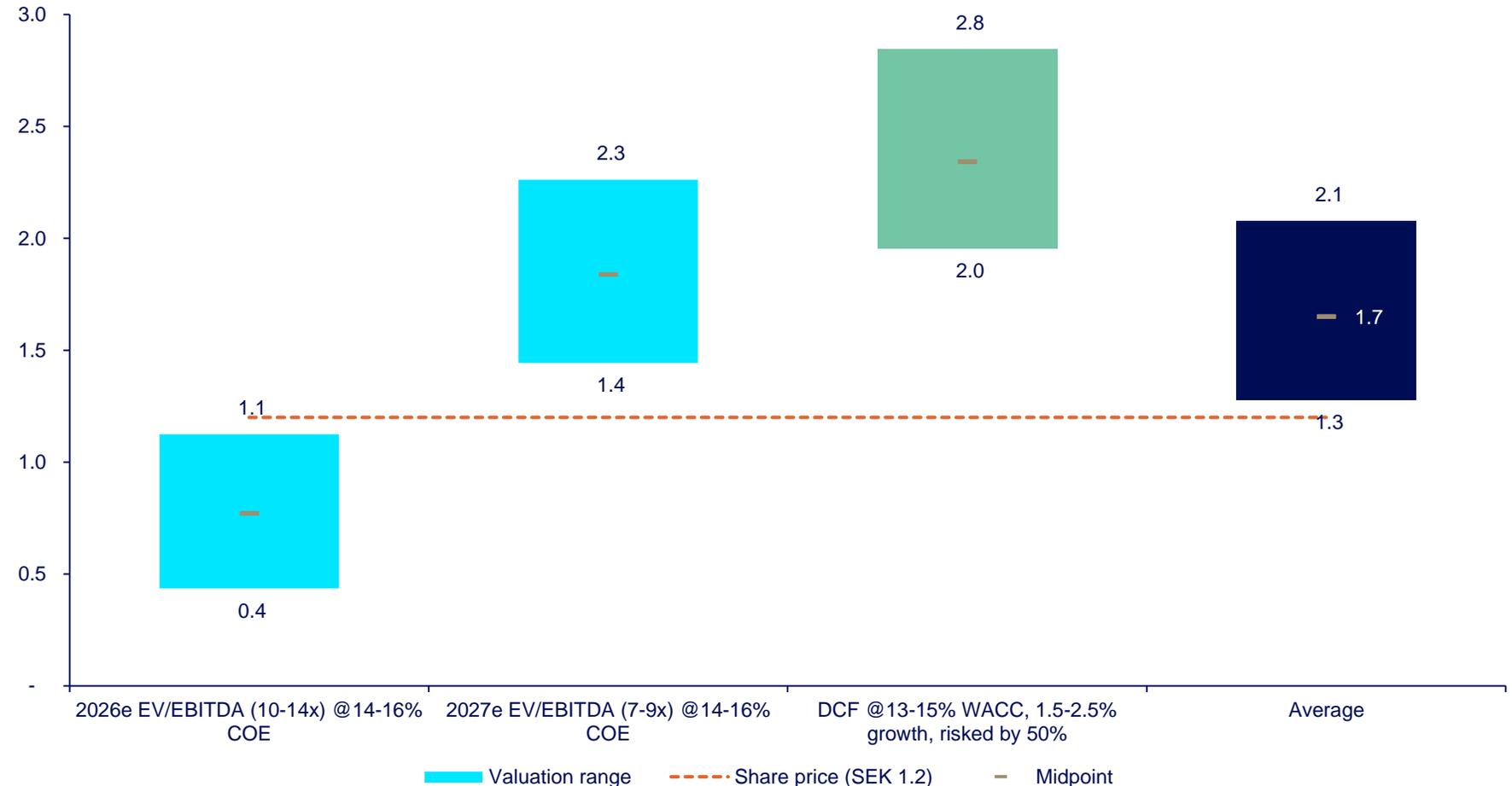
P&L (SEKm)	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Revenue	19	61	124	171	233	289	347	403
<i>Revenue growth, YoY</i>	23%	214%	103%	38%	36%	24%	20%	16%
Cost of goods sold	- 14	- 43	- 85	- 116	- 156	- 192	- 229	- 265
Gross contribution	5	18	40	56	77	97	118	138
<i>Gross margin-%</i>	27%	30%	32%	32%	33%	33%	34%	34%
Opex	- 29	- 38	- 39	- 42	- 45	- 48	- 54	- 59
EBITDA	- 23	- 20	0	13	32	48	64	79
<i>EBITDA margin</i>	-119%	-33%	0%	8%	14%	17%	18%	20%
EBIT	- 30	- 23	3	10	29	46	62	77
Net income	- 39	- 33	15	3	13	27	43	60
EPS	- 0.8	- 0.6	0.3	0.1	0.2	0.5	0.8	1.2
Revenue split								
Ship solutions	12	31	50	65	81	94	106	115
Mobile solutions	7	25	48	61	82	95	110	123
BaaS	-	2	16	33	54	80	109	141
Service agreements	-	3	10	13	16	19	22	24
EBITDA split								
Ship solutions	- 3	-	5	8	11	14	16	17
Mobile solutions	- 1	5	14	19	28	33	39	43
BaaS	-	0	5	10	16	24	33	42
Service agreements	-	1	3	4	6	7	8	8
G&A	- 19	- 26	- 27	- 28	- 29	- 30	- 31	- 32
Change in debt	15	25	10	-	10	20	42	30
Cash position	18	10	6	4	6	14	14	43

Valuation base case scenario: Average range between SEK 1.3-2.1 per share

Comments

- Our valuation range is derived from the following:
 - 10-14x 2026e EV/EBITDA discounted @14-16% COE: SEK 0.4-1.1 per share. Applied multiples are in line with industrial avg. peer group for 2025.
 - 7-9x 2027e EV/EBITDA discounted @14-16% COE: SEK 1.4-2.3 per share.
 - DCF analysis with estimate period until 2030 @13-15% WACC, 1.5-2.5% growth rate, probability weighted by 50%: SEK 2.0-2.8 per share.
- Average range: SEK 1.3-2.1 per share with SEK 1.7 as midpoint.
- **De-risking of estimates would lower the cost of equity and lift the multiples, which would lead to an uplift in our valuation range.**

In our base case scenario, we end up with an avg. value range between SEK 1.3-2.1 per share

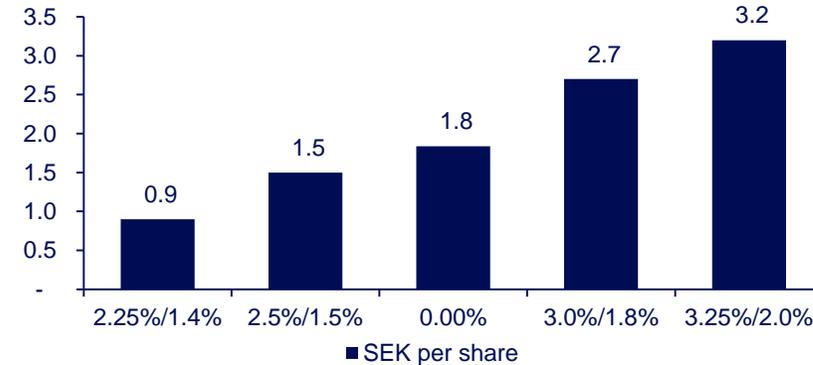


Valuation sensitivities in base case scenario

Comments

- Our multiple analysis is based on conservative multiples (below clean tech peer average in '26 of 30x) and a high cost of equity (COE).
- For illustration purposes, we have simulated what the value per share would be based on a change in market share for Ship Systems (SS) and percentage of addressable market towards (based on 8x 2027 EV/EBITDA).
- A de-risking of the business case would change the inputs favourably, leading to an uplift in the equity value, without a change in estimates.
- Risk factors to our base case valuation: If the company raises new equity, equity dilutions would lower the value per share.

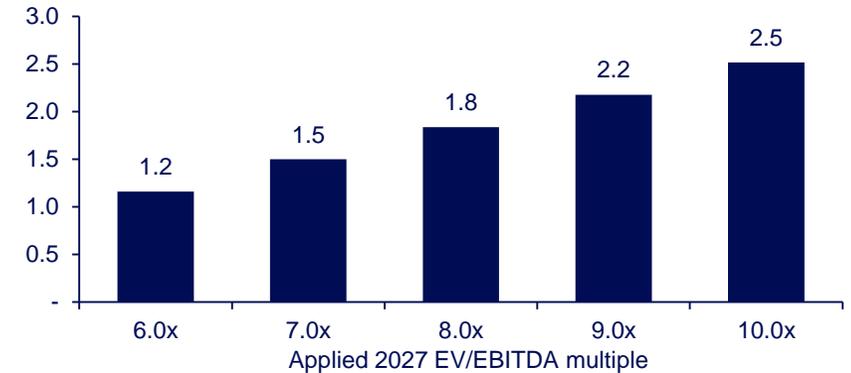
Market share SS and %TAM of MS @8x 2027 EV/EBITDA, SEK per share



DCF sensitivities, WACC and growth rate, SEK per share

		WACC				
		16.0%	15.0%	14.0%	13.0%	12.0%
Terminal growth	1.0%	1.6	1.9	2.2	2.5	2.9
	1.5%	1.7	2.0	2.3	2.6	3.0
	2.0%	1.8	2.0	2.3	2.7	3.2
	2.5%	1.8	2.1	2.4	2.8	3.3
	3.0%	1.9	2.2	2.5	3.0	3.5

2027 EV/EBITDA sensitivities, SEK per share



DCF sensitivities, terminal revenue and EBITDA-%, SEK per share

		% change in revenue terminal year				
		-60%	-30%	0%	30%	60%
EBITDA-margin	14.6%	1.5	1.6	1.8	2.0	2.2
	17.1%	1.6	1.8	2.1	2.3	2.6
	19.6%	1.7	2.0	2.3	2.7	3.0
	22.1%	1.8	2.2	2.6	3.0	3.4
	24.6%	1.9	2.4	2.9	3.4	3.9

Scenario analysis: All our scenarios imply conservative market shares

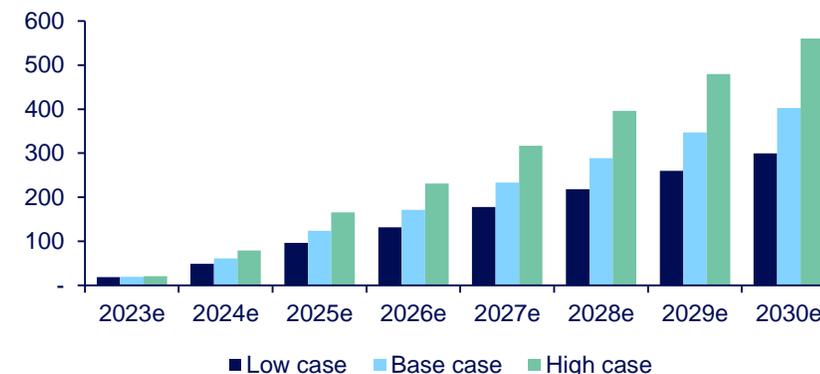
Comments

- **Base case scenario:** Revenues implies 2.7% avg. market share for Ship Systems beyond 2024 and 1.7% of addressable market for Mobile Systems (50% going into the BaaS offering). EBITDA breakeven in 2025 and SEK 79m in 2030, imply a steady state EBITDA margin of 20%.
- **High case:** Revenues implies ~4% avg. market share for Ship Systems beyond 2024 and 2.2% of addressable market for Mobile Systems (60% going into the BaaS offering). EBITDA breakeven in 2025 and SEK 126m in 2030, imply a steady state EBITDA margin of 23%.
- **Low case:** Revenues implies 2.5% avg. market share for Ship Systems beyond 2024 and 1.3% of addressable market for Mobile Systems (40% going into the BaaS offering). EBITDA breakeven in 2026 and SEK 48m in 2030, imply a steady state EBITDA margin of 16%.

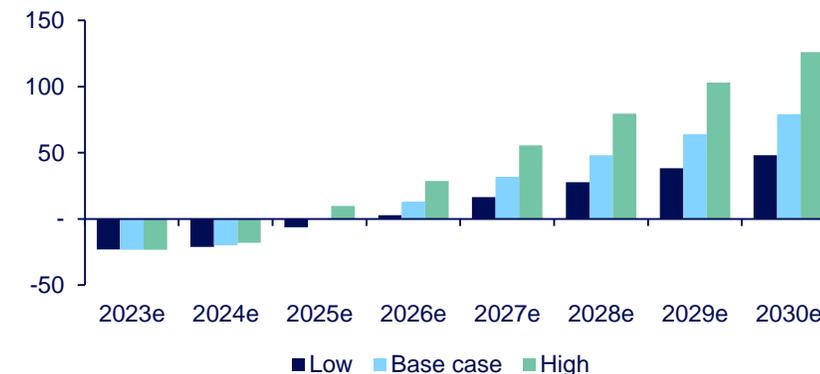
Scenario analysis, summary (SEKm)

Scenario analysis	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Order intake, system sale								
Low case	36	61	88	114	139	163	180	195
Base case	41	77	110	142	174	204	224	244
High case	45	99	143	185	226	265	292	317
Revenues								
Low case	19	49	97	132	178	218	260	300
Base case	19	61	124	171	233	289	347	403
High case	21	79	165	231	317	396	480	560
EBITDA								
Low	-23	-21	-6	3	16	28	38	48
Base case	-23	-20	0	13	32	48	64	79
High	-23	-18	10	29	56	79	103	126
EBITDA margin								
Low	-123%	-43%	-6%	2%	9%	13%	15%	16%
Base case	-119%	-33%	0%	8%	14%	17%	18%	20%
High	-114%	-23%	6%	12%	17%	20%	21%	23%

Scenario analysis, revenues (SEKm)



Scenario analysis, EBITDA (SEKm)

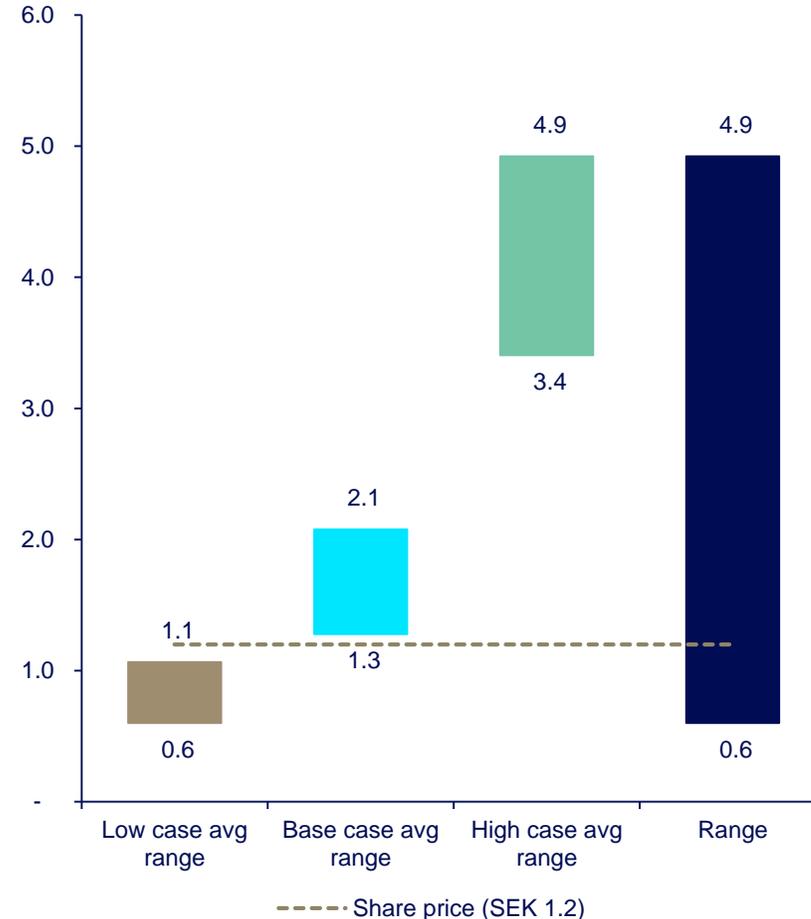


We initiate coverage with a fair value range of SEK 0.6-4.9 per share and view the risk/reward profile tilted towards the upside.

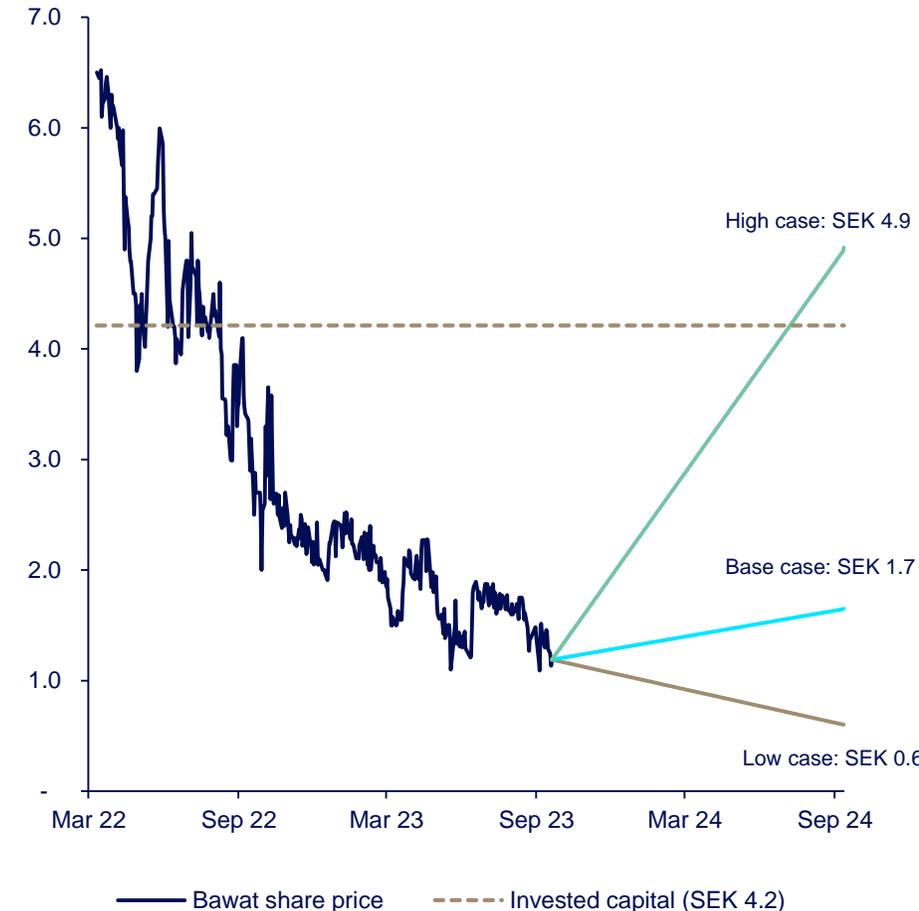
Comments

- **Valuation range SEK 0.6-4.9:** Our fair range is based on a combination of multiple and DCF analysis derived from low-, base- and high-case scenarios, yielding a fair valuation range of SEK 0.6-4.9 per share, with SEK 1.7 as the midpoint in our base case.
- **Trading at depressed levels:** Our range compares favourably to the current share price of SEK 1.1 (trading at < 0.3x invested capital).
- **Upside potential beyond our range:** Even our high case scenario may be too conservative in a full adoption scenario with higher market share.
- **Consequently, we see the risk/reward profile tilted towards the upside.**

ARCe fair valuation range, SEK per share



Share price performance and estimated value range (trading at 0.3x invested capital)

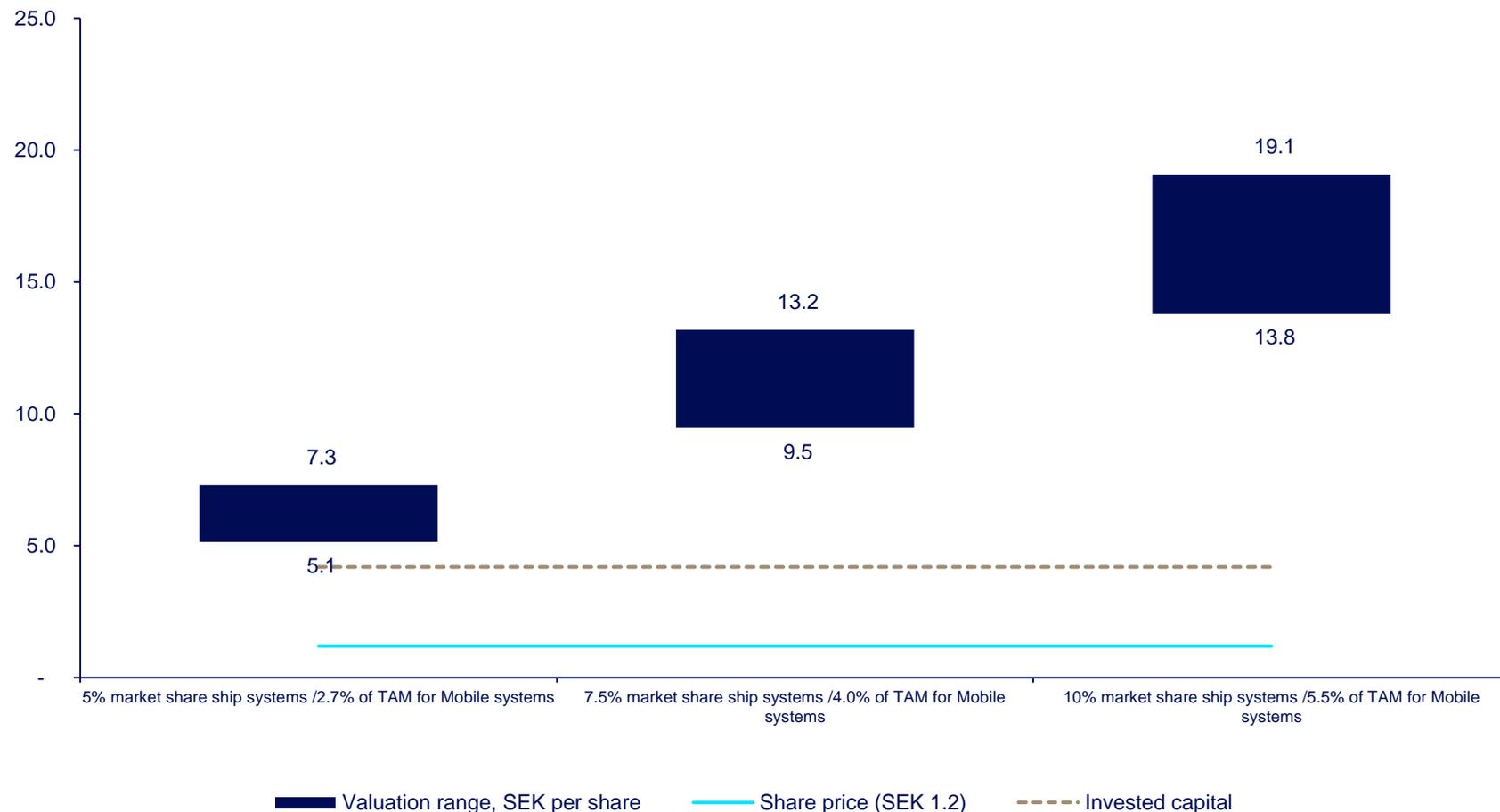


Scenario analysis in a full adoption scenario points to 4-16x upside potential

Comments

- For illustration purposes, we have simulated a what if scenario where Bawat reaches full adoption of its ship and mobile systems.
- The valuation ranges are based on the same framework as in our low-, base- and high case scenarios.
 - 5.0% market share for Ship Systems and 2.7% of TAM for Mobile Systems/BaaS: 4-6x upside potential.
 - 7.5% market share for Ship Systems and 4.0% of TAM for Mobile Systems/BaaS: 8-11x upside potential.
 - 10.0% market share for Ship Systems and 5.5% of TAM for Mobile Systems/BaaS: 12-16x upside potential.
- **The full adoption scenario points to 4-16x upside potential.**

Valuation range in a full adoption scenario with respective market share and % of TAM, SEK per share



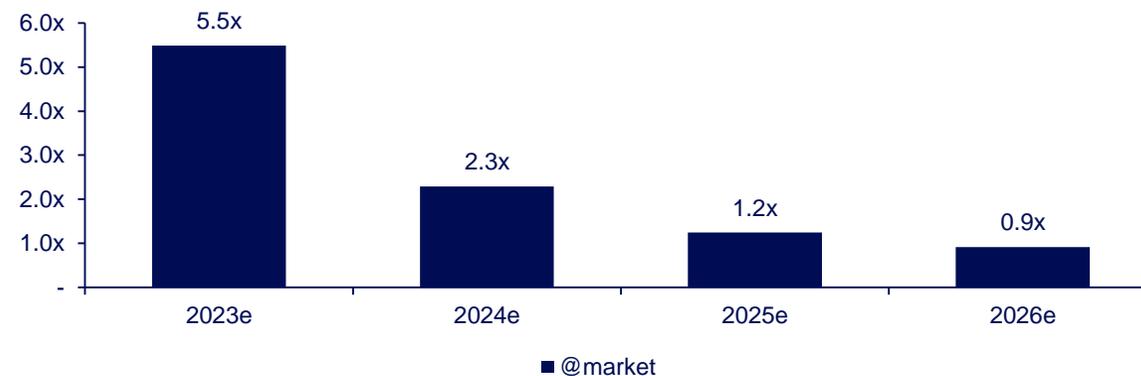
Peer multiples: Bawat On ARCe, Bawat is trading relatively in line with industrial peers for 2026

Clean tech peer multiples

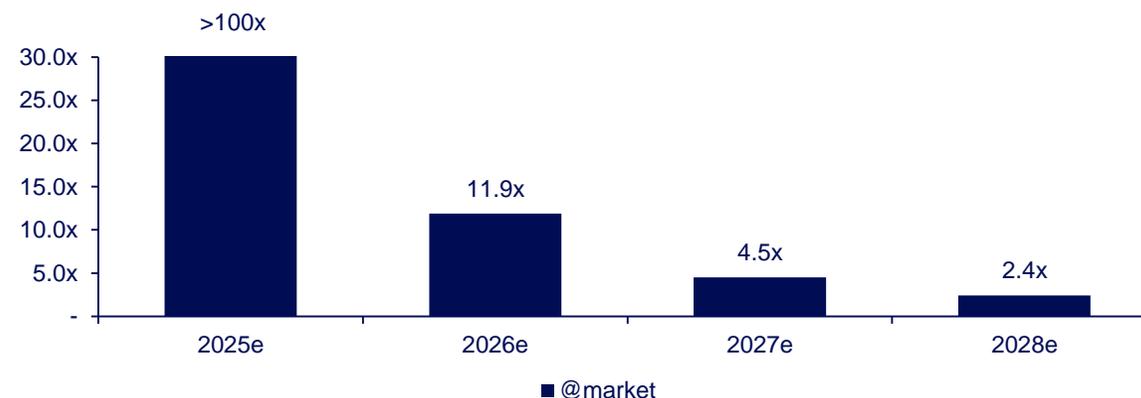
Company	EV USDm	EV/Sales			EV/EBITDA			'23-26 CAGR Sales
		2024e	2025e	2026e	2024e	2025e	2026e	
Alfa Laval	14,959	2.4x	2.3x	2.2x	11.8x	10.9x	9.9x	6%
Wartsila	6,954	1.0x	0.9x	0.9x	8.2x	7.3x	7.1x	5%
Tomra	3,483	2.5x	2.2x	1.9x	11.7x	9.9x	8.5x	11%
NIBE Industrier	13,526	2.8x	2.5x	2.2x	14.4x	12.3x	10.8x	12%
ABB	73,129	2.2x	2.1x	2.0x	11.1x	10.3x	9.5x	4%
Assa Abloy	30,405	2.2x	2.1x	2.0x	11.0x	9.8x	9.7x	6%
Atlas Copco	64,782	4.1x	3.8x	3.7x	15.1x	13.9x	12.6x	5%
Industrial average		2.4x	2.3x	2.1x	11.9x	10.6x	9.7x	7%
Tomra	3,483	2.5x	2.2x	1.9x	11.7x	9.9x	8.5x	11%
Envipco	132	0.9x	0.6x	n.m.	6.6x	3.9x	n.m.	na
Pyrum Innovations	139	9.5x	3.1x	2.8x	n.m.	n.m.	n.m.	210%
Pryme	49	2.7x	1.7x	n.m.	n.m.	n.m.	n.m.	na
WPU	177	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	na
Aker Carbon Capture	407	1.9x	1.0x	0.6x	n.m.	44.4x	19.4x	74%
Otovo	87	0.5x	0.3x	n.m.	n.m.	11.4x	n.m.	na
Arise	178	3.5x	2.9x	n.m.	3.8x	3.0x	n.m.	na
NEL Hydrogen	839	3.8x	2.5x	1.7x	n.m.	n.m.	78.5x	48%
ITM Power	197	9.9x	3.5x	1.7x	n.m.	n.m.	n.m.	259%
McPhy Energy	44	0.8x	0.4x	0.2x	n.m.	n.m.	n.m.	126%
Vow	200	1.5x	1.3x	1.1x	9.2x	6.5x	n.m.	23%
Hexagon Purus	290	1.2x	0.7x	0.5x	n.m.	26.7x	16.4x	62%
Scandinavian Biogas	132	2.0x	1.5x	n.m.	11.9x	7.6x	n.m.	na
Eolus Vind	100	0.7x	0.8x	n.m.	2.3x	1.8x	n.m.	na
REC Silicon	787	2.4x	1.4x	n.m.	13.6x	4.8x	n.m.	na
Pow ercell Sw eden AB	210	5.3x	3.9x	4.6x	n.m.	n.m.	n.m.	17%
Clean-tech average		3.1x	1.7x	1.7x	8.4x	12.0x	30.7x	92%
Bawat, ARCe	10	2.3x	1.2x	0.9x	n.a.	n.a.	11.9x	106%

Source: Arctic Securities Research, Bloomberg

Bawat implied EV/Sales on ARCe base case scenario



Bawat implied EV/EBITDA on ARCe base case scenario



Appendix: Management, board and risk factors

Risk factors

- Technology risk: Bawat's technology is based on standard marine equipment and is relatively easy to copy. However, new technologies would need to undergo IMO and U.S. Coast Guard certification.
- Bawat is small compared to most of its competitors: It has limited sales and marketing resources and financial strength
- Supply chain risks: Bawat is dependent on third parties to deliver its products.
- The market may not accept Bawat's system: Bawat's system is relatively new to the market, and there is a risk that customers will use existing technologies from more established competitors.
- Financial risk: Bawat is still in an early phase with limited revenues and has never been profitable. There is a risk that Bawat would need additional funding before it potentially reaches positive cash flow.
- Health, Safety and Environmental risk: Accidents or failure to comply with requirements may result in Bawat being held responsible, putting both the balance sheet and reputation at risk.
- Regulatory risk: Changes in regulations may lead Bawat's customers to delay their investments or cause them to prefer other systems.

Management & board of directors

Executive management



Marcus Hummer
CEO

Experience:

- Chairman, ATHCO Engineering
- COO, Kelvion Project Engineered Solutions
- COO, Business Unit VP, GEA Heat Exchangers
- Business Developer, Maersk Oil & Gas

Education:

- MSc Chemical Engineering, Technical University of Denmark
- HD II, Finance, Copenhagen Business School

Holdings in Bawat:

- 15.3% of shares (through family company)



John Henriksen
CFO

Experience:

- CFO, Arriva Denmark
- Senior Director, GEA Process Engineering
- CFO, GEA Procomac

Education:

- MSc in Business Economics and Auditing, Copenhagen Business School

Holdings in Bawat:

- 0.5% of shares



Klaus Nyborg
Chairman

Experience:

- CEO, D/S Norden
- CEO, Pacific Basin Shipping
- CFO, TORM
- CFO, Maersk Logistics
- CFO, Maersk Line, Asia

Other current positions:

- Chairman, D/S Norden
- Vice Chairman, DFDS
- Chairman, United Shipping & Trading

Holdings in Bawat:

- 12.6% of shares



Charlotte Vad
Deputy Chairman

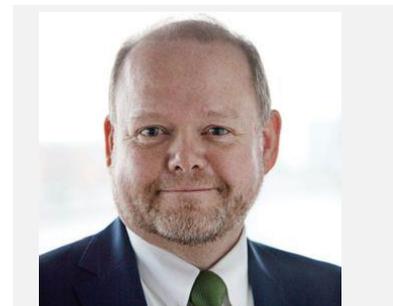
Experience:

- Head of Global Communication Services, Novozymes
- Management Consultant, Aarsø Nielsen & Partners
- Research scientist, SBP Medical Discovery Institute

Holdings in Bawat:

- 1.3% of shares

Board of directors



Steffen Jacobsen
Board Member

Experience:

- Previously CEO of Evergas
- Previously President (Chairman) of Society of International Gas Tanker and Terminal Operators (SIGTTO)

Holdings in Bawat:

- No shares



Lars H. Hansen
Board Member

Experience:

- Independent maritime advisor for Ship Owners, Government Business, Shipyards and Marine Suppliers (OEMs).

Holdings in Bawat:

- No shares

Shareholders

Investor	Number of shares	% of total	Comment
Selfinvest ApS	8,389,998	16.4%	
Homarus	7,370,226	14.4%	CEO (through family company)
Group of scandinavian shipowners	6,312,500	12.3%	
AkademikerPension	4,805,277	9.4%	
HNI	4,089,909	8.0%	
Return Aps (Klaus Nyborg)	3,445,233	6.7%	Chairman
Klaus Nyborg	2,993,422	5.8%	Chariman
EIFO	2,777,144	5.4%	
Den Danske Maritime Fond	1,850,747	3.6%	
AASN Holding A/S	1,700,001	3.3%	
Charlotte Hummer Vad	669,999	1.3%	Board member
Marcus Peter Hummer	451,440	0.9%	CEO
John Bo Henriksen	257,691	0.5%	CFO
Rest of total around 700 shareholders	6,180,034	12%	
Total number of shares	51,293,621		

Profit and Loss

Profit and Loss (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Revenue	15.9	19.5	61.0	124.0
Cost of sales	0.0	(14.1)	(42.9)	(84.5)
Other operating income/(costs)	(26.3)	(10.0)	(12.0)	(12.4)
Operating expenses	(44.1)	(42.7)	(81.0)	(123.9)
EBITDA	(28.2)	(23.2)	(19.9)	0.1
Depreciation	(9.1)	(6.7)	(3.3)	(3.0)
Impairment	0.0	0.0	0.0	0.0
Share of JV and ass. companies	0.0	0.0	0.0	0.0
Other	0	0	0	0
EBIT	(37.3)	(30.0)	(23.2)	(2.9)
Interest expense	(4.8)	(9.1)	(10.3)	(12.3)
Net interest	(1.6)	(8.8)	(9.9)	(12.3)
Other	0.0	0.0	0.0	0.0
Pre-tax profit	(38.9)	(38.8)	(33.1)	(15.1)
Income tax	0.0	0.0	0.0	0.0
Net income	(38.9)	(38.8)	(33.1)	(15.1)
Equity holders of the parent	(38.9)	(38.8)	(33.1)	(15.1)
Adj. EPS	0.0	0.0	0.0	0.0

Profit and Loss Statement (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Adj. revenue	15.9	19.5	61.0	124.0
Adj. EBITDA	(28.2)	(23.2)	(19.9)	0.1
Adj. EBIT	(37.3)	(30.0)	(23.2)	(2.9)
Adj. net profit	(38.9)	(38.8)	(33.1)	(15.1)
Gross margin	100.0	27.4	29.7	31.9
EBITDA margin (%)	(177.7)	(119.4)	(32.7)	0.1
Adj. EBITDA margin	(177.7)	(119.4)	(32.7)	0.1
EBIT margin (%)	(235.2)	(154.0)	(38.1)	(2.3)
Adj. EBIT margin	(235.2)	(154.0)	(38.1)	(2.3)
Net profit margin	(235.2)	(199.4)	(54.3)	(12.2)
Adj. net profit margin	(245.2)	(199.4)	(54.3)	(12.2)
Revenue growth (%)	48.0	22.6	213.7	103.3
EBITDA growth (%)	43.1	(17.6)	(14.2)	(100.6)
EBIT growth (%)	31.2	(19.7)	(22.5)	(87.7)
Net profit growth	30.3	3.9	(14.2)	(52.8)

Balance Sheet

Balance Sheet (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Property, plant and equipment	0.0	1.0	1.0	1.0
Right-of-use assets	1.3	0.0	0.0	0.0
Intangible assets	37.4	34.2	30.9	27.9
Share of JV, ass. comp. and other inv.	0.0	0.0	0.0	0.0
Interest bearing assets	0.0	0.0	0.0	0.0
Deferred tax assets	0.0	0.0	0.0	0.0
Other non-current assets	0.3	0.3	0.4	0.4
Total non-current assets	39.0	35.5	32.3	29.3
Inventories	0.0	0.0	0.0	0.0
Receivables	3.4	2.5	6.1	11.9
Other current assets	1.0	1.0	1.0	1.0
Cash and cash equivalents	6.7	18.1	10.4	5.6
Total current assets	12.7	22.5	18.4	19.4
Total assets	51.7	58.0	50.6	48.7

Balance Sheet (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Equity attributable to the parent	9.0	(10.7)	(43.8)	(58.9)
Non-controlling interests	-	-	-	-
Total equity	9.0	(10.7)	(43.8)	(58.9)
Long-term interest-bearing debt	23.9	57.2	82.2	92.2
Non-current lease liabilities	0.6	0.0	0.0	0.0
Deferred tax liabilities	0.0	0.0	0.0	0.0
Other non-current liabilities	0.0	0.0	0.0	0.0
Total non-current liabilities	24.5	57.2	82.2	92.2
Short-term interest-bearing debt	6.2	5.4	5.4	5.4
Current lease liabilities	0.7	0.8	0.8	0.8
Current tax assets	0.0	0.0	0.0	0.0
Other current liabilities	6.3	1.5	1.5	1.5
Total current liabilities	18.2	11.5	12.2	15.4
Total equity and liabilities	51.7	58.0	50.6	48.7
Gross debt	31.4	63.4	88.4	98.4
Net interest bearing debt	24.7	45.3	78.0	92.8
NIBD and lease liabilities	26.1	46.1	78.8	93.6
Capital employed	33.8	34.6	34.2	33.9
Working capital	(6.8)	(1.8)	1.1	3.7

Cash Flow Statement

Cash Flow Statement (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Net profit	(37.3)	(38.8)	(33.1)	(15.1)
D,A&I	9.1	1.8	3.3	3.0
Change in working capital	0.8	(1.7)	(2.9)	(2.7)
Cash flow from JV's and Associates	0.0	0.0	0.0	0.0
Other operating cash flow items	(1.9)	10.1	0.0	0.0
Cash flow from operations	(29.3)	(28.6)	(32.7)	(14.8)
Capital expenditures	(1.3)	0.0	0.0	0.0
Net financial investments	0.0	0.0	0.0	0.0
Net acquisitions/divestments	0.0	0.0	0.0	0.0
Other investment items	(0.0)	(1.1)	0.0	0.0
Cash flow from investing activities	(1.3)	(1.1)	0.0	0.0
New debt	1.4	15.0	25.0	10.0
Repayment of debt	(3.3)	0.0	0.0	0.0
Change in debt	(1.9)	15.0	25.0	10.0
Dividend payment	0.0	0.0	0.0	0.0
Other financing items	(0.7)	0.0	0.0	0.0
	-	-	-	-
Other (e.g. FX)	0.4	0.5	0.0	0.0
Net cash flow	(30.1)	(29.2)	(32.7)	(14.8)

Cash Flow Statement (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Free cash flow to firm	(25.8)	(20.7)	(22.4)	(2.5)
Free cash flow to equity	(32.4)	(14.8)	(7.7)	(4.8)

Key ratios & Valuation

Key ratios & Valuation (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
Avg. shares outstanding (m)	39.5	51.3	51.3	51.3
Avg. diluted shares outstanding (m)	39.5	51.3	51.3	51.3
EV	84.0	104.1	136.8	151.6
NIBD / EBITDA (x)	(0.9)	(1.9)	(3.9)	735.9
IBD / EBITDA (x)	(1.1)	(2.7)	(4.4)	780.2
IBD / (EBITDA - capex) (x)	(1.1)	(2.7)	(4.4)	780.2
IBD / Total assets	60.8	109.4	174.5	202.2
Operating cash flow / IBD	(93.2)	(45.2)	(37.0)	(15.1)
Free cash flow / IBD	(82.1)	(32.7)	(25.4)	(2.5)
EBITDA / Interest (x)	(5.9)	(2.6)	(1.9)	0.0
EBITDA / (Interest+Amortisation) (x)	(5.9)	(2.6)	(1.9)	0.0
Equity / total assets	17.5	(18.4)	(86.5)	(121.1)

Key ratios & Valuation (SEKm)	Dec-22	Dec-23e	Dec-24e	Dec-25e
FCFF yield	(29.5)	(19.2)	(16.0)	(1.6)
FCFE yield	(56.0)	(25.5)	(13.3)	(8.3)
ROE	(5,811.5)	4,670.6	121.6	29.4
ROACE	(110.6)	(87.7)	(67.5)	(8.4)
EV / Sales	5.5	5.5	2.3	1.3
EV / adj. Sales	5.5	5.5	2.3	1.3
EV / EBITDA	(3.1)	(4.6)	(7.0)	1,230.4
EV / adj. EBITDA	(3.1)	(4.6)	(7.0)	1,230.4
EV / EBIT	(2.3)	(3.6)	(6.0)	(54.4)
EV / adj. EBIT	(2.3)	(3.6)	(6.0)	(54.4)
P/E	(1)	(1)	(2)	(4)
P/E adj.	--	--	--	--
P/BV	--	--	--	--
Earnings yield	(87.1)	(66.9)	(57.2)	(26.1)
Dividend yield	0.0	0.0	0.0	0.0

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Company(ies)	General investment banking services 1)	Placement of shares bonds 2)	IPO 3)	Market maker 4)	Compensation 5)	No investment banking services 6)	No compensation 7)
Bawat Water Technologies AB	-	-	-	-	-	X	X

1. Arctic has provided general investment banking services to the Company in the previous twelve months.
2. Arctic has acted as financial advisor in connection with a placement of shares or bonds of the Company in the previous twelve months.
3. Arctic has acted as financial advisor in connection with an IPO of the Company in the previous twelve months.
4. Arctic has acted as market maker for the Company in the previous twelve months.
5. Arctic has received compensation for investment banking services from the Company in the previous twelve months.
6. Arctic has not provided any investment banking services to the Company in the previous twelve months.
7. Arctic has not received compensation for investment banking services from the Company in the previous twelve months.

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Company(ies)	Analyst shares 1)	Analyst bonds 2)	Net short position 3)	Net long position 4)
Bawat Water Technologies AB	-	-	-	-

1. Number of shares owned by the analysts who are authors of the parts of the report concerning the mentioned Company.
2. Number of bonds owned by the analysts who are authors of the parts of the report concerning the mentioned Company.
3. The size of the position if Arctic alone, or together with its affiliates or subsidiaries hold a net short position exceeding 0.5 % of the total issued share capital of the mentioned Company.
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Date	Recommendation	Target (SEK)	Price (SEK)
5 October 2023	Not Rated	NA	1.13

The relationship to other reports prepared by Arctic regarding the Company(ies)

The graph(s) below show the historical share price and how our recommendation(s) for the financial instruments issued by the Company(ies) have changed over the last 12 months.

The part of this report concerning Bawat Water Technologies AB has been prepared by Ivar Ryttervold

Planned Updates

There is no fixed schedule for updating. However, Arctic aims to update the recommendation on a company when:

- The price target is achieved/large change in credit spread,
- New accounting figures are released, or
- Any material news on a company or its industry is released.

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