



Cutting-edge quality with high price tag

Vaisala's journey has developed well and with its revised strategy the company continues to seek scalable growth within high-end measurement solutions. We find Vaisala's valuation stretched but a solid expected 14% annual EPS growth is in favor of holding the stock.

Global player in value-adding high-end measurements

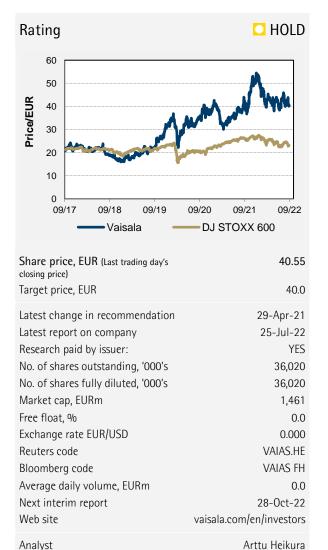
Vaisala operates in niche segments of weather, environmental and industrial measurements. The company focuses high value-adding processes and delivers mostly customized solutions. The company emphasizes its R&D activities with annual investments of 13% of net sales on average. We see Vaisala having solid competitive advantages, such as science-based technology leadership, elevated knowledge in high-mix/low-volume operations, a broad product portfolio, and fast and reliable delivery. Moreover, bolt-on acquisitions have boosted the company's market share and provided new growth opportunities in new market areas.

Continuity with the revised strategy

Vaisala updated its well-succeeded strategy in 2021 to better reflect the core of its business, vision, and megatrends applying to its industry. The company highlights its product and technology leadership, deep customer understanding and application know-how, scalability, and engaged and talented personnel in its current strategy. In our view, the execution of the company's strategy has started well. Vaisala has grown quite profitably in 2021 and 22, and in early 2022, the company acquired US-based SaaS company AerisWeather to increase its technological capabilities and scalable digital business.

Uncertain market environment forms some gray clouds

We see the current market environment as quite uncertain and with slowing GDP growth and industrial activity, we revised our 2023–24 estimates slightly downwards. The company's valuation is quite stretched, and valuation multiples have no room for any upside in our view. With our revised estimates and Vaisala's elevated valuation, we lower our TP to EUR 40.0 (prev. 43.0) and retain HOLD-rating.



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KEY FIGU	RES									
	Sales EURm	EBIT EURm	EBIT %	FCF EURm	EPS EUR	P/E (x)	EV/Sales (x)	EV/EBIT (x)	FCF yield %	DPS EUR
2020	379.5	44.8	11.8%	5.6	0.91	44.2	3.9	32.7	0.4	0.61
2021	437.9	50.1	11.4%	58.4	1.08	49.4	4.3	37.9	3.0	0.68
2022E	491.1	58.2	11.9%	39.9	1.17	34.5	2.9	24.4	2.7	0.70
2023E	520.0	66.3	12.7%	47.3	1.44	28.2	2.7	21.1	3.2	0.83
2024E	542.7	73.5	13.5%	50.1	1.61	25.2	2.5	18.7	3.4	0.92
Market cap, EURm 1,461			1,461	Gearing 2022E,		14.2				
Net debt 2022E, EURm -46			Price/book 2022	5.9 CAGR sales 2021-24, %				7.4		
Enterprise value, EURm 1,419			Dividend yield 2022E, %			1.7 ROE 2022E, %				
Total assets 2022E, EURm 434			434	Tax rate 2022E,		24.4 ROCE 2022E, %				
Goodwill 2022E, EURm 29			Equity ratio 2022E, % 57.1 PEG, P/E 22/CAGR						2.5	

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Investment summary

Value-adding solutions for weather, environmental and industrial customers

Vaisala designs, develops, manufactures, and markets equipment, systems, and services for weather, environmental, and industrial measurements. The company focuses on high-end value-adding applications and is a business-critical partner for its customers. Vaisala operates in two business areas: Industrial Measurements (IM) and Weather and Environment (W&E). IM provides solutions mostly for private corporations to understand and optimize their industrial processes better. With precise measurements and data, IM's customers can improve efficiency and save resources, such as materials and energy. With W&E's measurements and data, its customers can increase safety, protection, and efficiency. The majority of W&E's customer base is public sector-related.

Wide product portfolio with strong focus on annual R&D activities

The company emphasizes R&D in order to maintain its technology leadership and protect its market leader position in selected markets. Vaisala focuses on high value-add solutions by providing high-end measurement products and services in niche markets. Most of the company's products are customized and made on demand. With high-mix/low-volume production, Vaisala has over 300 product families with 9,000 different products. In the past, Vaisala has regularly acquired new businesses to widen its portfolio and expand into new markets.

Vaisala has multiple competitive advantages

With its science-based technology leadership and abilities to manage high-mix/low-volume operations, the company enjoys competitive advantages over bulk and average-level producers. Vaisala has been a reliable partner in delivering orders and its product lead times, especially in IM, are quite short. To our understanding, Vaisala has won customer ships during 2021-22 due to reliable and fast delivery times. In our view, this is a product of strong negotiation power as well as having a solid supply chain and strong relationships with suppliers. Moreover, industries in which Vaisala is operating require high technological capabilities and thus industry's entry barriers are quite high.

Industrial solutions showing strong growth

Vaisala's net sales amounted to EUR 437.9m and its EBIT margin was 11% in 2021. During 2010-21, the company has grown at a CAGR of 5%. During the same period, IM's revenue has increased at a CAGR of 10% while W&E has shown annual growth of 3%. W&E represents 60% of Vaisala's sales, but IM has grown clearly faster driven by strong demand and has generated the majority of Vaisala's profits in recent years due to its scalable business.

15-17% implied market share

Vaisala's total addressable market size is estimated to range between EUR 2.6-3.0bn. The industrial market is approximated to amount to EUR 1.3-1.6bn and annual growth varies around 8% while the weather and environmental market is estimated to be between EUR 1.3-1.5bn with annual growth of \sim 5%. Vaisala's implied market share varies approx. between 15-17%. Several megatrends support growth in Vaisala's target markets.

We slightly downgraded our estimates, but expect EBIT to improve We see the current market environment as quite uncertain and with slowing GDP growth and industrial activity, we slightly downgraded our 2023-24 estimates. We, however, expect both business areas to continue their growth with group net sales amounting to EUR 491.1m (+12% y/y), 520m (+6% y/y), and 542.7m (+4% y/y) during 2022-24E. With continuous investments in scalability, we expect Vaisala's EBIT margin to gradually improve. In 2022, we expect an EBIT margin of 11.9%, while 2023-24 EBIT margin estimates are 12.7% and 13.5% respectively. Improving gross margin with the component shortage easing has also notable impact on the company's profitability.

HOLD with a TP of EUR 40.0 (prev. 43.0)

With 23E EV/EBIT and P/E multiples of 21x and 29x, we see the company's valuation quite elevated. Vaisala trades with a premium compared to its peers which is in our view justified but the current valuation offers no opportunities for additional purchases. However, with the predicted EPS CAGR (2022-24) of 14%, we find it favourable to continue the journey aboard Vaisala. With our revised estimates and stretched valuation, we adjust our TP to EUR 40.0 (prev. 43.0) and retain HOLD-rating.

Company overview

Business critical partner providing accurate measurement solutions

Vaisala is a leading player in developing, manufacturing, and selling equipment, instruments, and systems for weather, environmental and industrial measurements. The company's accurate measurements play a business critical role for its customers and therefore generate high value-add. In addition to measurement equipment, the company provides installation, testing, training as well as maintenance, calibration, and digital application services. Moreover, Vaisala designs and implements large-scale weather and environmental projects around the Globe. Vaisala serves both public and private customers in its weather and environmental measurement markets and mostly private customers in industrial measurement markets.

Over 80 years of experience in measuring the environment

The company was founded in 1936 by a Finnish meteorologist and physicist, Professor Vilho Väisälä, when the first radiosonde pieces were sold to the Massachusetts Institute of Technology, MIT. The company was listed on the Helsinki OTC-list in 1988 and has been listed on the Helsinki primary stock exchange since 1994. Current President and CEO Kai Öistämö joined Vaisala (10/2020) from the US technology company InterDigital, where he has held the position of Chief Operating Officer since 2018, before which he served as a Member of the Board. Öistämö has also worked at private equity company Siris Capital Group and been in several leadership positions at Nokia, where he was part of the company's Executive Board between 2006 and 2014.

Global player headquartered in Finland Vaisala operates in 150+ countries and has 25+ offices in 16 different countries. The company is headquartered in Vantaa, Finland with an R&D center and production facilities. Vaisala has direct sales organizations in 20 countries and the company uses over 100 different distributors or agents. The company sells its products also through its online store. In Q2'22, Vaisala employed over 2,000 of which 29% worked in R&D.

Vaisala provides high value-added solutions

The company delivers primarily high value-added solutions. Vaisala highly emphasizes R&D, product and technology leadership, and a high-mix/low-volume operation approach. The company holds a portfolio of 300 product families, that is composed of 9,000 different products. Vaisala has factories in Vantaa (Finland), Boulder (Colorado, USA), Paris (France), and Shanghai (China). The company manufactures critical components as well as assembles, calibrates, and tests measuring equipment in-house. Meanwhile, standardized components are sourced both from strategic partners and other suppliers. Digitalization has increased the usage of data and the role of software in Vaisala's solutions is ever emphasized. Nowadays, significant amount personnel working in R&D are software developers.

Figure 1: Personnel by regions

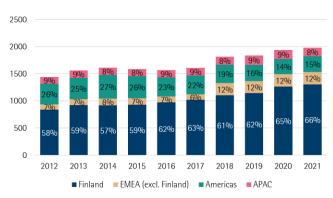


Figure 2: Personnel by units



Source: Vaisala, Evli Research

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Business model

R&D is in the heart of Vaisala

Vaisala has an asset-light business model where investment needs are low which can be seen in solid return on capital. The company emphasizes its annual R&D activities as a long-term investment which has been one of the key factors in Vaisala's long-term success. The company invests ~13% of its net sales in R&D annually to ensure its technology leadership, modernize outdated (or commoditized) products and develop completely new products and technologies. R&D is also a way to fight against competition and price erosion.

Providing highly customized solutions

Vaisala emphasizes its high-mix/low-volume operations and focuses purely on high value-added products. Vaisala aims to solve customers' business-critical challenges and to be a value-adding partner. Vaisala produces high-end technology based on science and research, and the environments where Vaisala's instruments are used are typically challenging in terms of measuring, such as space, data centers, offshore wind farms, maritime, etc. A significant part of Vaisala's offering is customized to respond to customers' personal needs and most industrial products are produced on demand. The fact that Vaisala made 1,100 product changes in 2021 indicates Vaisala's ability to respond to customer needs fast. Although, the company has some marginal mass production in radiosondes to our understanding. In addition to high value-adding product deliveries, Vaisala provides near-product services and projects. Moreover, Vaisala has initiated scalable weather and environment data services that yield recurring revenue.

The product portfolio consists of 9,000 different products

With the concept of the Vaisala Production System (VPS), the company is mastering over 300 product families and around 9,000 different products. According to the company's management, the way VPS is conducted is unique and hard to copy. Vaisala produces sensors and critical chips in its Vantaa's (Finland) clean room. Meanwhile, the company outsources standardized, less critical, and asset-intensive processes to trusted partners. Final assembly, calibration, and testing are conducted in Vaisala's four factories. Within VPS and other operations, the company is constantly seeking opportunities to increase efficiency to further scale the business as a part of its strategy.

Bolt-on acquisitions to bring new technologies

M&A has also been an essential part of Vaisala's business development. In the past, Vaisala has acquired multiple companies and technologies mainly for supporting its Weather and Environment business area. Through acquisitions, Vaisala aims to access new technologies and markets as well as gain new competencies. In January 2022, Vaisala announced the acquisition of US-based software company AerisWeather which provides weather and environmental data services. Through the acquisition of AerisWeather, Vaisala increased its digital business (Daas/SaaS), obtained crucial development tools and capabilities, and expanded further its customer base and offering.

Megatrends drive the market growth

Climate change being the most influential, Vaisala's business model relies on multiple megatrends that change the world and consuming behavior. Vaisala offers solutions to enable businesses to understand, mitigate and adapt to changing world, for example to climate change. Other crucial megatrends, such as renewable energy, resource efficiency, and well-being and health, offer Vaisala new resources for applying its technologies and know-how and therefore opening new business opportunities. The company has emphasized its handprint, i.e., how Vaisala's solutions reduce climate change.



Figure 3: Megatrends



Climate change

- Increasing knowledge and resilience to extreme weather
- Enhancing production process efficiency, decreasing emissions



Renewable energy

- Optimizing, predicting and planning wind energy solutions
- Optimizing biogas process to increase plant efficiency



Resource efficiency

- Increasing efficiency and circular economy
- Driving high-end product quality and long product lifecycles



Well-being and health

- Monitoring development and manufacturing in regulated industries
- Providing data on environmental indoor and outdoor conditions



Smart energy distribution and consumption

Help to optimize industrial processes in energy-intensive industries



Green and smart cities

- Instruments to measure and model air quality, road conditions as well as microclimates critical to economic activities
- Measurement technologies for buildings and industrial environments



Future of mobility

- Insights for operators and users of road infra and vehicles
- Navigational and infotainment systems with accurate weather and environmental data



Digitalization

- Optimizing road maintenance and providing data for vehicles
- Interfaces for industrial customers' systems
- Process control

Source: Vaisala, Evli Research

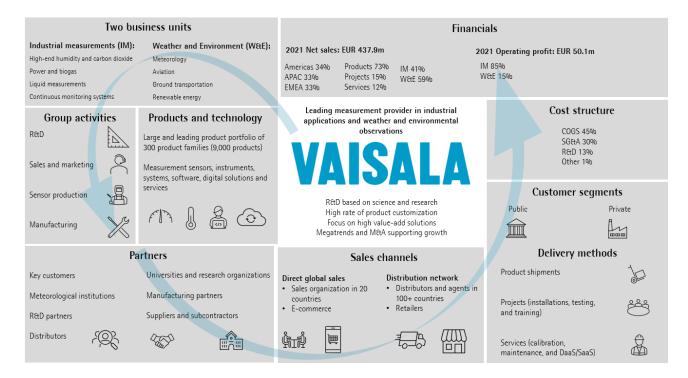
Products, services, and projects as a part of portfolio

Through its sales organizations and distribution network, Vaisala serves both its public and private customers. Vaisala has sales organizations in ~20 countries and a distribution network in over 200 countries. In addition to sales through contact person, the company sells its products via its online store (mainly IM solutions) and also using retailers. Vaisala offers plain products, projects (installations, testing, and training), and services (calibration, maintenance, and DaaS/SaaS) of which the product sales represent the majority of Vaisala's income.

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Figure 4: Vaisala's business model



Source: Vaisala, Evli Research

R&D

Figure 5: R&D expenditure in EURm (% of net sales in labels)



Source: Vaisala, Evli Research

~13% of net sales reinvested in R&D

Vaisala's research and development scope range from silicon chips to complete systems, software, and digital solutions. R&D investments have increased significantly during the past years, amounting to approx. EUR 55m (13% of net sales) in 2021. Even during the pandemic year 2020, Vaisala continued increasing its long-term investments in developing its offering, contrary to its competitors. The average level of R&D investment has varied around 13% in recent years. Weather and Environment business area accounted for two-thirds of R&D investment while Industrial Measurements unit

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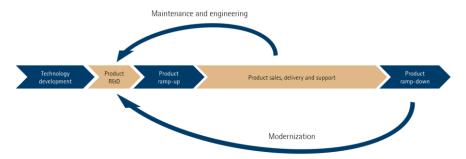
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accounted for a third. Vaisala also collaborates with research institutes and universities across various scientific and technological fields. Nowadays software development is an essential factor in Vaisala's R&D as all its products include some sort of software. In addition, the company develops digital solutions which include more sophisticated software and Al/machine learning algorithms alongside hardware. Vaisala's weather forecasts are also based on data and algorithms designed by software engineers.

R&D is a way to modernize outdated technologies

Approximately two-thirds of Vaisala's R&tD expenditures are related to the renewal of existing offerings and defending its current market position. Around 50% of annual R&tD spend is used for product modernization whereas the development of new products accounts for ~20%. Meanwhile, a fifth relates to the maintenance of the current product portfolio while the rest ~10% of R&tD expenditures is used for new technology pre-studies and research projects. Vaisala applies for patents selectively since the application process reveals valuable information to competitors.

Figure 6: Illustration of R&D process and product lifetime



Source: Vaisala, Evli Research



Operations

Vaisala has four factories located across the Globe

Operations manufactures products for both business areas and ensures that high-mix/low-volume procedure is functioning efficiently. The command of a large product portfolio without compromising quality is one Vaisala's core strength. Sensors, the most critical parts of Vaisala's equipment, are manufactured in the company's cleanroom in Vantaa, Finland. Meanwhile, the manufacturing of subassemblies is outsourced to partners such as Enics. Final assembly, calibration and testing is conducted in Vaisala's four factories. Vaisala's main factory locates in Finland, while facilities in the US are for the needs of American customers. To our understanding, Vaisala has still room for an extra capacity in its existing facilities as the factories operate only in two shifts (possibility for a third shift).

1,100 engineering changes were made to respond to customers' needs

Vaisala's offering covers over 300 product families and approx. 9,000 products. Due to variations in customers' needs and low component availability, Vaisala made around 1,100 product changes in 2021. The products are typically highly customized and made on demand according to customer specifications, which results in limited inventories. In larger project deliveries, Vaisala utilizes external partners in areas such as civil engineering and on-site installation. Meanwhile, project consulting and training are conducted by Vaisala.

Figure 7: Facts about suppliers in 2021



Source: Vaisala, Evli Research

Supplier network is constructed carefully

Vaisala's supplier management model has four different categories: potential, approved, preferred, and strategic suppliers. In addition to these categories, suppliers may be, for example, in phase-out when their contracts are being discontinued gradually or on a watch list when they are monitored closely due to serious issues experienced over the long-term. The classification defines the relationship between Vaisala and the supplier and outlines the management model for each category. All suppliers are expected to meet certain requirements before they can be approved and categorized.

Components are sourced mainly from Finland, the EU, and the US

Vaisala has optimized its supply chain by reducing the number of subcontractors from 900 to around 450 over the past few years, which allows for more efficient procurement. Vaisala's direct suppliers are typically located near its product development. Subassemblies, components, and mechanical parts are sourced mainly from Finland and other European countries as well as the United States which in total represented 94% of Vaisala's material spending in 2021. The other 6% is sourced from Japan, South Korea, or China.

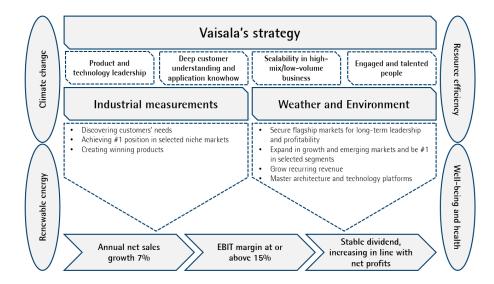
We see Vaisala's supply chain as efficient

In our view, Vaisala has a quite efficient supply chain that has proved itself during challenging times of component shortage. During 2021 and 22, Vaisala has had to source critical components from spot markets, which might have increased the number of subcontractors temporarily. So far, according to the company's management, Vaisala has delivered all its orders despite component shortages, whereas some corresponding electrical equipment providers have had to delay some product deliveries.

Group strategy

Vaisala updated its well-succeeded strategy in 2021 to better reflect the core of its business, vision, and megatrends applying to its industry. The company's strategy is built upon four different pillars: product and technology leadership, customer experience, scalability in high-mix/low-volume business and engaged and talented people.

Figure 8: Vaisala's strategy



Source: Vaisala, Evli Research

Product and technology leadership:

Vaisala's success relies on research and all its technologies are based on scientifical innovations. The company makes significant annual investments in R&D in order to innovate and create new technologies and defend and grow its market share. Vaisala's high-quality and reliable technologies range from sensors to digital solutions. Digital solutions also enable business models based on recurring revenues.

Customer understanding and application expertise:

The company's measurement solutions are based on a deep understanding of its customers' needs in versatile applications of weather, environment, and industrial measurements. To serve and understand its customer better, Vaisala acts as a continuous collaborator from the beginning of the design phase to ongoing services after the product delivery.

Scalable business model:

Vaisala's portfolio includes hundreds of product families and thousands of products, and the company serves customers through various sales channels in over 150 countries. Different applications require different products and solutions, which results in a on demand manufacturing, requiring operational excellence, supported by accordingly developed ways of working and scalable product platforms.

Engaged and talented employees:

Vaisala offers versatile opportunities for talented and motivated professionals who value work with a purpose and learning opportunities. The company supports the well-being of its employees and is willing to make sure they have the chance to develop at work. In an annual employee survey, the company monitors how its employees are feeling about their work. Additionally, Vaisala founded a work group to find new ways of working and ensure that its employees stay motivated also in the years to come.

Technology leadership brings competitive advantages

Close cooperation with customers enhances customer relations

Thicker margins with help of improved scalability

Competition for software developers is very high in Finland

Targeting 7% growth and an EBIT margin of 15%

Evli's comments on Vaisala's strategy:

We see Vaisala having a clear competitive advantage regarding its product portfolio quality and technological leadership. For example, IM's high-end customers usually choose Vaisala based on the company's high technology products and reliable deliveries. Moreover, Vaisala gained market share during 2021–22 by providing better availability than its competitors.

Vaisala's target is to know its customers better. Especially in IM, the company has lots of retail customers whom the company doesn't know directly. However, with clever usage of data, we see Vaisala serving its unknown customers better. Meanwhile, we see that Vaisala is partnering with its known customers closely and with the close cooperation, Vaisala can design and deliver even higher technology measurements.

For the company to achieve its profitability targets, Vaisala has to improve its scalability. While IM has shown its model to be scalable, W&E has some to improve. However, with W&E growing its share in digital business we see the company's overall scalability improving and margins widening. In addition, by IM growing its share of total sales, the group profitability explicitly improves.

It is also crucial for the company to recruit high talents and keep personnel satisfied in their current jobs at Vaisala. The company has made investments in its personnel in order to maintain strong position of a tech-employer. For example, Vaisala has grounded new premises near Helsinki center to attract skilled software developers in R&D. The labor market for software developers is very competitive in Finland. In our view, Vaisala has a strong employer image in terms of R&D focus and sustainability.

Financial targets

With its revised strategy the company also upgraded its long-term financial targets to correspond to increased ambition and its focus on operational excellence. Now the company's target is to achieve an average annual growth of 7% and an operating profit (EBIT) margin of 15% by the end of the strategy period while before revenue growth target was 5% and an EBIT margin over 12%. In line with its net profit development, Vaisala aims to distribute stable dividends to its shareholders.

Figure 9: Revenue growth target during 2014-21



Source: Vaisala, Evli Research



2021 growth was strong and outpaced Vaisala's growth target By examining a longer-term topline development, Vaisala has grown in line with its previous 5% target (2010-21 CAGR ~5%). After the decline of the pandemic year 2020, Vaisala has shown even stronger growth both in 2021 and 2022 driven by both business areas. The current strategy period started well as the company recorded a record-high growth rate of 15% in 2021, exceeding its new growth target of 7% clearly. The momentum is supported by favourable market demand while the cost side has been under pressure. With continuous investments in R&D and by gaining further market share in industrial measurements, we see the growth target of 7% to be well achievable. However, a possible recession and declined industrial activity have an inevitable impact on Vaisala's topline development.

Figure 10: EBIT margin target during 2014-21



Source: Vaisala, Evli Research

Margin target is still somewhat far away

EBIT margin target is achieved with multiple factors

Vaisala has struggled in achieving its profitability target over recent years. In 2020, the company's actualized relative profitability almost touched its target level of 12% despite decreased volumes due to the COVID-19 pandemic. In 2021, the company updated its operative profit margin target back to 15%, reflecting increased ambition and future investments in operational excellence.

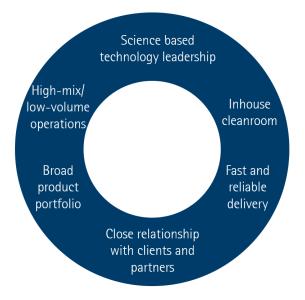
To our understanding, the new EBIT margin target relies somewhat on the growing share of Vaisala's more profitable business of Industrial Measurements, which in fact has been growing strongly during recent years and the outlook seems bright with the megatrends supporting the market growth. However, achieving the EBIT margin target of 15% requires growth and improving margins also in the W&E business. Our long-term EBIT margin estimates are still below the company's target of 15% as we wait for further evidence of the company's positive margin development.

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Competitive advantages

Figure 11: Competitive advantages



Source: Evli Research

Vaisala competes with quality and reliability

Vaisala operates within measurements that require high technology and know-how. The company deals with customers that are willing to pay the price corresponding to the high level of technology. In most cases, the company rather competes with quality and delivery reliability than price, especially in Industrial Measurements. With that, the company avoids price competition.

R&D supports Vaisala's technology leadership and competitive position

Annual R&D investments maintain and enhance Vaisala's technology leadership. Vaisala has an extensive experience from measurement industry for around 80 years. Due to the high technology intensity, the industry's entry barriers are quite high. The company has its own cleanroom which enables seamless cooperation between production and R&D, which results in improving lead times. Moreover, the cleanroom provides Vaisala ability to make guick product changes and adapt to other changes in the environment. For example, in 2021, extra engineering changes were made due to component shortage. All in all, with its own cleanroom Vaisala can execute critical R&D and production stages inhouse instead of outsourcing them.

Value-add with high rate of product customization By utilizing its high-mix/low-volume operations, Vaisala is able to customize its products or deliver substituting solutions to respond to customers' needs. Moreover, Vaisala has managed well in combining fast delivery times and on demand production. For example, while a significant part of IM's orders is made on demand, its delivery times vary from only a day to a few days on average.

Vaisala has close relationships with its clients and partners

In our view, Vaisala's close relationships with clients and partners generate an additional competitive advantage. According to the company's management, some customers have said that they accept only Vaisala's products as a part of their solution despite the potentially higher price. In our view, this stems from Vaisala's technology leadership but customer experience and reliability also play a big part.

Financial position

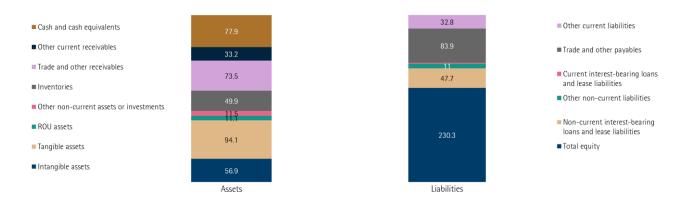
Vaisala has a strong balance sheet that provides stability and allows growth through selected acquisitions. At the end of 2021, Vaisala's balance sheet amounted to approx. to EUR 408m.

Vaisala's intangible assets worth EUR 57m consists mostly of goodwill and technologybased intangible assets such as patents and trademarks. At the end of 2021, Vaisala's balance sheet contained goodwill worth EUR 29.6m which were entirely allocated to the WEE business area. Technology-based intangible assets amounted to EUR 21.6m. The company's tangible assets amounted to EUR 94.1m which consists mostly of buildings, structures, machinery, and equipment.

Towards 2020-21, Vaisala's inventories have increased relatively, partly driven by increased component buffer due to component shortage. At the end of 2021, inventories amounted to EUR 49.9m. Vaisala had a strong cash position, with cash and cash eguivalents amounting to EUR 80m at the end of 2021. With the acquisition of AerisWeather, the cash position declined somewhat and amounted to EUR 48.4m in Q2'22.

Vaisala's equity accounted for EUR 230.3m at the end of 2021. Return on equity (ROE) has varied quite modestly between 16-18% due to hefty equity ratio of over 50%. We have estimated that a conservative owner base somewhat restricts possibilities to use leverage. The company had non-current interest-bearing debt worth EUR 40m. Net debt, excluding interest-bearing lease liabilities, at the end of 2021 amounted to EUR -37.8m, representing a gearing ratio of -16%. Return on invested capital (ROIC) has been strong by varying between 19-21% in recent years which is in our view has generated shareholder value.

Figure 12: Balance sheet at the end of 2021



Source: Vaisala, Evli Research



Two business areas

There are technology and cost synergies between business areas

Vaisala operates in two business areas: Industrial Measurements (IM) and Weather & Environment (W&E). W&E has been the leading business area, but during recent years IM has been catching W&E with its success in fast-growing markets. The business areas enjoy somewhat synergies by using the same production lines, cleanroom, and ERPs. There are also some technology synergies between business areas as R&D takes place in the same facilities and human capital knowledge is shared between the units. In contrast, the two business areas are clearly different in terms of customer base. W&E serves mostly large public sector clients directly. In contrast, IM serves mostly private sector clients, many of them through distributors. Therefore cross-selling and other revenue synergies are out of reach.

Markets

Figure 13: Vaisala's markets



Source: Vaisala, Evli Research

Vaisala has stable position in its flagship markets

By combining both business areas' addressable markets, Vaisala's current market size is worth EUR 2.6-3bn (based on the company's assessment). The total market split up evenly between the two business areas. However, the market growth in industrial applications is somewhat higher than in weather and environment. IM's flagship markets are expected to grow at a CAGR of 6% while IM's growing markets are estimated to see an annual growth of 5-10%. W&E's flagship market annual growth rate is quite moderate, varying between 0-5%. On the other hand, W&E's growth and emerging markets are expected to grow at a CAGR of 5-10%.

Implied market share approx. 15-17%

The markets are very fragmented and Vaisala is one of the few players focusing on such many measurements. Competitors usually focus on certain applications, industries, or technologies. Vaisala's implied market share varies around 15-17%.

Technologies and parameters outside Vaisala's current portfolio are excluded from the market estimates. Meanwhile, estimates include such regions in which Vaisala is not currently operating but sees as attractive.

^{*} Evli's assessment



Competition

Competitive field very fragmented

Vaisala operates in various niche markets globally and therefore, the competitive field is very fragmented. Contrary to Vaisala, its competitors tend to focus on specific types of products or applications, which makes it difficult to identify direct competitors. The competition in industrial instruments is more global and competitors include also larger companies. Meanwhile, the number of listed competitors especially in many weather-focused niche markets is limited and potential competitors are usually smaller non-listed and local companies. Moreover, many competitors have also other departments outside the industries of weather, environmental and industrial measurements. Vaisala competes with players like E+E, Ellab, Endress+Hauser, and Leonardo.

Acquisitions

Figure 14: Selected acquisitions



Source: Vaisala, Evli Research

N.B. Green colour represents W&E, blue colour represents IM

WEE boosting its growth via acquisitions

Vaisala, particularly in W&E applications, has boosted its growth and technology portfolio and expanded into new markets with selected acquisitions. While W&E has executed acquisitions regularly, so far, IM has acquired two businesses in the 21st century, namely Canadian Veriteq and K-Patents from Finland. The company has acquired both new technologies and entire companies, but typically the acquired businesses have been fairly small in terms of net sales, and they have operated in markets or technologies where Vaisala has not been fully present yet.

Previous acquisitions have focused on bringing new technologies or capabilities Vaisala's largest acquisition took place in 2018 when the company acquired the French Leosphere which manufactures remote wind sensing LiDAR instruments for wind energy, aviation, meteorology, and air quality applications. Leosphere's net sales in 2017 amounted to EUR 27 million and the deal value was EUR 38 million, representing a 1.4x EV/Sales multiple. Concerning the highlighted need for non-fossil energy, we see Vaisala positioned well for the wave of increased investments in renewable energy and green transition. In 2019, Vaisala reinforced its weather forecasts and digital abilities with the acquisition of Foreca's B2B weather business. The transferring business serves critical professional customers in the fields of transportation, energy, and industry. At the beginning of 2022, the company acquired US weather software company AerisWeather, which is a subscription-based software company providing weather and environmental data services. AerisWeather generated net sales worth USD 3.2m and a break-even operating profit in 2021. The deal value was USD 26m, representing an 8.1x EV/Sales multiple. AerisWeather brings to the table industry-leading data services and developer

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tools that combined with Vaisala's existing measurement and forecasting technologies accelerate the company's digital business more rapidly.

IM has entered new markets through two acquisitions

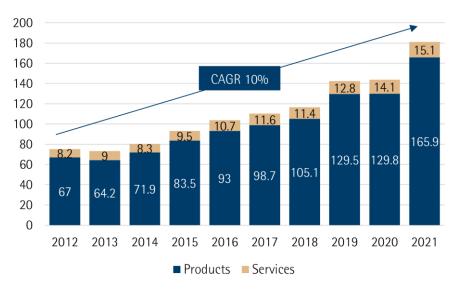
Vaisala entered the liquid measurement market by acquiring a Finnish K-Patents Group in December 2018. Net sales of K-Patents were EUR 11.4 million in 2017 and the purchase price amounted to EUR 12.5 million, representing a 1.1x EV/Sales multiple. K-Patents was a global market leader in in-line process refractometers for hundreds of applications in e.g., pulp and paper, food, and beverage, pharmaceutical, and semiconductor industries. The liquid measurement applications vary from measuring the sugar content of soft drinks and juices to measuring the concentration of paper-coating chemicals. The acquisition expanded Industrial Measurement's portfolio from gas measurements to high-end liquid measurements and strengthened Vaisala's market position in environmental and industrial measurements. With the company's platform, strong balance sheet, and current valuation, Vaisala is in a good position to continue value accreditive acquisitions in our view.



Industrial Measurements (IM)

IM focuses on businesscritical applications in niche markets Industrial Measurements business area serves customers in selected industrial applications. IM provides indoor measuring systems that help clients to improve product quality, productivity, energy efficiency, maintenance activities, and regulatory compliance. IM manufactures and develops instruments, systems, and related services for tens of thousands of different customers. IM operates in selected niche industrial applications in which the measurement is business-critical feature and measurement conditions are usually challenging requiring high technology and know-how. With Vaisala's technology and R&D capabilities, IM is capable to offer customers high-end measuring solutions.

Figure 15: IM's net sales development in EURm during 2012-21



Source: Vaisala, Evli Research

Revenue has over doubled for 9 years

The business area's net sales have grown quite strongly during the last decade at a CAGR of 10%. To our understanding, the growth is mostly organic as IM has executed only two acquisitions during its time as a listed company. IM's sales from services represented ~8% of total net sales in 2021 while product deliveries are the main drivers of the business. During 2012–21, service sales have grown quite steadily at a CAGR of 7%.

Customers

IM's customer base
consists primarily of
private B2B customers

To our understanding, IM serves mostly private customers. IM's customer base consists of system integrators, OEMs, and end users. The business area splits up its customer base into three categories: 1) key customers, 2) non-active but significant customers, and 3) retail customers. Key customers are known well and non-active customers to some extent, but the understanding of retail customers is somewhat limited. In its renewed strategy the company emphasizes customer understanding and to our understanding,

the company is also investing in knowing its retail customers better.

IM selling directly and through distributors

The majority of IM's sales are direct sales either on demand or from online store. Due to the large and heterogeneous customer base, IM also relies on distributors. As the business area's sales are focused on product sales, the average delivery time approximates to a few days which results in a small inventory of finished products. To our understanding, IM's average transaction is quite low, approximating to few thousand euros. IM's product typically represents a small part of clients' total capital expenditures

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and hence IM has a quite good position in the pricing sense which can be seen in wider product margins. Moreover, the demand for industrial solutions has not been notably sensitive to economic cycles. We see IM's customer risk as quite moderate given its extensive customer base.

IM operates in several industrial markets

In specific areas, IM is said to be a clear market leader. According to the company's management, all large data center providers use Vaisala's solutions. To our understanding, Vaisala is a player of which solutions fulfill data centers' requirements the best. Moreover, according to IM's management, almost all of the world's largest pharmaceutical manufacturers use Vaisala's technology in their processes. IM operates in the following industries:

- Food, beverage, and agriculture
- Traditional industrial manufacturers
 - Automotive
 - Battery
- Power plants and transformers
- Biogas
- Data centers
- Life science and pharmaceutical
- Semiconductors
- Fuel, oil, gas, and petrochemicals
- Research facilities and cleanrooms

Products and services

Vaisala's IM product offering consists of transmitters, handheld devices, OEM modules, and continuous monitoring systems, including wireless solutions. Over 90% of IM's net sales consist of product sales. Depending on customers' processes and their needs, the company continuously discovers new parameters to measure. The measured parameters include:

- Humidity
- Carbon dioxide
- Vaporized hydrogen peroxide
- Hydrogen
- Temperature
- CO2
- Dew point
- Moisture in oil
- Structural moisture
- Pressure
- Methane
- Dissolved gas in oil
- Other crucial parameters

Along with product deliveries, Vaisala also provides services connected to its products. IM's services consist mainly of calibration, CMS (continuous monitoring system), consulting, warranties, technical support, and system maintenance.



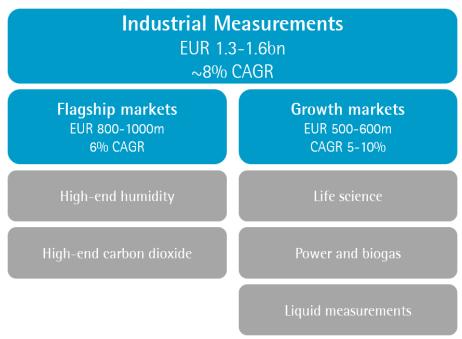
Strategy

IM solving customers' problems better than else

IM's strategic goal is to solve customers' problems better than anybody else, i.e., to invent, design, and produce high-end solutions such that its competitors cannot provide, and eventually achieve a position of a market leader in selected markets. Starting from the designing phase, Vaisala usually cooperates closely with its significant customers to understand a measured object better and therefore IM creates market-leading products and value-add for its customers. According to the company's management, IM has invested in R&D more than its competitors which can be indirectly seen in triplicated revenue during the recent 10 years.

Markets

Figure 16: Industrial Measurements' markets



Source: Vaisala, Evli Research

Flagship markets represent the majority of IM's business IM has operated in its flagship markets, i.e., high-end humidity and carbon dioxide, for 30-50 years and is a well-known market leader. Approximately ³/₄ of its revenue comes from flagship markets. Flagship markets face a solid annual growth of 6% whereas the market is worth EUR 800-1,000m in the company's calculations.

Other markets showing high growth rates

The growth markets, namely, life science, power and biogas, and liquid measurements, represent a quarter of IM's sales, but these markets face more rapid growth with megatrends supporting the development and are expected to increase their share over IM's traditional sales. The company approximates the total market size to be worth EUR 500-600m. Vaisala is still a young player in growth markets and has entered some markets through acquisitions. To our understanding, the company is more heavily investing in its solutions in growth markets to gain new customers and improve its market share.

High value-creation "on top of the pyramid"

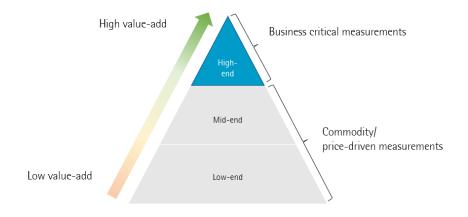
IM aims to operate in the high-end categories, i.e., on top of the value pyramid (see Figure 17) where measurements are business critical. To our understanding, should a product fall towards the mid- or low-end category, Vaisala considers either modernizing the technology with R&D or fully divesting it. The outcome is directly associated with the

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company's target position in the value chain; Vaisala aims to operate only in high valueadd sections. Mid- and low-end categories can be seen as commodities in which price competition is present.

Figure 17: IM's position



Source: Vaisala (CMD 2021 audiocast), Evli Research

Need for precise and reliable measurements is increasing

The products, parameters, and market environment change quite rapidly in industrial applications. The company sees the need for precise and reliable measurements steadily increasing with the industrial processes becoming more challenging and sophisticated requiring high-technology solutions and therefore generating Vaisala new business opportunities. However, all this requires Vaisala to continue investing in R&D and to be among the first movers.

Figure 18: Purchasing manager indices



Source: Bloomberg, IHS Markit, S&P Global, Evli Research

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Slowing industrial activity might have an impact on IM's performance

Purchasing manager indices (PMI) have seen some downward adjustments from their all-time highs since 2021. The slope is more prominent in Eurozone and United States while Japan's PMI has been somewhat flat. In fact, Eurozone has fallen below the threshold value of 50, which indicates that the industrial activity is declining. Further decline in industrial activity might have an impact on industrial investments and thus might slow the demand for IM's solutions down. However, there is still a long way to go to the levels seen during the financial crisis and the COVID-19 outbreak when the PMIs neared 30 points.

Opportunities

- Green transition and energy self-sufficiency: European Commission has set a target of 35bn cubic meters (today: 3bn) of annual biomethane production in EU-27 countries by 2023 in order to enhance green transition and reduce the dependency on Russian energy. Vaisala's management has also recognized biogas measurements as a significant market opportunity.
- Ever-increasing need for precise measurements and leading with data: According to the company's management, the demand for precise high-end measurement equipment is ever-increasing. With precise measurements and clever usage of data, companies can run their processes and produce products more efficiently and at the same time increase the quality as well as save resources.
- Well-being and health awareness: With the aging population and illness increasing, we see the demand for pharmaceutical and life science measurements to steadily increase.

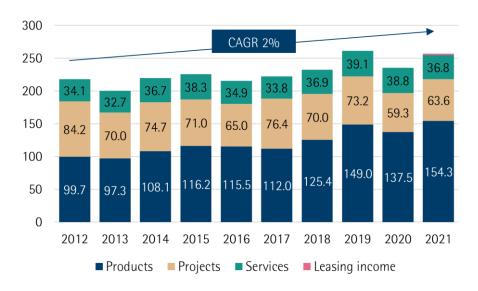
¹ European Biogas Association: Biomethane production potentials in the EU



Weather and Environment (W&E)

Vaisala provides safety, protection, and efficiency with its W&E solutions Weather and Environment business area serves selected weather-dependent customers with products and services to monitor real-time weather and environmental data. The business area provides measurements and decision-making support that focus on the safety of people, protection of property, and efficiency of operations under any environmental conditions. W&E serves customer segments such as meteorology, aviation, transportation, and renewable energy. A significant number of W&E's customers are public sector institutions, but it also serves private corporations, such as maritime and energy industries.

Figure 19: W&E's net sales development



Source: Vaisala, Evli Research

W&E's historical growth somewhat modest

The growth W&E has seen during the recent decade is somewhat lower than in IM. W&E has grown at a CAGR of 2% during 2012-21, which has been supported by multiple acquisitions. During the same period, the product sales have grown at a CAGR of 5%, project sales have decreased by 3% annually and services sales have been somewhat flat. Meanwhile, the business area has also divested some technologies from its product portfolio due to various reasons.

Customers

Public customers represent the majority of W&E's business WEEE serves both public sector institutions and private corporates, including meteorological institutes, airports, infrastructure constructors, transportation agencies, military, etc. However, we have approximated that over 70% of WEE's revenue is generated by public funding. The share varies over time due to large project deliveries that follow no clear seasonality. Therefore, we see the company as somewhat dependent on the public sector's budgets. We however see that focusing on strong megatrends and new technologies keeps the WEE's performance up even during hard times.

Market leader in flagship markets

According to the company's management, Vaisala is a market leader in serving meteorological institutions around the Globe. In addition, Vaisala is serving the world's largest and most significant airports with its technology. The coverage of weather measuring equipment in developed countries is already extensive according to the company, but growth opportunities are seen in developing countries' weather and environment infrastructures. The implementation of large system projects is one of W&E

business area's strategic cores. WEtE is currently focusing on weather-related capacity building in developing countries. Project deliveries take time and usually have lower margins than product deliveries, but certain projects' impact on revenue is significant. With its new digital business, the company aims to increase its scalable recurring revenue over time. The company delivers digital weather DaaS/SaaS (Data/Software as a Service) solutions for several industries, such as automotive, energy, municipalities, and other OEMs.

Products

- **Sounding products** are used for measuring upper-air atmosphere. Vaisala's offering mainly consists of dropsondes, radiosondes, and semiautomatic/ automatic sounding stations.
- Weather radar products include radars, transmitters, receivers, and signal
- Weather stations and sensors measure wind speed and direction, lightning, cloud height, visibility, air quality, surface temperature, water depth, precipitation, and rain.
- Wind LiDAR systems are used to measure the wind speed and direction from the distance. LiDARs are used in wind farms, aviation weather, meteorology, and maritime.

Projects and services

Providing large-scale project deliveries in developing economies Projects typically consist of system deliveries, which include hardware, software, and service sales. The delivery of larger high-complexity products is also classified as a project. At any given time, Vaisala typically has over a hundred ongoing projects. The length of projects varies greatly but is typically between 2-6 months. Sometimes, preparation and implementation span several years. Vaisala's role varies from an integrator to a subcontractor. In some projects, Vaisala's subcontractors include the Finnish Meteorological Institute which provides software and training. We have estimated that Vaisala's project sizes vary from hundreds of thousands to tens of millions of euros. For example, Vaisala reported the ongoing Ethiopian project's value to amount to EUR 13m of which implementation is estimated to take 2-3 years. However, the majority of projects are worth from a few million to less than a million euros.

Vaisala's target is to close one large infrastructure project every year. To our understanding, Vaisala has six such projects ongoing, in the Bahamas, Sweden, Argentina, Ethiopia, USA, and Poland.

Figure 20: Ongoing projects

The Bahamas	Sweden	Argentina	Ethiopia	USA	Poland
USD 18m contract signed with Ministry of Transport and Aviation of the Commonwealth of the Bahamas in Oct 2016. Delivery of nation-wide meteorology network for weather forecasting to improve warnings and preparedness for severe weather conditions.	In Feb 20219, approx. EUR 7m contract signed with Swedish Transport Administration. Delivery of at least 600 road weather information stations throughout Sweden. Deliveries scheduled for 2022-24.	In Mar 2019, EUR 15m (later reduced to EUR 5.6m) contract signed with the Argentine Air Navigation Service Provider (EANA). Automated weather observing systems to 31 airports across Argentina.	EUR 13m contract signed with National Meteorology Agency in Ethiopia in Oct 2019. Modernization of Ethiopia's weather and climate observation and monitoring systems. Implementation started in 2021 and the project is estimated to run for 2–3 years.	In Jan 2020, after completion of NOAA's automatic sounding systems in Alaska, USA, a contract was signed with NOAA for 8 additional automated sounding systems implemented across the continental USA.	Contract signed with Polish Institute of Meteorology and Water Management. Over 1,600 automatic meteorological, climatological, and hydrological measurement stations to improve meteorological observations and mitigate impact of flooding. Deliveries scheduled for 2021-22.

Source: Vaisala, Evli Research

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Services include W&E's digital business

In addition to basic calibration, consulting, and support services, W&E delivers weather data services based on monthly payments. This reduces Vaisala's customers' capital expenditures, meaning that an investment can be recorded as an operative cost in P&L. The weather stations can be either owned by Vaisala or a customer. Usually, Vaisala manages and maintains weather stations regardless of who is the owner. In some cases, Vaisala purchases external data from other providers. The company's management has indicated that the payback time of a weather station investment is quite short.

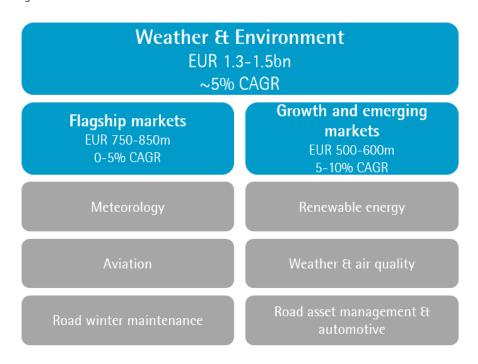
Strategy

Strategy aims for expanding growth and improving scalability

WEE's strategic targets are set to secure its market position in flagship markets, expand in growing and emerging markets and be a market leader in selected segments, grow recurring revenue, and master architecture and technology platforms. By investing smartly in its flagship markets, Vaisala defends its current market position while more substantial investments in growing or emerging markets provide Vaisala business opportunities. The company has also expanded into new markets or strengthened its current market position with acquisitions. At the beginning of 2022, Vaisala acquired AerisWeather to strengthen its data-driven weather and environmental business.

Markets

Figure 21: Weather and Environment's markets



Source: Vaisala, Evli Research

Other markets provide substantially higher growth than flagship markets

W&E's flagship markets, i.e., meteorology, aviation, and road winter maintenance, represent approx. 80% of the business area's total net sales, while growth and emerging markets, i.e., renewable energy, weather & air quality, and road asset management & automotive, cover the remaining 20%. Vaisala has estimated W&E's addressable market size landing between EUR 1.3-1.5bn. The annual growth of flagship markets is quite modest, varying around 0-5%. Vaisala is well positioned in all its flagship markets and continues to execute well selected investments in the businesses to maintain the position of a market leader. Vaisala estimates the annual growth in growth and

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emerging markets to be approx. 5-10% to which the company also invests more heavily. Vaisala's share in growth and emerging markets is still somewhat marginal, but with smart investments, the company gains an access to a significant source of growth.

Opportunities

- Green transition and renewable energy: Europeans are currently suffering from an energy crisis by the limited energy production. With the increased investment in green energy, for example in wind farms and wind-assisted maritime, we see the demand for Vaisala's LiDAR systems significantly increase.
- Climate change: extreme weather conditions increase the demand for largescale weather stations, especially in developing countries.
- Precise weather forecasts and real-time data: Vaisala's digital SaaS-based weather data is increased significantly during the past few years. Vaisala offers precise SaaS weather data for car manufacturers, energy manufacturers, cities, etc. We see the demand for subscription-based services increase with its easiness and low capital intensity.
- Future mobility: In the future, with clever usage of data, more precise weather forecasts can be conducted based on real-time observations of a set of thousands of cars for the needs of autonomic vehicles.
- **Urbanization:** urbanization has increased climate change and worsened the air quality in cities. With precise measurements and data, cities can reduce climate change and improve air quality.

Financial performance

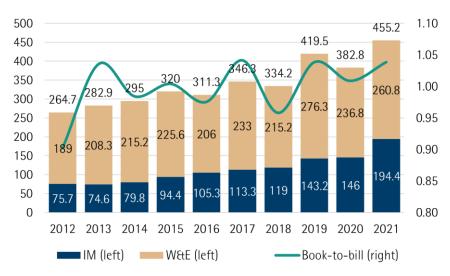
Orders

Figure 22: Order book in EURm



Source: Vaisala, Evli Research

Figure 23: Orders received in EURm



Source: Vaisala, Evli Research

Order book at a record level in Q2'22

IM's order book offers quite limited guidance due to the fact that most of the segment's orders are delivered within the same quarter they are received. At the end of Q2'22, Vaisala's order book was a record high at EUR 182.8m of which IM represented EUR 37.2m. IM's Q2 order intake increased by 24% y/y to EUR 56.2m. During 2021-22, IM's order book has somewhat stretched as a result of sticky supply chains and therefore its customers have increased their front-heavy orders to further into the future. We however foresee this trend to gradually diminish with the component availability improving.

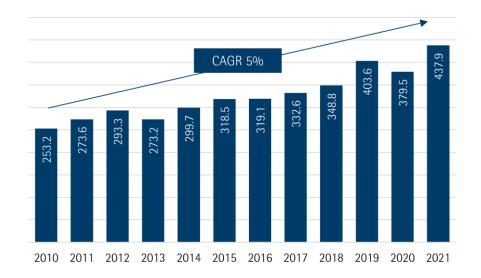


W&E's order book to bring some future predicting power

On the other hand, W&E's order book's predicting power is more prominent. Q2'22 order book amounted to EUR 145.6m of which 92.1m is scheduled to be delivered during 2022. W&E's Q2 order intake grew only by 1% y/y to EUR 75.7m mainly due to a strong comparison period as the Ethiopian weather infrastructure project worth EUR 13m was booked in Q2'21.

Net sales

Figure 24: Net sales development in EURm



Source: Vaisala, Evli Research

Vaisala has shown midsingle-digit growth during 2010-21

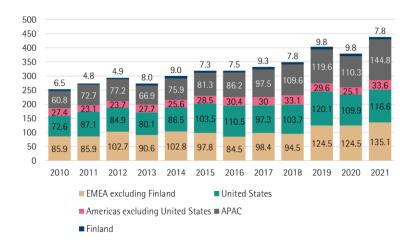
During 2010-21, the company's topline has grown at a CAGR of 5.1%, reflecting Vaisala's long-term focus on growing its businesses. After strong year 2019, Vaisala saw 6% decline due to decreased investment activity driven by outbreak of the COVID-19 pandemic. In 2021 the company continued its momentum of 2019 and recorded 15% growth. Year 2022 has also continued on a same track. In 2021, Vaisala's net sales amounted to EUR 437.9m. Although the company has a solid track record of growth, Vaisala's net sales have decreased during recent crises, i.e., the Euro area's debt and the COVID-19 crisis, indicating that the business is somewhat cyclical. The declines have been more pronounced in the W&E unit. However, Vaisala has widened its product portfolio and presence in different markets, so that certain megatrends support Vaisala's growth even during uncertain times in our view. For example, in 2020 IM's net sales grew by 1.1% y/y despite challenging COVID-19 times.

Growth supported by acquisitions

Growth has been supported by selective acquisitions that Vaisala has executed regularly. However, the company has also divested some unattractive departments which stems from the fact that Vaisala aims to operate in such product segments that generate high value-add instead of price-driven business.

Business diversified between all major economies Vaisala's revenue splits up smoothly between its three geographical regions, namely the EMEA and APAC regions and the Americas. From 2012 to date, Vaisala has grown its presence in the APAC region strongly while during the past ten years, the Americas and the EMEA region have been the leading regions in terms of net sales generation. To our understanding, Japan has become a notable market for Vaisala as measurements and high technology are very appreciated in that country.

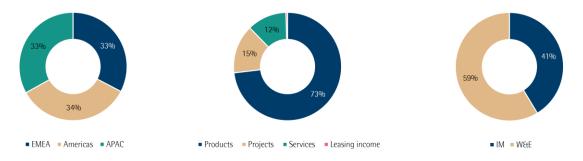
Figure 25: Net sales by regions in EURm



Source: Vaisala, Evli Research

73% of sales generated from product deliveries Vaisala's solutions are divided into four categories: products, services, projects, and leasing income. Products represent the majority of Vaisala's net sales covering 73% of total net sales in 2021. Projects were 15% of group net sales, all of them stemming from Weather and Environment business area. Services represented 12% of total net sales whereas licensing income was only 1% of group net sales. Licensing income is related to Vaisala renting measuring devices, such as large-scale LiDAR equipment, to its customers.

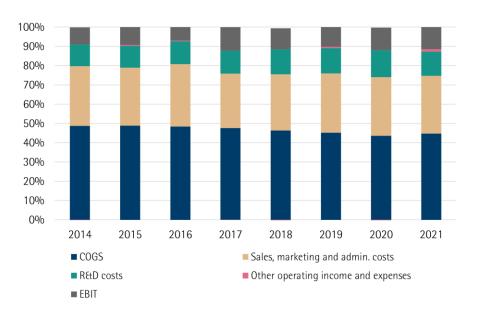
Figure 26: Net sales split in 2021



Source: Vaisala, Evli Research

Cost structure

Figure 27: Cost structure during 2014-21



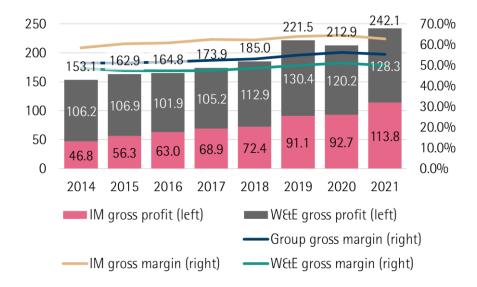
Source: Vaisala, Evli Research

Scalable cost structure, relative material costs have decreased over time

Vaisala has quite a scalable cost structure. Cost of goods sold (COGS), represents less than a half of total net sales. At the beginning of the 2010 decade COGS varied around 50% which in part indicates Vaisala's increased pricing power. Although material costs have been rising after the outbreak of the COVID-19 pandemic, 2021 COGS were clearly below historical levels and were 45% of group net sales. Vaisala's COGS include depreciations, amortizations, and impairments. Vaisala's R&D costs have increased steadily over the years. Relative to net sales, R&D expenditures have increased more rapidly in IM than in W&E. In our view, more emphasized R&D investments in IM are justified given industrial market growing faster. Moreover, the margin gap between business areas justifies Vaisala's ambitions to invest more heavier in its industrial businesses. In 2021, R&D costs represented approx. 13% of total net sales. Meanwhile, Sales, marketing, and administration costs have varied between 10-14% during 2010-21, being 13% of group net sales in 2021.

Gross profit and margin

Figure 28: Gross profit in EURm and gross margin



Source: Vaisala, Evli Research

Strong gross margin for a manufacturer

Vaisala's group gross margin has amounted to over 50% since 2014. Due to a more scalable business, IM's gross margin has been clearly stronger than W&E's. Moreover, IM is well positioned in terms of pricing while W&E's publicly funded product and project deliveries are usually tendered. In project deliveries, W&E outsources some of the tasks, such as civil engineering, with low margins which eventually tightens its margins. Despite the lower margins in W&E's project sales, Vaisala sees project business also important as it supports sales of higher-margin products and services in the long-term. In the future, we see that W&E's gross margin is positively supported by an increased share of scalable digital business. Overall, we see that Vaisala has quite a strong gross margin for a manufacturing company.

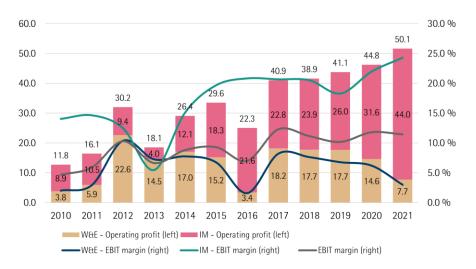
IM's margins higher than W&E's

During 2014-21, IM's gross margin varied between 58% and 64% while W&E's margin altered near 50%. In 2021, IM's and W&E's gross margins were 63% and 50% respectively while the group's gross margin was 55%. With higher material costs driven by component shortage and increased logistics costs, Vaisala's gross margin declined in 2021 from the levels of the previous year. Now there are signs of the component availability improving in H2'22 and 2023 since the demand for semiconductors has declined which should provide some upside potential in the company's margin development.



EBIT

Figure 29: EBIT in EURm and EBIT margin



Source: Vaisala, Evli Research

Large gap between business areas' earnings Supported by a stronger gross margin, IM has clearly outpaced W&E in profitability development. IM has generated the majority of Vaisala's group-level earnings during 2016-21. In our view, a larger engagement on project deliveries increases W&E's operative expenses through higher personnel costs which stress the unit's EBIT. Meanwhile, IM's scalable business and large engagement in direct product sales support the business area's margins.

EBIT still below targets

In 2021, group EBIT amounted to EUR 50.1m, IM representing ~90% of group EBIT. Group EBIT margin has improved from approx. 10% to 12% during 2010-21. While IM's EBIT margin has seen some upward trend, W&E's EBIT margin has rather declined from the levels of 2012 when its EBIT margin was approx. 10%. In our view, the trend of the global economy falling into recession decreases the possibility of Vaisala reaching its operating profit margin target as W&E's business has been somewhat sensitive to macroeconomic trends in history. However, Vaisala has good prospects for achieving its goals in the long-term.

EPS

Figure 30: EPS and DPS in EUR



Source: Vaisala, Evli Research

High valuation has lowered dividend yields

Vaisala's EPS has grown at a CAGR of 7% during 2012-21 slightly over its net sales development during the same period. Meanwhile, DPS development has been more moderate. In 2013 Vaisala returned capital worth EUR 0.62 per share and in 2017 the company distributed an extra dividend worth EUR 0.50. Vaisala's historical dividend yield has been somewhat moderate in recent years. During 2015-18, dividend yield varied around 3-5% while since 2019 the dividend yield has been clearly below 2% mainly due to hefty valuation.

Estimates

Guidance

For FY'22 the company guides:

- Net sales between EUR 465-495m.
- Operating profit (EBIT) between EUR 55-70m.

Guidance for FY'22 implies y/y growth and at the mid-point of the guidance, the EBIT margin would be 13%. The company has been quite cautious in giving official guidance, meaning that Vaisala has upgraded its estimates over the course of a year. However, in 2022 the company reiterated its original guidance throughout the year.

Table 1: Estimates

Interim figures	2020	Q1'21	Q2'21	Q3'21	Q4'21	2021	Q1'22	Q2'22	Q3'22E	Q4'22E	2022E	2023E	2024E
Net sales	379.5	92.0	109.5	111.5	125.0	437.9	118.8	120.5	119.2	132.6	491.1	520.0	542.7
Weather & Environment	235.6	52.2	65.4	64.4	74.9	256.9	65.7	65.9	66.8	76.5	274.9	283.4	290.3
Industrial Measurements	143.9	39.7	44.1	47.1	50.1	181.0	53.1	54.7	52.4	56.1	216.3	236.6	252.4
Reported EBIT	44.8	8.1	10.9	19.2	11.9	50.1	17.5	10.3	19.6	10.7	58.2	66.3	73.5
Weather & Environment	14.6	-0.9	1.0	5.3	2.3	7.7	2.9	-1.0	5.8	1.3	8.9	11.5	12.9
Industrial Measurements	31.6	9.4	10.5	14.2	9.8	44.0	14.6	11.5	14.2	9.8	50.1	56.8	62.7
Other operations	-1.4	-0.4	-0.6	-0.2	-0.3	-1.5	0.1	-0.1	-0.4	-0.4	-0.9	-2.0	-2.1
Adj. EBIT	52.3	10.0	12.7	21.2	13.7	57.6	19.5	12.4	21.6	12.6	66.2	74.4	81.6
Net sales growth	-6%	5%	20%	19%	17%	15%	29%	10%	7%	6%	12%	6%	4%
Weather & Environment	-10%	1%	14%	9%	12%	9%	26%	1%	4%	2%	7%	3%	2%
Industrial Measurements	1%	12%	30%	35%	26%	26%	34%	24%	11%	12%	19%	9%	7%
EBIT margin	11.8%	8.8%	10.0%	17.3%	9.5%	11.4%	14.8%	8.6%	16.4%	8.1%	11.9%	12.7%	13.5%
Weather & Environment	6.2%	-1.7%	1.5%	8.2%	3.1%	3.0%	4.4%	-1.6%	8.6%	1.7%	3.3%	4.0%	4.4%
Industrial Measurements	22.0%	23.7%	23.8%	30.2%	19.6%	24.3%	27.5%	21.0%	27.1%	17.5%	23.2%	24.0%	24.8%

Source: Vaisala, Evli Research

2022 estimates

Expecting solid growth in 2022 with strong H1'22

With the strong start of the year, we expect Vaisala to deliver solid 2022 results with its net sales nearing the upper bound and EBIT at a bit lower of the mid-point of the guidance. Vaisala's 2022 started strongly with H1'22 net sales showing double-digit growth. IM grew by 29% y/y while also W&E faced strong growth of 12% y/y in H1. We however expect the magnitude of growth to slow down in H2'22 and 2021 net sales to amount to EUR 491.1m (+12% y/y). Our 2021 net sales estimate for IM is EUR 216.3m. Estimated 19% growth is driven by favourable demand for measurement solutions in all IM's markets. Meanwhile, we expect W&E to grow by 7% to EUR 274.9m mostly driven by strong Q1.

22E EBIT margin improvement restricted by increased costs

We expect EBIT to clearly improve y/y to EUR 58.2m. 22E EBIT is primarily driven by IM's healthy margins while W&E's contribution to group EBIT is only worth EUR 8.9m. The company has been investing in its IT systems and other capabilities which have increased its fixed costs. Some of the increased costs are predicted to be temporal. Moreover, the company is also facing some cost inflation through increased material and logistics costs. In our view, a flat gross margin (22E: 55.2%) and elevated fixed costs limit the margin development, and therefore our 22E EBIT margin estimate is 11.9%. Our adjusted 22E EPS estimate is EUR 1.18.



2023-24 estimates

We lowered 2023-24 estimates due to uncertain economic conditions

Partly due to long-continued strong momentum and slowing economic activity, we expect Vaisala's growth pace to slow down both in 2023 and 24. With an uncertain market and weak visibility to economic development, we slightly downgraded our 2023-24 estimates. In total, we downgraded both 23 and 24 estimates by some 2%. We however expect both business areas to grow. Our 23E net sales estimate is EUR 520.0m, which reflects y/y growth of 5.9%. Our 23E net sales estimates for IM and W&E are EUR 236.6m and 283.4m respectively. We expect IM's solutions for both flagship and growth markets to drive the business area's growth while we estimate that near future growth of W&E is mainly driven by products targeted for green transition, i.e., renewable energy. However, aviation is still recovering from the pandemic lows and thus we expect solutions for aviation to show some gradual growth but not to the same extent than renewable energy. Meanwhile, in 2024, we expect net sales to amount to EUR 542.7m (+4% y/y). However, with a significant uncertainty concerning macroeconomic and geopolitical development, we note that our estimates include uncertainty to some extent.

Gross and EBIT margin expected to improve with component shortage easing

On the other hand, the component shortage is expected to ease in 2023, and thus with lower spot component purchases, we expect Vaisala's gross margin to improve gradually. With the gross margin improvement and fixed costs developing moderately, we expect 23-24E gross margins to improve to over 56%. With gross margin improving and net sales still showing some growth, we expect 23-24E EBIT to improve to EUR 66.3m and 73.5m (12.7% and 13.5% margin) respectively. Our EBIT estimates faced a 5% reduction from our previous update.

Table 2: Estimate revisions

	2022E		Change	2023E		Change	2024E		Change	
	Old	New	%	Old	New	%	Old	New	%	
Net sales	491.1	491.1	0%	530.3	520.0	-2%	553.5	542.7	-2%	
IM	216.3	216.3	0%	239.9	236.6	- 1%	253.6	252.4	0%	
W&E	274.9	274.9	0%	290.4	283.4	-2%	299.9	290.3	-3%	
EBIT	58.2	58.2	0%	69.4	66.3	-5%	77.6	73.5	-5%	
IM	50.1	50.1	0%	58.9	56.8	-4%	64.2	62.7	-2%	
W&E	8.9	8.9	0%	12.5	11.5	-8%	15.5	12.9	-17%	

Source: Evli Research



Valuation

Table 3: Fair value

Implied value	EUR
EV/EBITDA	41.8
EV/EBIT	41.2
P/E	38.0
DCF	39.1
Weighted average	40.0

Source: Evli Research

We lower our TP to EUR 40.0 (prev. 43.0) Our fair value and target price for Vaisala are derived using EV/EBIT-based valuation and our DCF-model's intrinsic value which in total accounts for EUR 40.0. The new target price reflects our decreased expectations for 2023 and 2024 driven by slowing GDP growth and industrial activity.

Valuation stretched compared to peers

Even though Vaisala's stock price has declined by some 35% from all-time highs seen in 2021, we view the company's valuation still elevated. Vaisala currently trades with 22-23E EV/EBIT multiples of 25-21x and P/E multiples of 35-29x. The premium to peer group median is notable and we see no room for an upside in valuation multiples. Our view is that Vaisala's stretched valuation compared to peers is somewhat driven by the soft profitability of the W&E business area. We also see that Vaisala's strong historical growth and competitive position with technological leadership justify somewhat higher valuation multiples.

DCF: intrinsic value EUR 39

Our DCF model suggests Vaisala's intrinsic value to amount to EUR 39.1 which is approx. in line with our TP. As Vaisala has a rather stable business and earnings fluctuation is quite restricted, DCF model guides quite well the fair value of Vaisala in our view. However, we note that DCF model is quite sensitive to assumptions.

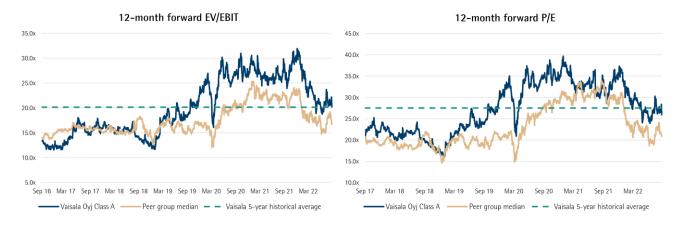
14% annual EPS growth supports holding the stock Stock performance is now mostly contributed by EPS development which we estimate to grow by some 14% p.a. during 2022-24. The support from expected ~2% dividend yield is yet quite small. We see that the current market environment causes some extra uncertainty concerning our estimates and with the stretched valuation multiples we lower our target price to EUR 40.0 which implies a 23E EV/EBIT of 21x. With the company's stretched valuation, we retain our HOLD-rating.

Historical valuation

Currently trading at 5-year average levels

From 2016 to mid of 2019 Vaisala traded approx. in line with its peer group varying around EV/EBIT of 15x and P/E of 20x, but during recent years the company's valuation has stretched above its peers. After an extensive price rally seen during 2020-21, Vaisala's current valuation declined slightly near its 5-year average of 20x EV/EBIT and 28x P/E but is still above its peer group median.

Figure 31: Historical consensus multiples



Source: FactSet, Evli Research



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Peer group

Our peer group for Vaisala consists of R&D-focused electrical equipment and measurement solutions providers. Due to the lack of listed high-end industrial and weather and environment measurement competitors, peer group companies are not direct competitors for Vaisala. Peer group companies' offerings range from electronic measurement instruments to electronic control, and process instrumentation, as well as computerized measurement products. Our peer group is composed of the following listed companies:

- Keysight Technologies provides electronic measurement instruments, such as
 oscilloscopes, meters, and network analysers, and systems and related software and
 software design tools used to make electronic equipment. It provides product-related
 services and consulting.
- National Instruments supplies computer-based instrumentation hardware and software products for engineers and scientists. The company provides flexible application software and modular hardware that users combine with computers, networks, and the internet to create computer-based measurement and automation systems.
- **Spectris** manufactures, designs, and markets products for the electronic control and process instrumentation sectors. The company's products include digital indication and control products, industrial computer circuit boards, semiconductor-related devices, infrared equipment for temperature measurement, flying controls, gas analysis products, and analytical x-ray systems.
- Oxford Instruments produces advanced instrumentation equipment. The company's products are used for scientific research, chemical analysis, patient monitoring, semiconductor processing, and diagnostic imaging. Oxford conducts manufacturing operations in the United Kingdom and the United States.
- **Trimble** designs, develops, and manufactures land surveying instruments, navigations systems (GNSS and GPS), laser rangefinders, unmanned aerial vehicles, software processing tools, and other products and services for needs of architecture, building construction, civil engineering, geospatial, survey and mapping, agriculture, natural resources, utilities, transportation, and government.
- Hexagon AB develops and produces sensor, software, and autonomous solutions.
 The company provides metrology systems for fast and accurate measurements, sensors for capturing data from land and air as well as sensors for positioning via satellites, and related software solutions.
- Sensirion Holding AG manufactures digital microsensors and systems. The firm engages in the development, production, sales and servicing of sensor systems, modules, and components. Its products include gas and liquid flow sensors, differential pressure sensors, and environmental sensors for the measurement of humidity and temperature, volatile organic compounds, carbon dioxide, and particulate matter.
- Halma Plc is a holding company that develops, produces, and sales hazard and life
 protection solutions. The company provides products and applications, such as
 electronic instruments, detectors, and diagnostic equipment, for industrial, medical,
 and environmental needs.
- FARO Technologies provides solutions for manual and automated measurement and inspection in an industrial or manufacturing environment, solutions for as-built data capturing, and 3D visualization in building information modeling and construction information management applications.

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Table 4: Peer group valuation

VAISALA PEER GROUP	EBIT %	EBIT %	EBITDA %	EBITDA %	ROCE %	ROCE %
VAISALA FEEN UNUUF	22E	23E	22E	23E	22E	23E
Keysight Technologies Inc	28.9	29.1	31.5	31.2	23.1	22.4
National Instruments Corporation	17.1	19.4	20.0	23.0	15.3	17.9
Spectris plc	16.6	16.8	19.7	19.8	15.4	15.6
Oxford Instruments plc	18.1	18.2	20.5	20.8	18.7	17.7
Trimble Inc.	23.4	24.1	25.4	26.1	15.5	15.4
Hexagon AB Class B	28.5	29.0	37.1	38.4	10.6	11.0
Sensirion Holding AG	20.6	17.6	25.5	22.5	29.0	22.9
FARO Technologies, Inc.	0.9	5.4	4.1	8.0	0.8	5.6
Halma plc	20.6	20.9	24.0	24.2	19.6	20.5
Peer Group Average	19.4	20.0	23.1	23.8	16.4	16.6
Peer Group Median	20.6	19.4	24.0	23.0	15.5	17.7
Vaisala (Evli est.)	11.9	12.7	16.4	16.8	20.5	22.5
Premium/discount to peer median	-42%	-34%	-32%	-27%	32%	27%

	ROE %	ROE %	DIV %	DIV %	P/E	P/E
	22E	23E	22E	23E	22E	23E
Keysight Technologies Inc	34.8	32.2	0.0	0.0	23.2x	21.5x
National Instruments Corporation	22.3	27.0	2.8	2.8	19.6x	16.1x
Spectris plc	14.0	15.2	2.6	2.8	18.9x	17.1x
Oxford Instruments plc	15.9	15.5	0.9	1.0	23.3x	21.8x
Trimble Inc.	17.3	18.2	0.0	0.0	22.3x	19.8x
Hexagon AB Class B	12.8	12.4	1.2	1.3	24.1x	22.3x
Sensirion Holding AG	21.6	16.4	0.0	0.0	25.0x	27.5x
FARO Technologies, Inc.		5.3	0.0	2.9	155.9x	37.0x
Halma plc	18.5	17.8	0.9	1.0	30.2x	28.2x
Peer Group Average	19.6	17.8	0.9	1.3	38.1x	23.5x
Peer Group Median	17.9	16.4	0.9	1.0	23.3x	21.8x
Vaisala (Evli est.)	17.6	19.9	1.7	2.0	35.0x	28.6x
Premium/discount to peer median	-2%	21%	87%	102%	50%	31%

	EV/S	EV/S	EV/EBITDA	EV/EBITDA	EV/EBIT	EV/EBIT
	22E	23E	22E	23E	22E	23E
Keysight Technologies Inc	5.7x	5.3x	18.1x	16.9x	19.8x	18.2x
National Instruments Corporation	3.2x	3.0x	16.1x	13.1x	18.9x	15.5x
Spectris plc	2.3x	2.1x	11.6x	10.7x	13.8x	12.7x
Oxford Instruments plc	3.0x	2.7x	14.4x	13.1x	16.3x	15.0x
Trimble Inc.	4.2x	3.8x	16.4x	14.7x	17.8x	15.9x
Hexagon AB Class B	6.1x	5.6x	16.5x	14.6x	21.5x	19.3x
Sensirion Holding AG	3.9x	3.6x	15.5x	15.9x	19.1x	20.4x
FARO Technologies, Inc.	1.5x	1.4x	36.1x	17.3x	168.4x	25.3x
Halma plc	4.8x	4.5x	20.2x	18.5x	23.5x	21.3x
Peer Group Average	3.9x	3.6x	18.3x	15.0x	35.5x	18.2x
Peer Group Median	3.9x	3.6x	16.4x	14.7x	19.1x	18.2x
Vaisala (Evli est.)	2.9x	2.7x	17.8x	16.2x	24.7x	21.4x
Premium/discount to peer median	-26%	-24%	9%	11%	29%	18%

	Sales growth 22E	Sales growth 23E	Net debt / EBITDA 22E	Net debt / EBITDA 23E	Equity ratio % 22E	Equity ratio % 23E
Keysight Technologies Inc	8.7%	5.8%	-0.2x	-0.5x	50.6	54.0
National Instruments Corporation	14.2%	6.9%	0.5x	0.4x	54.3	57.0
Spectris plc	-4.9%	5.2%	-0.7x	-0.9x	69.4	72.8
Oxford Instruments plc	5.0%	4.4%	-1.0x	-1.5x	67.2	69.8
Trimble Inc.	3.7%	6.3%	0.6x	0.2x	57.1	59.6
Hexagon AB Class B	21.6%	6.7%	1.5x	1.0x	60.9	62.8
Sensirion Holding AG	14.2%	6.8%	-1.6x	-2.3x	103.9	108.5
FARO Technologies, Inc.	1.7%	9.1%	-7.4x	-3.5x	68.1	68.1
Halma plc	11.5%	6.4%	0.2x	-0.2x	69.7	75.2
Peer Group Average	8.4%	6.4%	-0.9x	-0.8x	66.8	69.7
Peer Group Median	8.7%	6.4%	-0.2x	-0.5x	67.2	68.1
Vaisala (Evli est.)	12.1%	5.9%	-0.6x	-0.8x	57.1	60.8

Source: FactSet, Evli Research

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Risks

We find the overall risk level of Vaisala quite modest with its stable market position and megatrends supporting the market growth. In addition, Vaisala has extensive experience in the industry and a wide customer base. We have specified risks concerning the investment case as follows:

- High valuation: Vaisala has been trading above its peer group median for several years. Current 22E EV/EBIT and P/E amount to Xx and Xx. Undelivered expectations might have a notable impact on the stock price.
- Slowing economy: With inflation increasing, interest hikes, and the global economy slowing down, the demand for Vaisala's solutions might face some softness. Current macroeconomic indicators show mixed results, as the labor market is doing well while inflation is high, central banks tighten their policies, and GDP growth is slowing down in western economies.
- Geopolitical risks: Vaisala ended its businesses in Russia and Belarus after the beginning of Russia's attack war on Ukraine. Political tenses have increased between China and western countries. Vaisala has one factory in Shanghai which was obtained through the Leosphere acquisition. To our understanding, the factory in Shanghai is quite small in terms of volumes and Vaisala's Chinese customer base is not significantly large.
- Component availability: component shortage has restricted Vaisala's access to crucial components and the company has had to source more expensive components from spot markets. Market participants indicate the component availability to improve but further bottlenecks in the supply chain might prolong the component shortage.
- **Technology risk:** Vaisala's solutions are based on research and science. Unsuccessful product launches and challenges in R&D might lead to lower demand for Vaisala's technology. However, we consider this risk unlikely to materialize.

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VALUATION RESULTS	BASE CASE DETAILS	VALUATION ASSUMPTIONS	ASSUMPTIONS FOR WACC	
Current share price	40.55 PV of Free Cash Flow	489 Long-term growth, %	2.5 Risk-free interest rate, %	2.25
DCF share value	39.09 PV of Horizon value	917 WACC, %	7.4 Market risk premium, %	5.8
Share price potential, %	-3.6 Unconsolidated equity	-4 Spread, %	0.0 Debt risk premium, %	2.8
Maximum value	39.1 Marketable securities	78 Minimum WACC, %	7.4 Equity beta coefficient	0.80
Minimum value	39.1 Debt - dividend	-72 Maximum WACC, %	7.4 Target debt ratio, %	10
Horizon value, %	65.2 Value of stock	1,408 Nr of shares, Mn	36.0 Effective tax rate, %	25

DCF valuation, EURm	2021	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	Horizon
Net sales	438	491	520	543	562	579	596	614	632	651	667	684
Sales growth, %	15.4	12.1	5.9	4.4	3.5	3.0	3.0	3.0	3.0	3.0	2.5	2.5
Operating income (EBIT)	50	58	66	73	79	81	83	86	89	91	93	96
Operating income margin, %	11.4	11.9	12.7	13.5	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
+ Depreciation+amort.	22	23	21	21	22	23	24	20	20	21	22	
EBITDA	72	81	87	95	101	104	107	106	109	112	115	
- Paid taxes	-12	-14	-13	-15	-16	-16	-17	-17	-18	-18	-19	
- Change in NWC	17	-5	-3	-2	-2	-2	-2	-2	-2	-2	-1	
NWC / Sales, %	8.6	8.7	8.7	8.7	8.7	8.8	8.8	8.8	8.8	8.8	8.8	
+ Change in other liabs	0	0	0	0	0	0	0	0	0	0	0	
- Operative CAPEX	-19	-14	-17	-22	-21	-22	23	-17	-17	-18	-9	
opCAPEX / Sales, %	4.9	4.0	4.4	5.0	4.9	4.8	-2.8	3.7	3.7	3.7	2.3	
- Acquisitions	0	0	0	0	0	0	0	0	0	0	0	
+ Divestments	0	0	0	0	0	0	0	0	0	0	0	
- Other items	5	0	0	0	0	0	0	0	0	0	0	
= FCFF	63	48	54	57	62	65	112	70	72	74	86	1,788
= Discounted FCFF		46	49	48	49	48	77	45	43	41	44	917
= DFCF min WACC		46	49	48	49	48	77	45	43	41	44	917
= DFCF max WACC		46	49	48	49	48	77	45	43	41	44	917

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INTERIM FIGURES

EVLI ESTIMATES, EURm	2021Q1	2021Q2	2021Q3	2021Q4	2021	2022Q1	2022Q2	2022Q3E	2022Q4E	2022E	2023E	2024E
Net sales	92.0	109.5	111.5	124.9	437.9	118.8	120.5	119.2	132.6	491.1	520.0	542.7
EBITDA	13.4	16.1	24.7	17.5	71.7	23.1	16.1	25.1	16.3	80.7	87.2	94.9
EBITDA margin (%)	14.6	14.7	22.2	14.0	16.4	19.5	13.4	21.1	12.3	16.4	16.8	17.5
EBIT	8.1	10.9	19.2	11.9	50.1	17.5	10.3	19.6	10.7	58.2	66.3	73.5
EBIT margin (%)	8.8	10.0	17.3	9.5	11.4	14.8	8.6	16.4	8.1	11.9	12.7	13.5
Net financial items	-0.2	-0.8	-0.5	-0.6	-2.1	-0.2	-1.0	-0.7	-0.7	-2.6	-1.5	-1.0
Pre-tax profit	7.9	10.1	18.8	11.3	48.1	17.3	9.3	18.9	10.0	55.6	64.8	72.5
Tax	-1.6	-0.7	-2.8	-3.7	-8.8	-3.6	-3.0	-4.5	-2.4	-13.5	-13.0	-14.5
Tax rate (%)	20.0	7.1	14.9	32.9	18.3	20.8	32.2	24.0	24.0	24.4	20.0	20.0
Net profit	6.2	9.2	16.0	7.6	39.0	13.7	6.3	14.4	7.6	42.0	51.8	58.0
EPS	0.17	0.25	0.44	0.21	1.08	0.38	0.18	0.40	0.21	1.17	1.44	1.61
EPS adjusted (diluted no. of shares)	0.17	0.25	0.44	0.21	1.08	0.39	0.18	0.40	0.21	1.18	1.44	1.61
Dividend per share	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.70	0.83	0.92
SALES, EURm												
Weather and Environment	52.2	65.4	64.4	74.9	256.9	65.7	65.9	66.8	76.5	274.9	283.4	290.3
Industrial Measurements	39.7	44.1	47.1	50.1	181.0	53.1	54.7	52.4	56.1	216.3	236.6	252.4
Total	92.0	109.5	111.5	124.9	437.9	118.8	120.5	119.2	132.6	491.1	520.0	542.7
SALES GROWTH, Y/Y %												
Weather and Environment	0.8	13.5	8.8	11.7	9.0	25.8	0.7	3.7	2.2	7.0	3.1	2.4
Industrial Measurements	12.3	30.5	35.3	25.5	25.8	33.6	23.9	11.3	12.0	19.5	9.4	6.7
Total	5.5	19.8	18.6	16.9	15.4	29.2	10.1	6.9	6.1	12.1	5.9	4.4
EBIT, EURm												
Weather and Environment	-0.9	1.0	5.3	2.3	7.7	2.9	-1.0	5.8	1.3	8.9	11.5	12.9
Industrial Measurements	9.4	10.5	14.2	9.8	44.0	14.6	11.5	14.2	9.8	50.1	56.8	62.7
Other	-0.4	-0.6	-0.2	-0.3	-1.5	0.1	-0.1	-0.4	-0.4	-0.8	-2.0	-2.1
Total	8.1	10.9	19.2	11.9	50.1	17.5	10.3	19.6	10.7	58.2	66.3	73.5
EBIT margin, %										·		
Weather and Environment	-1.7	1.5	8.2	3.1	3.0	4.4	-1.6	8.6	1.7	3.3	4.0	4.4
Industrial Measurements	23.7	23.8	30.2	19.6	24.3	27.5	21.0	27.1	17.5	23.2	24.0	24.8
Other						50,000.0						
Total	8.8	10.0	17.3	9.5	11.4	14.8	8.6	16.4	8.1	11.9	12.7	13.5

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INCOME STATEMENT, EURm	2017	2018	2019	2020	2021	2022E	2023E	2024E
Sales	332.6	348.8	403.6	379.5	437.9	491.1	520.0	542.7
Sales growth (%)	4.2	4.9	15.7	-6.0	15.4	12.1	5.9	4.4
EBITDA	50.3	51.1	64.7	65.9	71.7	80.7	87.2	94.9
EBITDA margin (%)	15.1	14.7	16.0	17.4	16.4	16.4	16.8	17.5
Depreciation	-9.5	-12.1	-23.6	-21.1	-21.6	-22.5	-20.9	-21.5
EBITA	40.8	39.0	41.1	44.8	50.1	58.2	66.3	73.5
Goodwill amortization / writedown	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	40.8	39.0	41.1	44.8	50.1	58.2	66.3	73.5
EBIT margin (%)	12.3	11.2	10.2	11.8	11.4	11.9	12.7	13.5
Reported EBIT	40.8	39.0	41.1	44.8	50.1	58.2	66.3	73.5
EBIT margin (reported) (%)	12.3	11.2	10.2	11.8	11.4	11.9	12.7	13.5
Net financials	-2.8	-1.4	-1.0	-3.4	-2.1	-2.6	-1.5	-1.0
Pre-tax profit	38.0	37.6	40.1	41.4	48.1	55.6	64.8	72.5
Taxes	-10.9	-8.0	-6.5	-8.5	-8.8	-13.5	-13.0	-14.5
Minority shares	0.0	0.0	0.0	0.0	-0.3	0.0	0.0	0.0
Net profit	27.1	29.6	33.5	32.9	39.0	42.0	51.8	58.0
Cash NRIs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-cash NRIs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET, EURm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Assets								
Fixed assets	46	102	108	120	125	121	122	127
Goodwill	16	25	30	30	29	29	29	29
Right of use assets	0	12	12	13	11	12	13	14
Inventory	29	32	40	45	50	56	59	62
Receivables	84	93	105	93	107	120	127	132
Liquid funds	91	73	56	45	78	87	93	101
Total assets	274	347	361	352	408	434	451	474
Liabilities	27.	017	001	002				
Shareholder's equity	185	183	198	205	230	247	274	302
Minority interest	0	0	0	0	1	1	1	1
Convertibles	0	0	0	0	0	0	0	0
Lease liabilities	0	12	11	9	8	12	13	14
Deferred taxes	1	9	8	8	7	7	7	7
Interest bearing debt	0	41	40	45	40	29	12	0
Non-interest bearing current liabilities	81	89	94	76	116	131	138	144
Other interest-free debt	5	9	7	8	7	7	7	7
Total liabilities	274	347	361	352	408	434	451	474
CASH FLOW, EURm		-				-	-	
+ EBITDA	50	51	65	66	72	81	87	95
- Net financial items	-3	-1	-1	-3	-2	-3	-1	-1
- Taxes	-7	-9	-9	-8	-11	-14	-13	-14
- Increase in Net Working Capital	7	-4	-16	-7	17	-5	-3	-2
+/- Other	2	11	2	-6	5	0	0	0
= Cash flow from operations	49	48	41	41	80	60	70	77
- Capex	-8	-14	-38	-35	-22	-20	-23	-27
- Acquisitions	-2	-52	0	0	0	0	0	0
+ Divestments	0	0	0	0	0	0	0	0
= Free cash flow	39	-18	3	6	58	40	47	50
+/- New issues/buybacks	-2	5	3	-4	8	0	0	0
- Paid dividend	-18	-37	-21	-22	-22	-25	-25	-30
+/- Other	-18	31	-21 -1	9	-22 -12	-25 -6	-25 -17	-30 -11
Change in cash	19	-19	-16	-11	33	-6 9	-17	9
Change in cash	13	-13	-10	*11	JJ	3	3	J

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KEY FIGURES	2018	2019	2020	2021	2022E	2023E	2024E
M-cap	659	1,159	1,454	1,924	1,461	1,461	1,461
Net debt (excl. convertibles)	-20	-5	9	-30	-46	-68	-88
Enterprise value	638	1,154	1,466	1,899	1,419	1,396	1,376
Sales	349	404	380	438	491	520	543
EBITDA	51	65	66	72	81	87	95
EBIT	39	41	45	50	58	66	73
Pre-tax	38	40	41	48	56	65	72
Earnings	30	34	33	39	42	52	58
Equity book value (excl. minorities)	183	198	205	230	247	274	302
Valuation multiples							
EV/sales	1.8	2.9	3.9	4.3	2.9	2.7	2.5
EV/EBITDA	12.5	17.8	22.2	26.5	17.6	16.0	14.5
EV/EBITA	16.4	28.1	32.7	37.9	24.4	21.1	18.7
EV/EBIT	16.4	28.1	32.7	37.9	24.4	21.1	18.7
EV/OCF	13.2	28.3	35.8	23.7	23.8	19.9	17.8
EV/FCFF	-38.5	141.5	115.8	30.3	29.9	25.8	24.3
P/FCFE	-37.2	413.9	259.7	33.0	36.6	30.9	29.1
P/E	22.2	34.6	44.2	49.4	34.5	28.2	25.2
P/B	3.6	5.8	7.1	8.4	5.9	5.3	4.8
Target EV/EBITDA	0.0	0.0	0.0	0.0	17.3	15.8	14.3
Target EV/EBIT	0.0	0.0	0.0	0.0	24.0	20.7	18.4
Target EV/FCF	0.0	0.0	0.0	0.0	35.0	29.1	27.0
Target P/B	0.0	0.0	0.0	0.0	5.8	5.3	4.8
Target P/E	0.0	0.0	0.0	0.0	34.0	27.8	24.8
Per share measures	0.0	0.0	0.0	0.0	34.0	27.0	27.0
Number of shares	35,790	35,881	36,000	36,101	36,020	36,020	36,020
Number of shares (diluted)	35,790	35,881	36,000	36,101	36,020	36,020	36,020
EPS	0.83	0.93	0.91	1.08	1.17	1.44	1.61
Operating cash flow per share	1.35	1.14	1.14	2.22	1.66	1.94	2.15
Free cash flow per share	-0.49	0.08	0.16	1.62	1.11	1.31	1.39
Book value per share	5.11	5.53	5.69	6.36	6.86	7.60	8.38
Dividend per share	0.58	0.61	0.61	0.68	0.70	0.83	0.92
Dividend payout ratio, %	70.1	65.3	66.8	63.0	60.0	58.0	57.0
Dividend yield, %	3.2	1.9	1.5	1.3	1.7	2.1	2.3
FCF vield, %	-2.7	0.2	0.4	3.0	2.7	3.2	3.4
Efficiency measures	-2.7	0.2	0.4	3.0	2.7	3.2	3.4
Efficiency fileasures							
ROF	16.1	17.6	16.3	17.9	17.6	19.9	20.1
ROE ROCE	16.1 18.5	17.6 17.0	16.3 17.7	17.9 18.6	17.6 20.5	19.9 22.5	20.1
ROCE	16.1 18.5	17.6 17.0	16.3 17.7	17.9 18.6	17.6 20.5	19.9 22.5	20.1 23.9
ROCE Financial ratios	18.5	17.0	17.7	18.6	20.5	22.5	23.9
ROCE Financial ratios Inventories as % of sales Receivables as % of sales	9.2 26.7	9.8 26.0	17.7 11.7 24.4	18.6 11.4 24.4	20.5 11.4 24.4	22.5 11.4 24.4	23.9 11.4 24.4
ROCE Financial ratios Inventories as % of sales Receivables as % of sales Non-interest bearing liabilities as % of sales	9.2 26.7 25.5	9.8 26.0 23.2	17.7	11.4 24.4 26.6	20.5	22.5	23.9 11.4 24.4 26.6
ROCE Financial ratios Inventories as % of sales Receivables as % of sales Non-interest bearing liabilities as % of sales NWC/sales, %	9.2 26.7 25.5 10.1	9.8 26.0 23.2 12.7	17.7 11.7 24.4 20.1 15.2	11.4 24.4 26.6 8.6	20.5 11.4 24.4 26.6 8.7	22.5 11.4 24.4 26.6 8.7	23.9 11.4 24.4 26.6 8.7
ROCE Financial ratios Inventories as % of sales Receivables as % of sales Non-interest bearing liabilities as % of sales NWC/sales, % Operative CAPEX/sales, %	9.2 26.7 25.5 10.1 4.1	9.8 26.0 23.2 12.7 9.4	17.7 11.7 24.4 20.1 15.2 9.3	11.4 24.4 26.6 8.6 4.9	20.5 11.4 24.4 26.6 8.7 4.0	22.5 11.4 24.4 26.6 8.7 4.4	23.9 11.4 24.4 26.6 8.7 5.0
ROCE Financial ratios Inventories as % of sales Receivables as % of sales Non-interest bearing liabilities as % of sales NWC/sales, % Operative CAPEX/sales, % CAPEX/sales (incl. acquisitions), %	9.2 26.7 25.5 10.1 4.1 -10.7	9.8 26.0 23.2 12.7 9.4 9.4	17.7 11.7 24.4 20.1 15.2 9.3 9.3	11.4 24.4 26.6 8.6 4.9 4.9	20.5 11.4 24.4 26.6 8.7 4.0 4.0	22.5 11.4 24.4 26.6 8.7 4.4 4.4	23.9 11.4 24.4 26.6 8.7 5.0 5.0
ROCE Financial ratios Inventories as % of sales Receivables as % of sales Non-interest bearing liabilities as % of sales NWC/sales, % Operative CAPEX/sales, % CAPEX/sales (incl. acquisitions), % FCFF/EBITDA	9.2 26.7 25.5 10.1 4.1 -10.7 -0.3	9.8 26.0 23.2 12.7 9.4 9.4 0.1	17.7 24.4 20.1 15.2 9.3 9.3 0.2	11.4 24.4 26.6 8.6 4.9 4.9 0.9	20.5 11.4 24.4 26.6 8.7 4.0 4.0 0.6	22.5 11.4 24.4 26.6 8.7 4.4 4.4 0.6	23.9 11.4 24.4 26.6 8.7 5.0 5.0
ROCE Financial ratios Inventories as % of sales Receivables as % of sales Non-interest bearing liabilities as % of sales NWC/sales, % Operative CAPEX/sales, % CAPEX/sales (incl. acquisitions), % FCFF/EBITDA Net debt/EBITDA, book-weighted	9.2 26.7 25.5 10.1 4.1 -10.7 -0.3 -0.4	9.8 26.0 23.2 12.7 9.4 9.4 0.1 -0.1	17.7 24.4 20.1 15.2 9.3 9.3 0.2 0.1	11.4 24.4 26.6 8.6 4.9 4.9 0.9 -0.4	20.5 11.4 24.4 26.6 8.7 4.0 4.0 0.6 -0.6	22.5 11.4 24.4 26.6 8.7 4.4 4.4 0.6 -0.8	11.4 24.4 26.6 8.7 5.0 0.6 -0.9
ROCE Financial ratios Inventories as % of sales Receivables as % of sales Non-interest bearing liabilities as % of sales NWC/sales, % Operative CAPEX/sales, % CAPEX/sales (incl. acquisitions), % FCFF/EBITDA	9.2 26.7 25.5 10.1 4.1 -10.7 -0.3	9.8 26.0 23.2 12.7 9.4 9.4 0.1	17.7 24.4 20.1 15.2 9.3 9.3 0.2	11.4 24.4 26.6 8.6 4.9 4.9 0.9	20.5 11.4 24.4 26.6 8.7 4.0 4.0 0.6	22.5 11.4 24.4 26.6 8.7 4.4 4.4 0.6	11.4 24.4 26.6 8.7 5.0 0.6

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COMPANY DESCRIPTION: Vaisala develops, manufactures, and markets products, projects, and services for weather, environmental and industrial measurements. Vaisala's strategy relies on R&D and focusing on technology leadership in its selected segments. Vaisala has two segments: Weather & Environment (W&E), and Industrial Measurement (IM). The W&E customers include meteorological institutes, airports, roads and railroad, defense, and energy industry. IM serves industrial customers in life science, power transmission, and targeted industrial applications offering a broad range of measurement instruments to ensure operational quality and productivity. Headquartered in Finland, Vaisala employs over 2,000 professionals worldwide.

INVESTMENT CASE: Vaisala should continue to profitably grow due to continued good growth in IM, with possible additional organic and non-organic opportunities in other niche areas supporting growth, and increased share of digital business of W&E. Vaisala benefits from its strong R&D based market leadership in both segments, with main profitability drivers being economies of scale and increasing share of IM sales. The healthy business and strong net cash position support ability to pay an increasing dividend.

OWNERSHIP STRUCTURE	SHARES	EURm	0/0
Skandinaviska Enskilda Banken Ab (publ) Helsinki Branch	3,776,358	153.131	10.5%
Nordea Nordic Small Cap Fund	1,954,761	79.266	5.4%
Weisell-Säätiö Sr	1,700,710	68.964	4.7%
Mandatum Life Insurance Company Ltd.	1,405,717	57.002	3.9%
Voipio Mikko	1,268,312	51.430	3.5%
Citibank Europe Plc	1,127,474	45.719	3.1%
Caspers Anja	969,496	39.313	2.7%
Voipio Raimo Hannes	919,656	37.292	2.6%
Ten largest	13,122,484	532.117	36%
Residual	22,897,516	928.494	64%
Total	36,020,000	1,460.611	100%

EARNINGS CALENDAR		
October 28, 2022	Q3 report	
OTHER EVENTS		

COMPANY MISCELLANEOUS	
CEO: Kai Öistämö	Vanha Nurmijärventie 21, 01670 Vantaa
CFO: Kaarina Muurinen	Tel:
IR: Paula Liimatta	



Electronic Equipment & Instruments/Finland, September 9, 2022 Company report

DEFINITIONS

P/E	EPS
Price per share Earnings per share	Profit before extraord. items and taxes- income taxes + minority interest Number of shares
P/BV	DPS
	د ال
Price per share Shareholders' equity + taxed provisions per share	Dividend for the financial period per share
Silarcifolities equity + taxet provisions per silare	
Market cap	OCF (Operating cash flow)
D: 1 *N 1 C1	
Price per share * Number of shares	EBITDA – Net financial items – Taxes – Increase in working capital – Cash NRIs ± Other adjustments
	, i
EV (Enterprise value)	FCF (Free cash flow)
Market cap + net debt + minority interest at market value -	Operating cash flow – operative CAPEX – acquisitions + divestments
share of associated companies at market value	operating costs now operative of a EX dequisitions is diversiments
D.I.C.	FOR ALLIAN
EV/Sales	FCF yield, %
Enterprise value	Free cash flow
Sales	Market cap
EV/EBITDA	Operative CAPEX/sales
Enterprise value	Capital expenditure – divestments – acquisitions
Earnings before interest, tax, depreciation and amortization	Sales
EV/EBIT	Net working capital
Enterprise value Operating profit	Current assets – current liabilities
	0 : 1 161
Net debt	Capital employed/Share
Interest bearing debt – financial assets	Total assets – non-interest bearing debt
	Number of shares
Total assets	Gearing
Balance sheet total	Net debt
	Equity
Div yield, %	Debt/Equity, %
Dividend per share	Interest bearing debt
Price per share	Shareholders' equity + minority interest + taxed provisions
Payout ratio, %	Equity ratio, %
Total dividends Earnings before extraordinary items and taxes – income taxes + minority interest	Shareholders' equity + minority interest + taxed provisions Total assets - interest-free loans
,	וטנפו פאבנף – ווונבנביר-וובב ומפעצ
ROCE, %	CAGR, %
Profit before extraordinary items + interest expenses+ other financial costs Balance sheet total – non-interest bearing debt (average)	Cumulative annual growth rate = Average growth per year
ROE, %	
Profit before extraordinary items and taxes – income taxes	
Shareholder's equity + minority interest + taxed provisions (average)	

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Important Disclosures

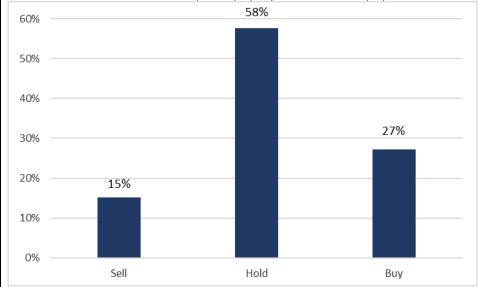
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Investment recommendations are defined as follows:

Target price compared to share price Recommendation

< -10 % SELL -10 - (+10) % HOLD > 10 % BUY

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The graph above shows the distribution of ERP's recommendations of companies under coverage in 11th of May 2020. If recommendation is not given, it is not mentioned here.

Name(s) of the analyst(s): Heikura

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Electronic Equipment & Instruments/Finland, September 9, 2022 Company report

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