VOYANT ADVISORS

Voyant Europe

Comprehensive Analysis

NIBE Industrier AB (NIBEb.ST – SEK 103.45) October 06, 2022*

NIBE Industrier AB (NIBEb.ST) develops, manufactures, and markets energy-efficient heating, cooling, ventilation, and hot water products and components for residential and commercial settings. NIBE primarily sells its products through wholesalers, retailers, installers, and original equipment manufacturers. The Company was founded in 1989 and is headquartered in Markaryd, Sweden. Its fiscal year ends on 12/31.

Thesis Summary

We are concerned heat pump adoption and revenue may be pressured given high upfront costs, long payback periods, and evidence of limited energy cost savings relative to legacy heating methods. Given the limited cost savings and the need for a supplemental heating source in certain cold-weather climates, we believe heat pump adoption may be dependent on government subsidies. We are concerned legacy HVAC manufacturer heat pump competition may pressure NIBE revenue growth and market share. Our market share concerns are heightened given commentary indicating certain competitors delayed price increases to gain market share and poor NIBE customer reviews. Given the Company's FY 25 guidance implies lower-than-targeted revenue growth, we believe long-term targets may be optimistic and difficult to achieve. Persistently below-targeted revenue growth heightens our concerns. We believe persistently below-targeted inorganic revenue growth despite consistent acquisition activity and negative additional consideration adjustments suggest acquisition quality may have deteriorated and/or acquisitions underperformed internal expectations. We are concerned elevated receivable levels suggest certain customers may have built buffer inventory and channel inventory levels may be elevated. In our view, a recent acquisition and currency fluctuations may not fully rationalize the receivable build. We are concerned an inventory level surge amidst elevated inventory costs suggests inventory may be overbuilt and margins maybe pressured. We believe a capex surge and guidance for capex to remain elevated suggest depreciation may ramp and margins may be pressured. Working capital driven cash flow deterioration and substantial floating rate debt levels amid global monetary policy tightening heighten our earnings sustainability concerns. **We are initiating NIBEb.ST on *The Short List.***

Company Data	
Country/Exchange	Sweden/OMNX
Reporting currency	SEK
Accounting standard	IFRS
Shares Outstanding (mil)	1,782.9
Float (mil)	1,640.5
Average Volume (mil)	SEK 258.4
52 Week Range	SEK 68.64 – SEK 138.65
Dividend Yield	0.5%
Market Cap (bil)	SEK 208.6
Net Debt (bil)	SEK 7.2
Enterprise Value (bil)	SEK 215.8
FY 21 Rev (mil)/Rev Growth	SEK 30,832.0 / 13.6%
FY 21 Adj. Op. Income (mil)	SEK 4,438.0
FY 21 GM %/Change	33.1% / 0 bps
FY 21 Adj. Op. Margin %/Chg	14.4% / 140 bps

Valuation (as of report date)	
NTM P/S	5.0x
NTM EV/ EBITDA	28.2x
NTM P/E	46.7x

Consensus Estimate Drift

SEK million	EST	1M Ago	6M Ago	1YR Ago
Q3 22 Rev	9,571.1	9,589.4	8,783.8	8,815.0
FY 22 Rev	38,043.9	38,044.6	34,711.4	34,330.1
FY 23 Rev	42,939.3	42,765.4	38,200.3	37,491.2
Q3 22 EPS	SEK 0.52	SEK 0.53	SEK 0.40	SEK 0.50
FY 22 EPS	SEK 1.99	SEK 2.00	SEK 1.82	SEK 1.72
FY 23 EPS	SEK 2.28	SEK 2.28	SEK 2.08	SEK 1.89

Peers Mentioned In This Report
Lennox International Inc. (LII)
Redrow plc (RDW.L)
Watsco Inc. (WSO)

Catalysts and Timing
High upfront costs, long payback periods, and limited energy cost savings pressure heat pump adoption.
Competition drives market share loss and/or revenue pressure.
Elevated channel inventory levels drive revenue pressure.
Inventory normalization drives margin pressure.

*** All research is completed as of 4:00PM – 4:15PM Eastern Time unless otherwise noted.**
Please refer to the end of this report for an updated version of *The Short List*.

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Table of Contents

Company Background

Company description: NIBE Industrier AB (NIBEb.ST) develops, manufactures, and markets energy-efficient heating, cooling, ventilation, and hot water products and components for residential and commercial settings. NIBE primarily sells its products through wholesalers, retailers, installers, and original equipment manufacturers. The Company was founded in 1989 and is headquartered in Markaryd, Sweden. Its fiscal year ends on 12/31.

Results by segment: In FY 21, Climate Solutions accounted for 63.7% (71.5%) of segment revenue (segment operating income), Element accounted for 26.7% (19.4%), and Stoves accounted for 9.7% (9.1%).

- **Climate Solutions:** The Climate Solutions segment offers energy-efficient climate control and water heating products. Climate Solutions products include air-source heat pumps, ground-source heat pumps, domestic boilers, ventilation systems, and solar panels, among other climate control products for residential and industrial applications. NIBE primarily sells its Climate Solutions products to wholesalers and installers.

- **Element:** The Element segment provides customized heating and control components. Element products include foils, heat exchangers, heating cables, heating jackets, resistors, control equipment, flexible hoses, and temperature sensors, among others. NIBE primarily sells its Element products to original equipment manufacturer (OEM) and industrial customers.

- **Stoves:** The Stoves segment offers energy-efficient wood, electric, and gas stoves (i.e. heaters) and related accessories. Stoves products include wood-burning stoves, electric stoves, gas stoves, free-standing stoves, heat retaining materials, chimney systems, and decorative wood holders, among others. NIBE primarily sells its Stove products to retailers.

FY 21 Segment Analysis (as % of total)	Segment Revenue	Segment Operating Income
Climate Solutions	63.7%	71.5%
Element	26.7%	19.4%
Stoves	9.6%	9.1%
Total segment revenue	100.0%	100.0%

Revenue by geography: In FY 21, Europe excluding Nordics accounted for 46.3% of revenue, Nordic countries accounted for 23.3%, North America accounted for 24.6%, and other markets accounted for 5.8%. In its FY 21 Annual Report, the Company highlighted it operated in 31 countries throughout Europe, North America, Australia, and Asia.

Geography Analysis (as % of revenue)	FY 21
Europe (excl. Nordics)	46.3%
Nordic countries	23.3%
Total Europe	69.6%
North America	24.6%
Other markets	5.8%
Total	100.0%

Seasonality: Over the past three years, Q4 accounted for 27.9% of revenue on average, while Q1 accounted for 22.8%. The Company did not discuss seasonality in its FY 21 Annual Report.

Seasonality Analysis (as % of total)	Q1	Q2	Q3	Q4
FY 21 quarterly revenue contribution	22.2%	25.3%	25.4%	27.2%
FY 20 quarterly revenue contribution	23.4%	22.9%	25.4%	28.3%
FY 19 quarterly revenue contribution	22.7%	24.0%	25.1%	28.2%
Three-year average	22.8%	24.1%	25.3%	27.9%

Competition: In its FY 21 Annual Report, NIBE highlighted its markets were "fragmented" with "many" large and small manufacturers. NIBE competes with Daikin, Panasonic, A.O. Smith, Toshiba, Systemair, Vaillant, WOLF, Veissmann, Grant, Bosch, Trane, and Carrier, among others.[1]

[1] Daikin Industries, Ltd. (6367.T), Panasonic Holdings Corp. (6752.T), A.O. Smith Corp (AOS), Toshiba Corp (6502.T), Systemair AB (SYSR.ST), Vaillant Group (private), WOLF (subsidiary of CEVG.H), Viessman Group (private), Grant UK (private), Bosch Ltd (BOSH.NS), Trane Technologies PLC (TT), Carrier Global Corp (CARR).

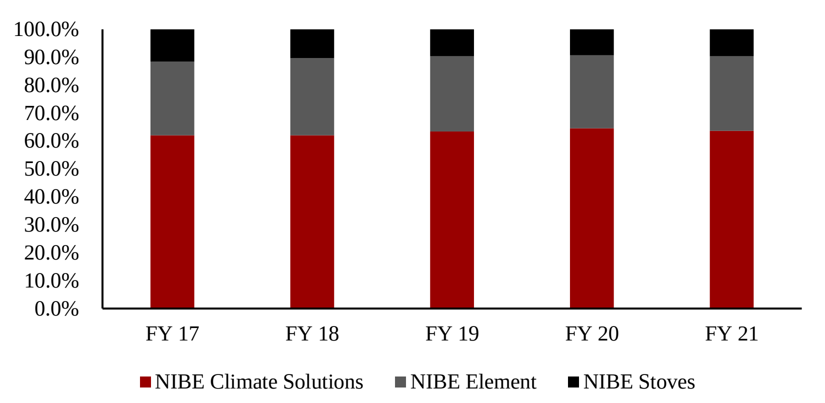
Voyant's Earnings Risk Assessment

We are concerned heat pump adoption and revenue may be pressured given high upfront costs, long payback periods, and evidence of limited energy cost savings relative to legacy heating methods. Given the limited cost savings and the need for a supplemental heating source in certain cold-weather climates, we believe heat pump adoption may be dependent on government subsidies. We are concerned legacy HVAC manufacturer heat pump competition may pressure NIBE revenue growth and market share. Our market share concerns are heightened given commentary indicating certain competitors delayed price increases to gain market share and poor NIBE customer reviews. Given the Company's FY 25 guidance implies lower-than-targeted revenue growth, we believe long-term targets may be optimistic and difficult to achieve. Persistently below-targeted revenue growth heightens our concerns. We believe persistently below-targeted inorganic revenue growth despite consistent acquisition activity and negative additional consideration adjustments suggest acquisition quality may have deteriorated and/or acquisitions underperformed internal expectations. We are concerned elevated receivable levels suggest certain customers may have built buffer inventory and channel inventory levels may be elevated. In our view, a recent acquisition and currency fluctuations may not fully rationalize the receivable build. We are concerned an inventory level surge amidst elevated inventory costs suggests inventory may be overbuilt and margins maybe pressured. We believe a capex surge and guidance for capex to remain elevated suggest depreciation may ramp and margins may be pressured. Working capital driven cash flow deterioration and substantial floating rate debt levels amid global monetary policy tightening heighten our earnings sustainability concerns. **We are initiating NIBEb.ST on *The Short List*.**

High Upfront Costs & Limited Energy Cost Benefits May Pressure Heat Pump Adoption

Largest segment (Climate Solutions) revenue growth may be dependent on heat pump adoption, in our view: As mentioned, in FY 21, Climate Solutions accounted for 63.7% (71.5%) of NIBE segment revenue (operating income). Given NIBE's Climate Solutions include air-source and ground-source heat pumps and other products typically used in conjunction with heat pumps (e.g. domestic boilers, ventilation systems, and solar panels), we believe a majority of Climate Solutions revenue may be directly or indirectly related to heat pumps (discussed next). Accordingly, we believe Climate Solutions (i.e. NIBE's largest segment) revenue growth may be dependent on heat pump adoption.

Revenue By Segment Analysis
(as % of total segment revenue)



Background on heat pumps: Heat pumps are electric-powered heating systems used in residential homes and commercial buildings. Ground-source (i.e. geothermal) heat pumps collect heat energy from a below-ground tube system and transfer its inside. Air-source heat pumps collect heat energy from outside air and transfers it inside. Exhaust air heat pumps collect heat energy from exhaust fans throughout the house/building (typically in the kitchen and/or bathroom), adding heat to the rest of the house. Many heat pumps can work in reverse, transferring heat energy from the inside to the outside of the building. In its FY 21 Annual Report, NIBE indicated its heat pump systems could reduce carbon (CO_2) emissions by up to 80.0% relative to traditional gas furnaces/boilers.

Upfront costs may pressure heat pump adoption, in our view: According to HomeGuide, air-source (ground-source) heat pump installations cost approximately $8,000.00 ($25,000.00) on average for a complete system in the US, while a traditional gas-powered furnace costs $3,600.00 on average.[2] According to Greenmatch, air-source (ground-source) heat pump installations cost approximately £13,000.00 (£27,500.00) on average for a complete system in the UK, while a traditional gas-powered boiler costs £3,375.00 on average.[3] In addition, in its Heat Pumps Tracking Report on 09/22/22, the International Energy Association highlighted high upfront costs were a "challenge" for household and commercial heat pump adoption.[4] **While we acknowledge certain governments may provide subsidies and/or tax incentives for heat pump installations (discussed below), we believe the substantial upfront costs relative to traditional alternatives may pressure heat pump adoption.**

Heat Pump Upfront Cost Analysis	US	UK
Traditional central heating system	$3,600.00	£2,955.00
Average air-source heat pump and installation cost	$8,000.00	£13,000.00
Average ground-source heat pump and installation cost	$25,000.00	£27,500.00

Heat pump replacement payback periods suggest annual cost savings may not offset upfront cost: According to Energy Star, the average annual US household heating and cooling expense is approximately $865.20.[5] According to HomeGuide, a household with an air-source (ground-source) heat pump can save up to 50.0% (70.0%) on its annual heating and cooling costs and the pumps have an average life span of 17.5 years (20.0 years).[6] Given air-source (ground-source) heat pump installations cost approximately $8,000 ($25,000.00) on average for a complete system in the US, we estimate a system replacement payback period of at least 18.5 years (41.3 years). In our view, long payback periods relative to estimated heat pump lifespans may deter certain customers from purchasing heat pumps and pressure heat pump adoption.

US Residential System Replacement Payback Period Analysis	Air-Source Heat Pump	Ground-Source Heat Pump
Average annual household heating and cooling cost	$865.20	$865.20
Average annual heating and cooling cost savings rate	≤ 50.0%	≤ 70.0%
Average annual heating and cooling cost savings	≤ $432.60	≤ $605.64
Average unit and installation cost	$8,000.00	$25,000.00
Average systems replacement payback period (Voyant estimate)	≥ 18.5 years	≥ 41.3 years
Average lifespan	17.5 years	20.0 years

Homebuilder trial highlights limited energy cost savings and heightens our heat pump adoption concerns: On its Q4 22 Conference Call on 09/14/22, Redrow plc (RDW.L), a British homebuilder, represented it conducted a trial in which it installed electric air-source heat pumps in one group and gas boilers in another group of the "exact same houses." Redrow highlighted the energy "cost was the same" for otherwise identical heat pump-enabled and gas boiler-enabled homes. Specifically, Redrow represented while the heat pump used one third of the total energy, the electricity cost was three times higher than gas. In our view, the Redrow commentary highlights the limited heat

[2] https://homeguide.com/costs/heat-pump-cost; https://homeguide.com/costs/new-furnace-replacement-cost
[3] https://www.greenmatch.co.uk/blog/2014/08/the-running-costs-of-heat-pumps; https://www.greenmatch.co.uk/blog/2018/08/new-boiler-cost#conventional-boiler-cost
[4] https://www.iea.org/reports/heat-pumps
[5] https://www.energystar.gov/products/ask-the-expert/breaking-down-the-typical-utility-bill
[6] https://homeguide.com/costs/heat-pump-cost#savings

pump energy cost savings. Accordingly, our concerns about high upfront costs and long payback period-driven adoption pressure are heightened.

> We've done -- we have done some trials. We've trialed -- a couple of houses, exact same houses, one of the gas boiler, one with electric air source heat pumps. **The gas boiler effectively, interestingly, the -- cost was the same in the end.** Why and these will happen is air source heat pumps being obviously 300% efficient, whereas a gas boiler is 83% efficient. So -- it was drawing 1/3 less energy required to do in the air source heat pump, but the problem is here at the moment that gas is 1/3 of the cost per therm of an electric therm. (RDW.L CEO Mr. Matthew Brennan-Pratt, RDW.L Q4 22 Conference Call, 09/14/22) [emphasis added]

Little or no air-source heat pump cost savings suggest target market may be limited, in our view: In an Environmental Research Letter published on 07/28/21, Thomas A Deetjen et al simulated US residential energy consumption before and after replacing legacy heating and/or cooling system with an air-source heat pump and calculated the net present value of each residence's heat pump conversion. The study highlighted 32.0% of US households would economically benefit from installing a heat pump (i.e. 68.0% of US households would not economically benefit from installing a heat pump).[7] **In our view, the study suggests heat pump cost benefits may be limited to certain households and/or climates and NIBE's target market may be limited.**

> We use energy prices, CO2 emissions, health damages from criteria air pollutants, and changes in peak electricity demand to quantify the costs and benefits of each house's heat pump retrofit. **The results show that 32% of US houses would benefit economically from installing a heat pump**, and 70% of US houses could reduce emissions damages by installing a heat pump. (Environmental Research Letter, 07/28/21) [emphasis added]

Industry commentary suggests heat pumps may not be suitable for certain cold-weather climates: Throughout the course of our research, we identified certain heating, ventilation, and air conditioning (HVAC) industry commentary highlighting limited heat pump viability and/or the need for a supplemental heating in certain cold-weather climates. While we acknowledge heat pumps may be suitable for certain well-insulated buildings in cold-weather climates, we believe the need for supplemental heating and/or insulation in certain buildings may (1) further increase upfront installation and/or energy costs, (2) reduce CO_2 emissions savings and/or (3) pressure furnace replacements/conversions to heat pumps. We have included certain heat pump manufacturer and distributor commentary below:

- **Lennox highlighted furnaces were "there to stay" in the northern US:** On its Morgan Stanley Laguna Conference Call on 09/14/22, Lennox International Inc. (LII), a US-based HVAC system manufacturer, highlighted cold-weather climates were a "key barrier" to heat pump adoption. In addition, Lennox represented certain cold-weather climate households required back-up gas furnaces for "super cold" days and furnaces were "there to stay."

> If you're in the northern area in which where heat pump may not be able to use all 12 months, we can also put a hybrid system. So you put a system that uses gas in the super cold days and uses the electric heat pump in less colder days… **I think if you take Northern U.S., like Minnesota, Wisconsin, any of those places, furnaces are there to stay, right?** (LII CEO Mr. Alok Maskara, Morgan Stanley Laguna Conference Call, 09/14/22) [emphasis added]

- **Watsco highlighted heat pumps were "trickier" in cold-weather climates:** On its Morgan Stanley Laguna Conference Call on 09/14/22, Watsco Inc. (WSO), an HVAC part and system distributor, highlighted heat pumps were "trickier" in the northern US and highlighted certain households required a gas furnace to supplement its heat pump system.

> In Florida, where we sell heat pumps every day, if we sell a heat pump instead of a straight cooling system, it will be very close in terms of somebody upgrading their heating source to a heat pump. **That becomes trickier in Northern markets where you may still need a furnace to supplement a heat pump system.**

[7] Thomas A Deetjen et al 2021 Environ. Res. Lett. 16 084024; https://iopscience.iop.org/article/10.1088/1748-9326/ac10dc

(WSO EVP Planning & Strategy Mr. Barry S. Logan, Morgan Stanley Laguna Conference Call, 09/14/22) [emphasis added]

Heat pump adoption may be reliant on government subsidies, in our view: In its Q2 22 Interim Report, the Company highlighted certain government subsidies drove heat pump adoption and revenue growth in Germany and the UK. On its Q2 22 Conference Call, the Company highlighted the US Inflation Reduction Act provided customer subsidies for certain Climate Solutions products (i.e. heat pumps). **While we acknowledge certain government programs may incentivize heat pump adoption, we believe (1) high upfront costs, (2) long payback periods, (3) limited heat pump cost benefits, and (4) the need for a supplemental heating source in certain cold-weather climates suggest heat pump adoption may be dependent on government subsidies (i.e. government subsidies may reduce upfront costs and payback periods).**

Intense Heat Pump Market Competition May Pressure NIBE Revenue Growth

Background on heat pump market position and competition: In its FY 21 Annual Report, NIBE highlighted it was a "leading European heat pump supplier" and heat pump "market leader" in North America. NIBE represented its markets were "fragmented" with "many" large and small manufacturers. In addition, NIBE highlighted large international (i.e. legacy) HVAC suppliers were increasingly focused on energy conservation and environmentally friendly products (e.g. heat pumps).

Competitor commentary highlights legacy HVAC manufacturer heat pump competition: On its Morgan Stanley Laguna Conference Call, Lennox highlighted "all the key payers" (i.e. legacy HVAC manufacturers) had been making heat pumps for "quite a few years." In our view, the Lennox commentary highlights (1) the intense heat pump competitive environment, (2) legacy HVAC manufacturer competition, and (3) significant heat pump market fragmentation. To the extent heat pump adoption accelerates, we believe legacy HVAC manufacturers' existing installed base and brand positioning may attract consumers to purchase legacy manufacturers' heat pumps and NIBE revenue growth and market share may be pressured.

> All of us -- all the key players have been making heat pumps for quite a few years. (LII CEO Mr. Alok Maskara, Morgan Stanley Laguna Conference Call, 09/14/22)

Certain competitors may have delayed price increases to gain market share: In its FY 21 Annual Report, NIBE highlighted its Climate Solutions segment faced "fierce price competition." On its Q1 22 Conference Call, the Company highlighted it raised prices and guided for further price increases to offset inflationary pressure. However, the Company indicated certain competitors may have delayed heat pump price increases to gain market share. To the extent certain competitors drove market share gains through reduced heat pump pricing, our concerns about the intensified competitive environment, NIBE market share, and NIBE revenue growth would be heightened.

> **Analyst:** Do you see that there's a handful of heat pump manufacturers perhaps that are willing to sacrifice margins in order to gain a bit of a stronger foothold? Or is there a single one that's kind of hampering the profitability for the entire industry?
>
> **CEO Mr. Gerteric Lindquist:** All are increasing price. But **there might be a few instances where they have delayed them to get some market share**, but in the long run, you can't buy market share by lower prices. (Q1 22 Conference Call, 05/17/22) [emphasis added]

Poor reviews may compel customers to purchase competing heat pumps, in our view: Throughout the course of our research, we identified certain online customer reviews highlighting limited NIBE customer satisfaction. Specifically, on Trustpilot, we identified numerous NIBE Energy Systems Ltd (i.e. NIBE UK) reviews highlighting high energy costs, poor customer service, and heat pump mechanical issues, among others.[8] In addition, as of the date of this publication, NIBE UK had a Trustpilot score of 1.7 out of 5.0, while heat pump competitors Vaillant UK

[8] In our analysis, we used UK-based reviews and competitors to maintain comparability.

(4.6), Worcester Bosch UK (4.6), Grant UK (4.3), and Daikin UK (3.8) had higher scores.[9] While we acknowledge certain competitors may have broader product offerings, we believe poor NIBE customer reviews relative to competing heat pump manufacturers suggest customers may favor competing heat pumps and our concerns about NIBE market share and revenue growth are heightened.

Heat Pump Manufacturer Reviews Analysis (United Kingdom)	Score (out of 5)
Vaillant UK	4.6
Worcester Bosch UK	4.6
Grant UK	4.3
Daikin UK	3.8
NIBE UK	1.7

Long-Term Revenue Growth Targets May Optimistic, In Our View

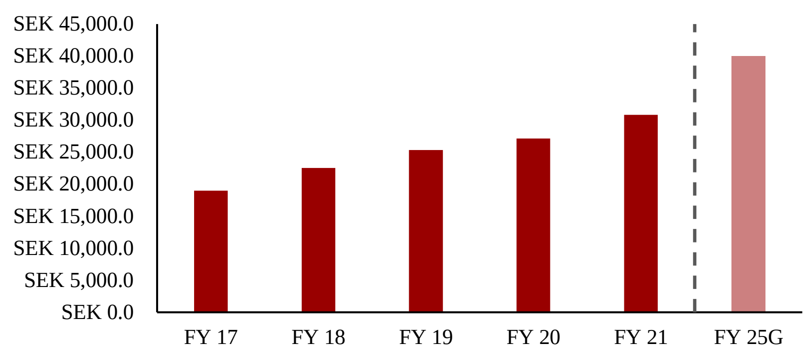
Background on revenue growth targets: In each of its last five Annual Reports, the Company highlighted its long-term targets included 20.0% annual revenue growth. Specifically, the Company highlighted it targeted 10.0% annual organic revenue growth and 10.0% annual inorganic revenue growth (i.e. revenue growth through acquisitions). In its FY 21 Annual Report, the Company reiterated its long-term organic and inorganic revenue growth targets.

Long-Term Revenue Growth Target Analysis	Target
Annual organic revenue growth	10.0%
Annual inorganic revenue growth	10.0%
Total revenue growth	20.0%

Implied revenue growth guidance suggests long-term target may be optimistic: Previously, in its FY 18 Annual Report, the Company guided for FY 25 revenue of SEK 40,000.0 million. In its FY 21 Annual Report, the Company reiterated its guidance for FY 25 revenue of SEK 40,000.0 million. Given FY 21 revenue of SEK 30,832.0 million, we estimate the Company's FY 25 guidance implies a 6.7% annual CAGR from FY 21 to FY 25, 1,330 basis points below the Company's annual revenue growth target of 20.0%. We believe the Company's implied FY 21 to FY 25 revenue growth guidance suggests its long-term guidance for 20.0% annual revenue growth may be optimistic and difficult to achieve.

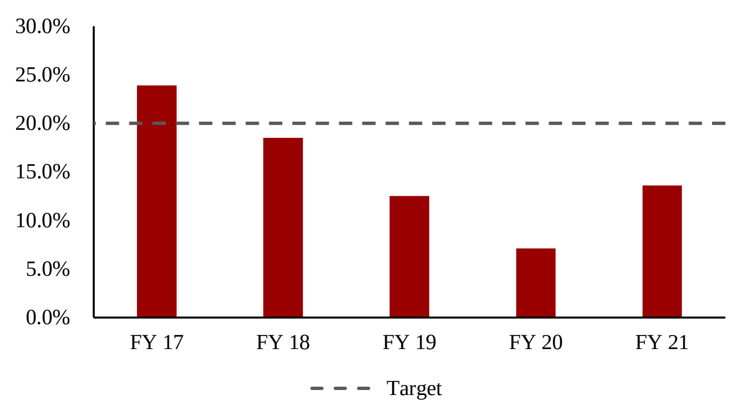
[9] https://www.trustpilot.com/review/www.nibe.co.uk, https://www.trustpilot.com/review/daikin.co.uk, https://www.trustpilot.com/review/www.vaillant.co.uk, https://www.trustpilot.com/review/www.worcester-bosch.co.uk, https://www.trustpilot.com/review/grantuk.com

Revenue Guidance Analysis
(SEK in millions)

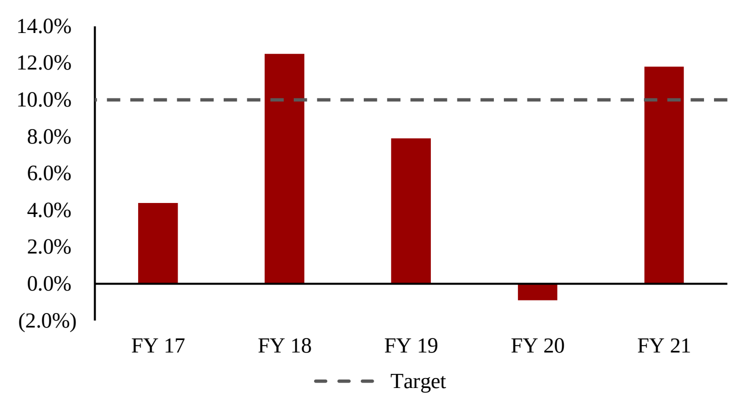


Persistent below-targeted revenue growth heightens our concerns: In each of the last four years (three of the last five years), the Company underperformed its annual revenue growth (organic revenue growth) target of 20.0% (10.0%). While we acknowledge FY 20 and FY 21 may have been impacted by the COVID-19 pandemic and related supply constraints and Q1 22 and Q2 22 organic growth outperformed the targeted level, the persistent (and pre-pandemic) revenue growth target underperformance heightens our concerns about the Company's long-term target achievability.

Revenue Growth Target Analysis
(year-over-year % increase/decline)



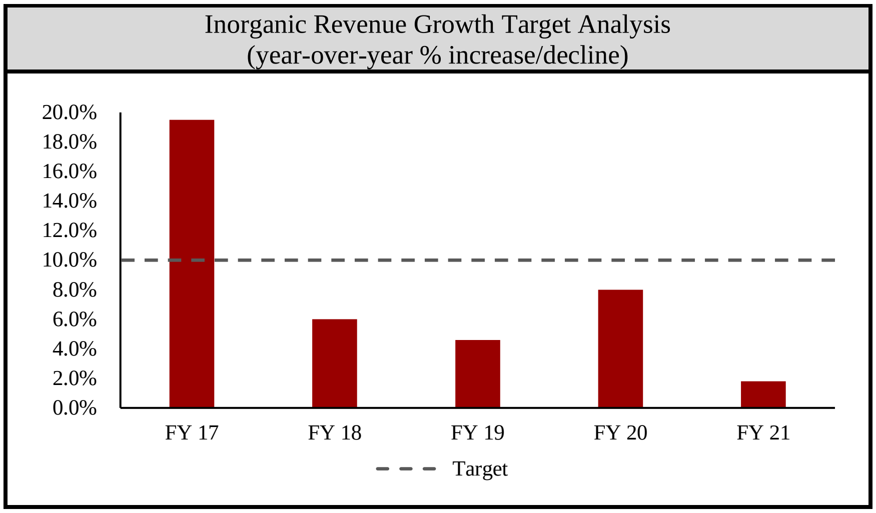
Organic Revenue Growth Target Analysis
(year-over-year % increase/decline)



Lower Quality Acquisitions May Have Underperformed Expectations, In Our View

Background on acquisition strategy: As mentioned, in each of its last five annual reports, the Company highlighted it targeted 10.0% inorganic revenue growth (i.e. revenue growth through acquisitions). The Company highlighted it prioritized companies with "strong brands" and products that complemented NIBE's existing portfolio. From FY 17 to FY 21, the Company completed 25 acquisitions for an aggregate of SEK 7,329.0 million.

Persistent below-targeted inorganic growth highlights potential acquisition quality deterioration: In each of the last four years, the Company underperformed its inorganic revenue growth target despite completing 25 acquisitions from FY 17 to FY 21. In our view, the persistent below-targeted inorganic revenue growth despite material (in our view) acquisition activity suggests recent acquisition quality may have deteriorated and heightens our long-term revenue growth target achievability concerns.



Additional consideration adjustments suggest acquisitions may have underperformed expectations: In its FY 21 Annual Report, the Company highlighted additional consideration was dependent on the acquired companies' future financial performance and amounts were remeasured "regularly." In three of the last four years, the Company recognized negative additional consideration adjustments. While we acknowledge FY 20 was impacted by the COVID-19 pandemic, we believe the persistent negative additional consideration adjustments suggest recent acquisitions may have underperformed expectations (i.e. acquirees did not hit targets necessary for certain additional consideration) and/or acquisition quality may have deteriorated.

> The size of the additional considerations is dependent on the future financial performance of the acquired units. The amounts specified are based on expected financial performance. The expected amounts are remeasured regularly. (FY 21 Annual Report)

Additional Consideration Analysis (SEK in millions)	FY 17	FY 18	FY 19	FY 20	FY 21
Additional consideration adjustments	SEK 13.0	(SEK 35.0)	--	(SEK 353.0)	(SEK 30.0)

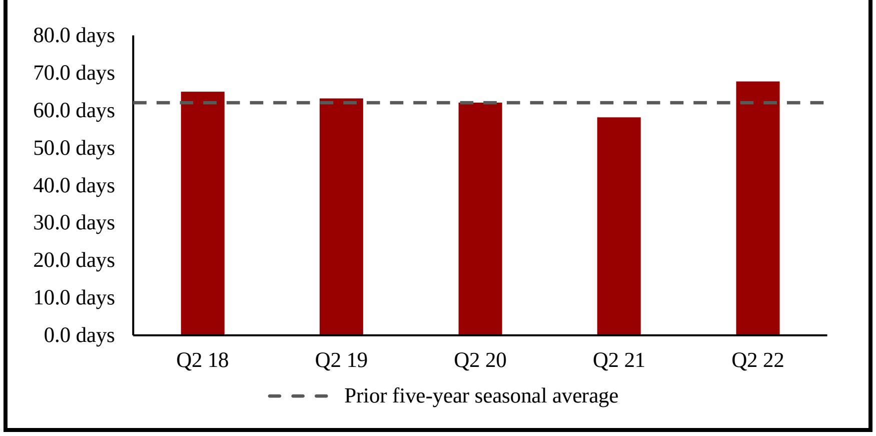
Elevated Receivable Levels Highlight Potential Revenue Pressure, In Our View

Background on total current receivables disclosure: In its Annual Reports, the Company discloses total current receivables components. Specifically, in its FY 21 Annual Report, the Company disclosed total current receivables included accounts receivable, accounts receivable form associates, current tax assets, other receivables, and prepaid expenses and accrued income. In Q4 21, accounts receivable accounted for 82.3% of total current receivables, accounts receivable from associates accounted for 0.2%, current tax assets accounted for 3.5%, other receivables accounted for 7.1%, and prepaid expenses and other current assets accounted for 6.9%. The Company does <u>not</u> disclose total current receivable components in its quarterly Interim Reports. In addition, the Company does <u>not</u> disclose information about other receivables.

Receivable Disclosure Analysis (SEK in millions)	Q4 21
Accounts receivable	82.3%
Accounts receivable from associates	0.2%
Current tax assets	3.5%
Other receivables	7.1%
Prepaid expenses and accrued income	6.9%
Total current receivables	100.0%

Elevated total current receivable levels highlight potentially elevated channel inventory, in our view: In Q2 22, total current receivables surged 44.4% year-over-year to SEK 7,186.0 million, while revenue increased 24.0% to SEK 9,656.0 million. Accordingly, DSO increased 16.5% to 67.7 days, <u>the highest seasonal level in at least five years</u>. Based on our understanding of representations made to us by the Company, the total current receivable increase was driven by a weaker SEK relative to other currencies, price increases, and the Argoclima acquisition.[10] In our view, a weaker SEK and the Argoclima acquisition may not fully rationalize the receivable build (discussed next). We believe elevated receivable levels suggest certain wholesalers/installers/retailers/OEMs may have built buffer inventory amid supply chain challenges and channel inventory levels may be elevated. Accordingly, we are concerned revenue may be pressured as customers work through inventory on hand.

Seasonal Receivables Analysis
(DSO)



Argoclima acquisition may not rationalize receivable build, in our view: Previously, in its 05/31/22 Press Release, NIBE disclosed it acquired a 50.0% stake in Argoclima S.p.A, an Italian heat pump and air conditioning product manufacturer. NIBE represented Argoclima's annual sales were approximately €100.0 million (approximately SEK 1,052.6 million).[11] In its Q2 22 Interim Report, the Company disclosed Argoclima was consolidated into the Climate Solutions segment as of 06/01/22. The Company represented the acquisition value was "still provisional" and did <u>not</u> disclose acquired receivables. We estimate if NIBE DSOs remained steady at the prior five-year seasonal average of 62.0 days, Q2 22 total receivables would have been 8.4% lower at SEK 6,583.1 million. Given annual Argoclima revenue of SEK 1,052.6 million, we estimate Argoclima would have accounted for 3.0% of twelve-month revenue. Accordingly, we believe it is unlikely Argoclima accounted for 8.4% of receivables as of Q2 22 and Argoclima does <u>not</u> rationalize the DSO build.

[10] Throughout the course of our research, we communicated with the Company's investor relations department. We appreciate their timely and thorough response to our inquiries.
[11] EUR/SEK exchange rate was approximately 0.095 on 05/30/22.

Baseline Receivables Analysis (SEK in millions)	Q2 22
Total current receivables (as reported)	SEK 7,186.0
Five-year seasonal average DSO	62.0 days
Total current receivables at five-year seasonal average (Voyant estimate)	SEK 6,583.1
Above (below) reported	*(8.4%)*

FX hedging policy suggests weakening currency may not rationalize receivable build, in our view: In its FY 21 Annual Report, the Company disclosed regular sales and purchases made in foreign currencies must be at least 60.0% hedged. While we acknowledge certain sales may not be fully hedged, we believe the Company's hedging policy suggests exchange rate fluctuations may not fully rationalize the receivable build.

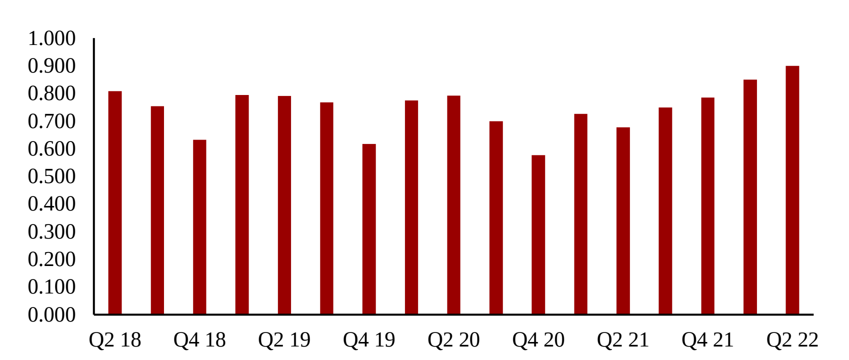
> Transaction risk is the risk of exchange losses from regular business transactions in foreign currencies, for example, an account receivable in a foreign currency falling in value due to fluctuations in the currency's exchange rates. As part of the Group's currency hedging policy, regular sales and purchases made in a foreign currency or linked to changes in a foreign currency, **must be hedged under a rolling 12-month plan within the range 60-100% of the estimated flows.** (FY 21 Annual Report) [emphasis added]

Inventory Level Surge & Elevated Costs Highlight Potential Margin Pressure, In Our View

Inventory level surge suggests margins may be pressured: In Q2 22, inventory surged 64.8% year-over-year to SEK 8,689.0 million, while revenue increased 24.0% to SEK 9,656.0 million. Accordingly, inventory-to-revenue surged 32.9% to 0.900, the highest level in at least five years. In its Q2 22 Interim Report, the Company highlighted it increased "buffer" inventory amid persistent supply chain challenges. While we acknowledge it may be rational to build inventory given persistent supply constraints, we believe the Company may have overbuilt inventory levels and margins may be pressured to the extent the Company is compelled to write off/write down aging inventory.

> In anticipation of this expected improvement, we are doing everything in our power to help our customers by means of maximum flexibility in production, increased buffer inventories and restructuring where possible. (Q2 22 Interim Report)

Inventory Analysis
(inventory-to-revenue)



Elevated inventory costs heighten our margin pressure concerns: On its Q2 22 Conference Call, the Company attributed a portion of the inventory build to elevated inventory costs. In addition, the Company highlighted its price increases were "lagging" cost increases. While we acknowledge the Company guided to increase prices to offset cost inflation, we believe commentary about "lagging" price increases suggests margins may be pressured amid increased inventory cost inflation.

So we have been trying to source components for our production to cater for the challenges on the supply chain side and of course, **building inventory costs.** So that's where we have the shift. (CFO Mr. Hans Backman, Q2 22 Conference Call, 08/18/22) [emphasis added]

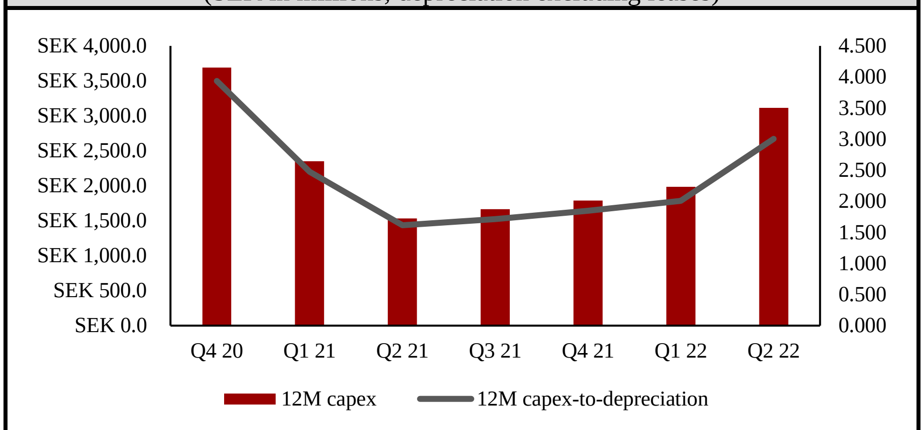
Capex Surge Suggests Depreciation May Ramp And Margins May Be Pressured

Background on capital expenditure guidance and depreciation excluding leases disclosure: Previously, in its FY 20 Annual Report, the Company guided for capital expenditures to be "equal to or just above" depreciation excluding leases "over the next few years." In addition, in its FY 20 Annual Report, the Company began disclosing depreciation excluding leases.

> The investment rate may vary slightly over time but because of continued capacity increases and the need for further rationalization investments, the investment rate over the next few years will continue to be **equal to or just above** the depreciation rate, excluding leases. (FY 20 Annual Report) [emphasis added]

Capex surge above prior guidance suggests depreciation may ramp: In the twelve months ended Q2 22, capex surged 103.5% year-over-year to SEK 3,115.0 million, while depreciation excluding leases increased 32.0% to SEK 1,036.0 million. Accordingly, twelve-month capex-to-depreciation excluding leases surged 54.2% to 3.007, albeit from a depressed base (declined 42.1% in Q2 21). On its Q2 22 Conference Call, the Company highlighted its "ambitious" investment program and attributed the capex surge to heat pump production capacity expansion. While we acknowledge additional capacity may support the Company's growth, we are concerned the capex surge materially above depreciation excluding leases despite prior guidance to be "equal or just above" depreciation excluding leases highlights (1) aggressive cost capitalization risk and/or (2) potential margin pressure as assets are placed into service and depreciation ramps.

Capex Analysis
(SEK in millions, depreciation excluding leases)

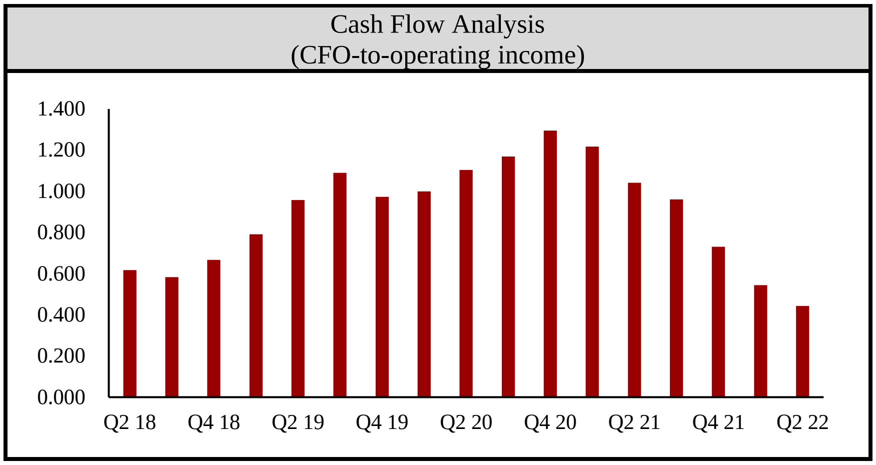


Guidance for elevated capex heightens our concerns: In its Q2 22 Earnings Release, the Company guided for capex to "double" in the next three to four years and to invest SEK 5,000.0 million in production capacity expansion. In our view, the guidance for capex to "double" suggests capex levels may remain elevated and our depreciation ramp/margin pressure concerns are heightened.

> Since we are convinced that the supply-side problems are ultimately of a transient nature and we also perceive good opportunities for growth in all three business areas, we are currently implementing a very ambitious investment programme. The rate of investment will double in the next three to four years and we expect to invest just over SEK 5 billion in increased production capacity alone. In particular, the current paradigm shift in the market in respect of the transition from oil and gas to heat pumps will require a significant increase in production capacity. (Q2 22 Earnings Release, 08/18/22)

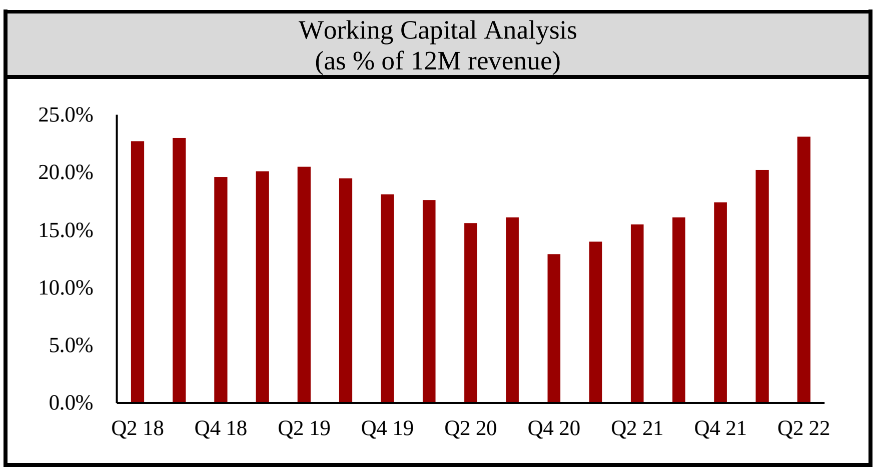
Cash Flow Deterioration Heightens Our Earnings Sustainability Concerns

Working capital driven cash flow deterioration highlights elevated earnings sustainability risk: In the twelve months ended Q2 22, cash from operations (CFO) declined 55.2% year-over-year to SEK 2,165.0 million, while operating income increased 5.3% to SEK 4,891.0 million. Accordingly, CFO-to-operating income declined 57.5% to 0.433, <u>the lowest level in at least five years</u>. Working capital consumed SEK 2,545.0 million of cash in the period. On its Q2 22 Conference Call, the Company attributed the cash flow pressure to elevated inventory levels. In our view, cash flow deterioration driven by working capital (i.e. inventory) cash consumption highlights elevated earnings sustainability risk.



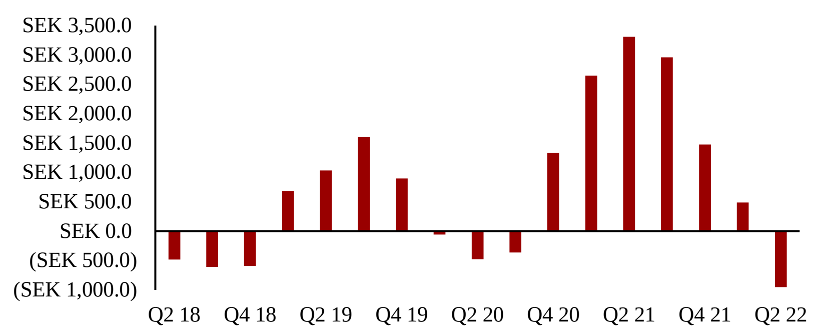
Working capital above "sustainable" levels heightens our concerns: In its quarterly Interim Reports, the Company discloses working capital as a percent of twelve-month revenue. Previously, on its Q4 21 Conference Call on 02/17/22, the Company highlighted 15.0% working capital as a percent of twelve-month revenue was a "more sustainable level." In Q2 22, working capital as a percent of twelve-month revenue increased 760 basis points year-over-year to 23.1%, <u>the highest level in at least five years</u>. Elevated working capital levels above "sustainable" levels heighten our earnings sustainability concerns.

> On the working capital, I mean, it landed in at 17.4%, excluding cash and bank, up from the 12.9%. And **I would rather say that maybe some around 15% is a more sustainable level**, 15%, 16%, somewhere around there. (CFO Mr. Hans Backman, Q4 21 Conference Call, 02/17/22) [emphasis added]



Negative free cash flow heightens our concerns: In the twelve months ended Q2 22, free cash flow declined SEK 4,256.0 million to negative SEK 950.0 million, <u>the lowest level in at least five years</u>. Negative free cash flow heightens our earnings sustainability concerns.

Free Cash Flow Analysis (SEK in millions)



Other Observations: Floating Rate Debt Amid Global Monetary Tightening

Floating rate debt amid global monetary tightening may pressure margins, in our view: In Q4 21, floating rate loans accounted for 93.8% of total bank and bond loans. In its FY 21 Annual Report, the Company disclosed most of its bank and bond loans were floating rate and highlighted a 100-basis point interest rate increase would have a negative SEK 103.0 million profit impact. In our view, substantial floating rate debt levels amid global monetary tightening suggests margins may be pressured to the extent the Company does not hedge its interest rate exposure.

> Since all borrowing in the NIBE Group apart from one bank loan and two bond loans is at floating interest, the Group is exposed only to cash flow risk from financial borrowing. A change in the interest rate of 1% on constant liabilities would have an impact on Group profit of SEK 103 million. (FY 21 Annual Report)

Floating Rate Debt Analysis (SEK in millions)	Q4 21
Floating rate bank loans	SEK 982.0
Floating rate bond loans	SEK 7,100.0
Total floating rate bank and bond loans	SEK 8,082.0
Fixed rate bank loans	SEK 538.0
Total bank and bond loans	SEK 8,620.0
Floating rate as % of total bank and bond loans	93.8%

Conclusion

We are concerned heat pump adoption and revenue may be pressured given high upfront costs, long payback periods, and evidence of limited energy cost savings relative to legacy heating methods. Given the limited cost savings and the need for a supplemental heating source in certain cold-weather climates, we believe heat pump adoption may be dependent on government subsidies. We are concerned legacy HVAC manufacturer heat pump competition may pressure NIBE revenue growth and market share. Our market share concerns are heightened given commentary indicating certain competitors delayed price increases to gain market share and poor NIBE customer reviews. Given the Company's FY 25 guidance implies lower-than-targeted revenue growth, we believe long-term targets may be optimistic and difficult to achieve. Persistently below-targeted revenue growth heightens our concerns. We believe persistently below-targeted inorganic revenue growth despite consistent acquisition activity and negative additional consideration adjustments suggest acquisition quality may have deteriorated and/or acquisitions underperformed internal expectations. We are concerned elevated receivable levels suggest certain customers may have built buffer inventory and channel inventory levels may be elevated. In our view, a recent acquisition and currency fluctuations may not fully rationalize the receivable build. We are concerned an inventory level surge amidst elevated inventory costs suggests inventory may be overbuilt and margins maybe pressured. We believe a capex surge and guidance for capex to remain elevated suggest depreciation may ramp and margins may be pressured. Working capital driven cash flow deterioration and substantial floating rate debt levels amid global monetary policy tightening heighten our earnings sustainability concerns. **We are initiating NIBEb.ST on *The Short List*.**

Risks to Our Thesis & Valuation

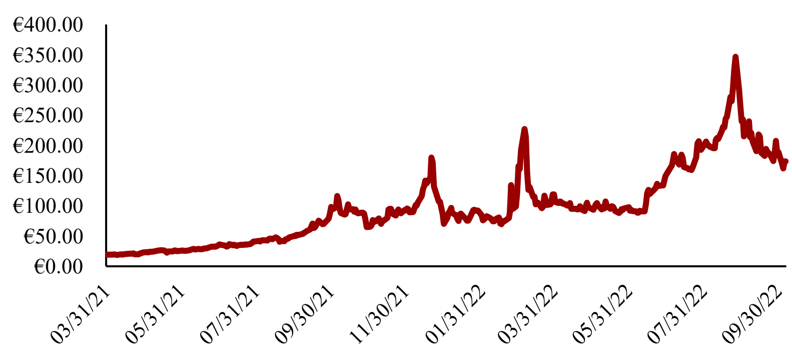
Energy Prices, Government Incentives, Large Market, & Long-Term Targets

Government incentives may drive heat pump adoption: In its FY 21 Annual Report, NIBE highlighted certain government including the UK, Netherlands, Germany, and Norway were "phas[ing] out" fossil-fuels. In its Q2 22 Interim Report, the Company highlighted certain government subsidies drove heat pump adoption and revenue growth in Germany and the UK. On its Q2 22 Conference Call, the Company highlighted the US Inflation Reduction Act provided customer subsidies for certain Climate Solutions products. Specifically, the Company represented certain residential and commercial customers were eligible to receive 10.0% to 30.0% tax reductions and guided for the subsidies to drive heat pump adoption and revenue growth. To the extent certain governments phase out fossil fuel-powered heating, heat pump adoption could accelerate.

> The German market, which is important to us, is also showing very strong growth. This is an effect both of favourable state subsidies, offered in return for energy-efficient and sustainable heat pumps, and the urgent need to become less dependent on Russian oil and gas. The British market is also growing rapidly, thanks to the special subsidies introduced to aid the transition to fossil-free heating. (Q2 22 Interim Report)

Elevated European energy prices may drive energy-efficient adoption: As of 10/06/22, Dutch TTF Natural Gas (i.e. the European natural gas benchmark) surged 59.9% year-over-year to €173.69/MWh.[12] On its Q2 22 Conference Call, the Company highlighted surging energy prices were driving European consumers to minimize their energy bills and adopt heat pumps.

European Natural Gas Price Analysis
(Dutch TTF natural gas continuous futures contract)



Large market with low heat pump penetration highlights growth opportunity: In its FY 21 Annual Report, the Company highlighted its "significant" addressable market. Specifically, the Company highlighted its Climate Solutions addressable market was approximately SEK 500,000.0 million, its Element addressable market was approximately SEK 50,000.0 million, and its Stoves addressable market was approximately SEK 35,000.0 million. In addition, the Company highlighted heat pumps accounted for "only" 5.0% of residential heating needs in 2019.

> Heat pumps met only 5% of global heating needs in residential buildings in 2019 and, according to the IEA, this figure should grow threefold by 2030. (FY 21 Annual Report)

[12] Based on Factset data

Total Addressable Market Analysis (SEK in millions)	FY 21
Climate Solutions addressable market	SEK 500,000.0
Element addressable market	SEK 50,000.0
Stoves addressable market	SEK 35,000.0
Total addressable market	SEK 585,000.0

Long-term revenue growth, operating margin, and ROE targets: In its FY 21 Annual Report, the Company highlighted its long-term targets included (1) annual organic revenue growth of at 10.0%, (2) annual inorganic revenue growth of 10.0%, (3) operating margin on 10.0%, and (4) return on equity of at least 20.0%.

Long-Term Target Analysis	Target
Annual organic revenue growth	10.0%
Annual inorganic revenue growth	10.0%
Annual revenue growth	20.0%
Operating margin	10.0%
Return on equity	20.0%

Valuation Analysis

As of the date of this publication, NIBE's shared traded at 46.7x next-twelve-month earnings, 22.9% above its five-year average of 38.0x.

Valuation Analysis	Publication Date	1Y Ago	3Y Ago	5Y Average
NTM P/E	46.7x	63.7x	24.3x	38.0x

Disclaimer and Disclosure

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