ANNUAL REPORT 2019:

VAT again built its leading market share in 2019 and is well positioned to take advantage of new opportunities as the market returns to growth.

VAT is the world's Number One supplier of mission-critical high-vacuum solutions needed to manufacture semiconductors, displays and other devices enabling the new Digital Era. In 2019, the company again built its leading market position by maintaining its tradition of continuous technology innovation. The company took additional measures to improve operational speed and flexibility, allowing it to achieve significantly higher profitability through the recent downturn compared with the previous cycle. As the market environment returns to growth, VAT is well positioned to tap the significant opportunities ahead in areas such as the Internet of Things, Big Data and artificial intelligence.

VAT

PASSION. PRECISION. PURITY.

Our business strategy is simple and robust, focused on growth, profitability and free cash flow generation. We also strive to build a sustainability culture that creates value for all of our stakeholders and encourages a focus on social responsibility and environmental stewardship.

Key figures

In CHF million	2019	2018	Change
Order intake	585.0	648.0	–9.7%
Order backlog as of December 31	114.5	113.6	0.8%
Net sales	570.4	698.1	–18.3%
Gross profit	345.4	419.5	–17.7%
Gross profit margin	60.6%	60.1%	
EBITDA	154.0	215.2	–28.4%
EBITDA margin	27.0%	30.8%	
EBIT	107.7	179.7	–40.1%
EBIT margin	18.9%	25.7%	
Net income	74.8	135.7	–44.9%
Net income margin	13.1%	19.4%	
Basic earnings per share (in CHF)	2.50	4.53	–45.0%
Diluted earnings per share (in CHF)	2.49	4.52	–44.9%
Cash flow from operating activities	157.7	171.7	–8.2%
Capex[1]	18.0	48.0	–62.5%
Capex margin	3.2%	6.9%	
Free cash flow[2]	139.9	123.9	12.9%
Free cash flow margin	24.5%	17.7%	
Free cash flow conversion rate[3]	90.8%	57.5%	
Free cash flow to equity[4]	135.4	119.6	13.2%

As of December 31 In CHF million	2019	2018	
Total assets	972.7	968.2	0.5%
Total liabilities	449.2	404.0	11.2%
Equity	523.4	564.2	–7.2%
Net debt	144.3	147.6	–2.2%
Net debt/EBITDA	0.9	0.7	36.6%
Invested capital[5]	356.1	358.3	–0.6%
NOPAT[6]	101.7	155.2	–34.5%
Return on invested capital (ROIC)	28.6%	43.3%	
Dividend per share[7]	4.00	4.00	
Payout ratio[8]	88.6%	100.4%	
Number of employees[9]	1,810	1,712	98

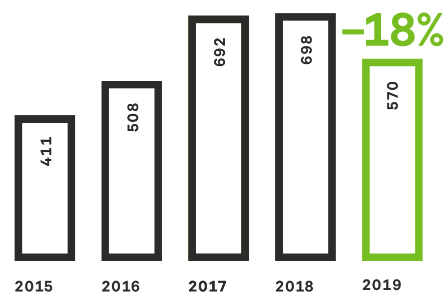
1 Capex comprises purchases of property, plant and equipment, and intangible assets and proceeds from sale of property, plant and equipment.
2 Free cash flow is calculated as cash flow from operating activities minus cash flow from investing activities.
3 The free cash flow conversion rate is calculated as free cash flow as a percentage of EBITDA.
4 Free cash flow to equity is calculated as cash flow from operating activities less cash flow from investing activities less interest paid and the current portion of loan and borrowings due at the end of the period.
5 Invested capital is defined as total assets (excluding current income tax receivables, goodwill, acquired technology & customer relationships, brands & trademarks and deferred income taxes) less non-current liabilities (excluding loans & borrowings and deferred income tax liabilities). less current liabilities (excluding loans & borrowings and deferred income tax liabilities).
6 Net operating profit less adjusted taxes (NOPAT) is calculated as EBITDA minus depreciation and amortization (excluding amortization of acquired technology and customer relationships) plus finance income (including net foreign exchange gains/losses from financing activity and excluding other finance income) less taxes at the average Group rate of 15.8% (previous year 17.6%).
7 Proposal of the VAT Board of Directors to its shareholders at the AGM on May 14, 2020
8 Percentage of free cash flow to equity proposed to be paid out as dividend
9 Number of employees expressed as full time equivalents (FTE)

Net sales
in CHF million

570.4

2018 **698.1**

Net sales development
in CHF million



EBITDA
in CHF million

154.0

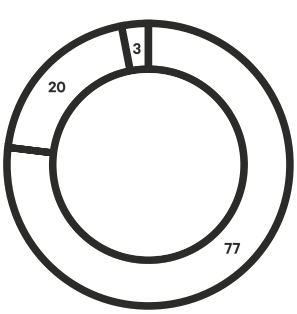
2018 **215.2**

EBITDA margin
in %

27.0

2018 **30.8**

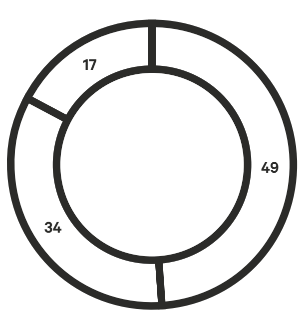
Net sales by segment
in %



77 VALVES
20 GLOBAL SERVICE
3 INDUSTRY

2018
74 VALVES
15 GLOBAL SERVICE
6 INDUSTRY

Net sales by region
in %



49 ASIA
34 AMERICAS
17 EMEA

2018
50 ASIA
33 AMERICAS
17 EMEA

Free cash flow
in CHF million

139.9

2018 **123.9**

Dividend per share*
in CHF

4.00

2018 **4.00**

* Proposal of the VAT Board of Directors to its shareholders at the AGM on May 14, 2020

Dear Shareholders,

VAT is the world's leading supplier of high-end vacuum valves used to make semiconductors, digital displays, solar panels, and many other high-precision products. Indeed, our valves are vital to the new Digital Era – Big Data, artificial intelligence, autonomous vehicles – and the continued growth in all kinds of smart personal and industrial devices depend on the ultrapure manufacturing environments created using VAT valves.

In 2019, market conditions presented a significant challenge, with lower demand reflecting the continued cyclical slowdown that began in the second half of 2018. However, VAT continued to focus on delivering the highest level of customer value in our industry while building the fast and flexible global organization that we need to secure our competitive success over the long term. I believe our results show the success of that approach. The return to demand growth in the fourth quarter shows that the downturn is behind us and we are now in an even stronger position to take advantage of the many opportunities that lie ahead.

We approach those opportunities with a solid and simple business strategy built around the three pillars of growth, profitability, and free cash flow.

Our growth strategy is focused on continuously building our market share through deep customer relationships and our commitment to technology innovation. In 2019, we further expanded our market share to 50% and introduced a variety of new products across all of our businesses in close collaboration with our customers. Technology advances continued in the areas of reduced particle emissions and product purity, improved consistency in valve performance, and high-speed process control. Exciting new developments are being made in the area of mechatronic valves that integrate mechanical, electronic and computing functionality. Our leading capabilities in all these areas are feeding a strong pipeline of spec wins, which are product designs agreed together with our customers that they will use in the next generation of fabrication equipment.

We also aim for sector-leading profitability. Since VAT went public in 2016, our management team has been driving increased operational agility through the cycle. That means broadening our global footprint, optimizing supply chains, speeding up internal processes and freeing up our employees to focus more of their energy on meeting customer requirements. In 2019, we continued to increased production capacity at our Malaysia plant. Our cost and efficiency program that we introduced at the beginning of the cyclical downturn in 2018 made a significant contribution to EBITDA and helped us achieve an EBITDA margin in 2019 that was well above previous cyclical lows.

Ultimately, we want to generate healthy and sustainable free cash flows so we have the financial strength to take advantage of the many growth opportunities to come in this dynamic and exciting business. We are also committed to paying a sustainable dividend. In 2019, we continued to drive improved working capital management, and with the completion of our expansion at the Malaysia plant, lower capital expenditures in the coming years will further support free cash generation.

These three pillars describe our approach to creating long-term economic value, but we also recognize the need for sustainable value creation along social and environmental dimensions. These include building our talent base, transferring know-how and expanding our supply chains to create value for our people and their communities in Switzerland, Romania and Malaysia, as well as developing production methods that reduce our physical impact on the environment. For example, we are using ground-source heat pumps to cool buildings during the summer and are participating in an energy-saving initiative in Malaysia using solar panels on the roof of our plant there. We will continue to build a sustainability culture in VAT that

“We have a solid and simple business strategy built around the three pillars of growth, profitability and free cash flow.”

DR. MARTIN KOMISCHKE
CHAIRMAN OF THE BOARD OF DIRECTORS

both supports our business development and guides the attitudes and behaviors of all of our employees.

As I’ve said in previous letters, VAT’s biggest asset is its people and 2019 confirmed this. Our approximately 1,800 people around the world turned in an excellent performance in a very challenging business environment. On behalf of the Board of Directors and Executive Management, I’d like to thank them for their commitment and engagement.

I’d also like to thank our shareholders for their trust in our company and I’m pleased to report that we will again recommend a dividend of CHF 4.00 per share.

Our long-term market outlook remains very positive. We are still at the beginning of the Digital Era. Device interconnectivity and the Internet of Things, cloud computing, new mobile data applications coming through the rollout of 5G telecommunications, smart personal devices, automated homes: there is no end in sight to global digitalization and the high-precision products needed to make it happen.

As we move into this new world, we will intensify our focus on meeting and exceeding our customers’ demands by continuing to innovate: new valve designs, new materials, new product modules and actuating systems, new service products, and new interconnected “smart” valve products and systems that will further improve our customers’ performance. Increased organizational flexibility will remain a management priority, together with a stronger drive to build a sustainability culture in which we can ensure value creation for all of our stakeholders.

I look forward to working with all of you to achieve this goal.

Sincerely,

Martin Komischke

CEO Interview

What were the highlights of 2019 from your perspective?

Our continuing efforts to make the company more flexible and responsive are paying off. Despite a sharp drop in net sales because of the cyclical slowdown that started in 2018, we achieved a full-year EBITDA margin about 200 basis points higher than in previous downturns. The quality of our long-term customer relationships also supported us through a difficult environment. We built our Number One market share even further and continued to launch new products as our customers prepare for the next generation of digital devices. That includes more than 90 specification wins, a new record. We also achieved record free cash flows in 2019, despite the slowdown.

What changes have you made to achieve that result?

We've implemented a global cost optimization program along the entire value chain, from product design and procurement through to ordering, delivery and logistics. We're also driving a comprehensive IT integration program to link all of our operational and business processes. That will make us faster and more efficient. It will also improve transparency, allowing us to make better business decisions and more quickly. And we continued our sector-leading investments in research and development despite the weaker market. Continuous innovation is absolutely critical to our competitive success.

Did the downturn change the competitive environment?

In a downturn, our customers focus on developing new platforms and bringing them to market. We have the strongest engineering resources and technology know-how in the industry, which gives us a significant competitive advantage. We also have a more global footprint than most of our competitors, so we can better optimize supply chains and adapt capacity across multiple facilities. Plus, our solid balance sheet and cash flow generation give us long-term stability, which our customers value.

What's the status of the Malaysia plant and how do you see its role for the future?

We officially opened the expanded facility in September last year. We've quadrupled production space to 24,000 square meters since the original facility was begun in 2012. We're continuing to ramp up production, including engineering and testing facilities, and so far we've qualified more than 30 new products there. We expect our Malaysia facility to account for approximately 20% of total sales in 2020, increasing to about 40% in the coming years. It will play a key role, both in increasing our overall flexibility as well as strengthening our relationships with customers in the region.

How are you addressing sustainability in your business?

We aim to drive value creation along three lines: economic, social and environmental. We create social value in a number of ways, most directly by investing in the communities where we operate. Furthermore, we strive to create a work environment that is diverse, safe and rewarding for all of our people, and we run an annual engagement survey to measure our progress in this area. On the environmental side, we continue to develop ways to reduce raw materials, make our packaging less wasteful and improve production efficiency. That's good for both the environment and our business.

What new technologies will drive growth in the next few years?

The Digital Era is just beginning, and ongoing developments in artificial intelligence, autonomous vehicles and Big Data will continue to create the need for newer, more powerful, and more energy-efficient semiconductors and digital displays. Almost all of the new technologies coming to market have higher densities of silicon chips, and this exponential growth is driving more and more capital investments.

MICHAEL ALLISON, CEO

"We built our Number One market share even further and continued to launch new products as our customers prepare for the next generation of digital devices."

We expect the new 5G network rollout to create significant demand for leading-edge silicon chips, not just in network electronics, but also in new handsets. These will have faster processors, more OLED screens and a huge increase in memory. Some of these advances will be based on new processes, such as extreme ultraviolet lithography, or EUV, for fabricating chips with transistors as small as 7 nanometers or lower. New materials, such as gallium nitride, are also being introduced as more energy-efficient alternatives to silicon. All of this will require new high-vacuum solutions.

What's your outlook for 2020?

We're optimistic that 2020 will be a year of moderate growth. Net sales in the fourth quarter of 2019 returned to year-over-year growth, driven by demand recovery in the semiconductor sector, mainly in memory applications such as flash chips. We expect that trend to continue. The outlook for displays, solar and general industrial applications is also positive.

What will be your management priorities this year?

We need to ensure that we can quickly meet the changing needs of our customers as demand recovers. Technology innovation and product quality will remain in focus, as well as speeding up time to market. We'll continue to drive out costs and drive up cash flow as we build and finetune our global footprint. We're expanding our service offerings to help customers improve the performance of their existing assets and developing new generations of smart valves for the Internet of Things. And we'll continue our efforts to create a sustainability culture in the company that will support our ability to create value for all our stakeholders over the long term.

From modest beginnings to global leadership

VAT was founded in 1965 in Flawil, Switzerland, and was originally focused on vacuum valves for scientific research. VAT entered the thin-film market for industrial coatings and optics in the 1980s and established its COMVAT AG subsidiary to manufacture vacuum-sealing equipment. VAT entered the semiconductor sector in 1988, laying the groundwork for its current position as the world's leading supplier of high-vacuum valves.

As the semiconductor industry continued to grow, VAT broadened its product range and began to serve adjacent markets with similar high-vacuum production processes, such as flat-panel displays and solar panels. VAT expanded its business beyond Europe by establishing manufacturing and service operations in the US and Asia and undertook some small acquisitions, including Sysmec in Romania in 2008 and the vacuum valves product line from Inficon AG in 2012.

That year, VAT also launched its largest organic growth initiative with a new manufacturing center in Penang, Malaysia. The aim was to improve collaboration with large customers in Asia and to make the organization faster and more flexible by diversifying the production footprint and optimizing its global value chain. The Penang plant has been substantially expanded from its original size of 6,000 square meters and with the completion of a major build-out in 2018 currently occupies 24,000 square meters, including assembly, engineering and testing capabilities.

VAT Group was taken public through an Initial Public Offering (IPO) on the SIX Swiss Exchange in April 2016. VAT paid its first dividend as a public company of CHF 4.00 per share to shareholders in May 2017. The company paid the same dividend again in 2018 and has proposed a dividend of CHF 4.00 per share for 2019.

Today, VAT has more than one million valves in operation around the world and continues to build its leading market share by focusing on deep customer relationships, a passion for technology innovation and a commitment to sustainable value creation for all of its stakeholders.

Milestones

- **1965** Founded in Flawil, Switzerland
- **1983** Established COMVAT AG
- **1988** Entry into the semiconductor industry
- **2008** Acquisition of Sysmec, Romania
- **2012** Established manufacturing center in Malaysia
- **2014** Acquired by private equity
- **2016** VAT surpasses CHF 500 mn in net sales; IPO at Six Swiss Exchange
- **2017** Further build-out of global footprint
- **2018** Malaysia expansion completed; Record net sales and EBITDA
- **2019** Market share above 50%; Record free cash flow

Driving long-term competitive success for the Digital Era

The world is still in the early stages of a new growth era fueled by data. The sheer volume of data being generated is almost inconceivable. It is estimated that in 2007, global internet traffic generated 2,000 gigabytes (GB) of data per second. Ten years later, that had jumped to 46,000 GB per second. Estimates are that it will reach more than 150,000 GB per second by 2022. According to recent estimates from the World Economic Forum, the volume of data in the entire digital universe is expected to reach 44 zettabytes – or 44 trillion gigabytes – this year, equivalent to more than 40 times the number of stars in the observable universe.

That's data that needs to be stored, processed, mined and analyzed, transmitted, communicated and displayed. The hardware that enables all of those steps are semiconductors and digital displays, whose manufacture requires extraordinary levels of precision within extremely pure vacuum environments.

And those environments are only achievable with the kind of vacuum valves in which VAT is the world leading manufacturer.

A passion for purity

VAT vacuum valves are used to manufacture semiconductors, high-resolution displays, photovoltaic solar panels and a variety of other high-precision products. Near-perfect vacuums are essential to the manufacture of these devices because they involve processes such as layering, etching and deposition of materials measured in nanometers (nm). As an example, the latest generations of semiconductors feature electronic circuits of between 7 and 10 nm in size, no larger than a DNA molecule. These processes are therefore carried out in specially designed vacuum chambers that are as empty as space at the edge of the earth's atmosphere, 100 kilometers above the planet's surface. At the same time, it must be possible to quickly open and close these chambers in order to move substrates, such as silicon wafers, glass or plastic, between them while maintaining the high-vacuum atmosphere.

VAT valves provide those capabilities: the tight seal that allows high vacuums to be created (isolation valves); open-and-close operation that permits the particle-free transfer of substrates from one process chamber to another (transfer valves); and valves used during the injection of sometimes corrosive gases into the chamber while maintaining a reliable vacuum seal (control valves). Furthermore, they have to be fast and reliable over tens of thousands of operations. They must be easy to replace and maintain in order to reduce production downtime.

Manufacture at the molecular scale

In the era of AI, the Internet of Things, and ubiquitous device interconnectivity, new ways are urgently needed to process, store and display vast volumes of data faster and using less energy. Many of our customers say the new era of computing will require order of magnitude improvements in chip performance per watt. Chip and display manufacturers are working at top speed to deliver these improvements. That often involves manufacturing at a molecular scale, where the tiniest contaminant can bring fabrication to a costly halt, and pushing process technologies to their physical limits. Our customers therefore need partners who can match their pace, who are committed to technology innovation, and who can deliver the highest quality at exactly the right time. They are among the most demanding customers in the world. VAT's ability to reliably meet those demands over the long term is what distinguishes us from our competition and has made us the clear market leader.

To take just one example from the semiconductor industry, chip manufacturers are continuously striving to pack more storage and processing power into smaller spaces using less energy. This includes new technologies to make individual transistors smaller, such as extreme ultraviolet lithography (EUV) that uses lasers in the process chambers to create patterns in a substrate as small as 7 nanometers. Semiconductor manufacturers are also developing new chip architectures, for example moving from flat single-layer semiconductors to chips with multiple layers that allow them to pack more processing power into a smaller volume. They are experimenting with new materials to improve chip performance, such as replacing silicon with silicon carbide or gallium nitride, and looking at new ways to connect chips together to deliver higher performance at lower energy consumption and production cost.

With each innovation, new high-vacuum manufacturing processes are needed in areas such as etching, deposition, patterning, coating and packaging. This may involve the development of entirely new process steps, such as EUV, or changing the number of current processes in an existing fab design.

In the digital displays sector, new technologies, including ultra-thin and flexible organic light-emitting diodes (OLED) and much larger displays, require new substrate layers and materials. In the solar photovoltaic sector, new technologies are improving the efficiency with which sunlight is converted into electricity. And in general industry, precision manufacturing at a microscopic scale is becoming more widespread, for example, in the application of extremely thin industrial coatings. In all of these developments, high-end vacuum valves play a central role in the manufacturing process.

Continuous design innovation

With each innovation in the manufacture of digital devices, our customers need new vacuum solutions: cleaner, faster, more durable, more flexible, more reliable. And because digital technology is moving so fast, success comes only to those with the deepest understanding of the technology, markets and customers, and capable of developing the right products at the right time, whether that’s in two years or in two months.

This is where VAT has a clear competitive advantage. We drive technology innovation in several core areas, some of them based on the development of long-term product platforms that can serve our customers for a number of years, and others based on more immediate needs.

One core area is product purity. Our valves are being incorporated into the purest vacuum chambers, so they must be delivered without any kind of surface contamination. This requires meticulous attention to detail in the manufacturing, machining, assembly and packaging processes, including the use of innovative packaging materials.

Another key feature is particle-free operation. VAT has developed specialized elastomer materials used for sealing surfaces that, unlike conventional materials, emit close to zero particles when the surfaces meet during opening and closing. We also develop our own actuating systems that open and close the vacuum seals with just enough force to secure the vacuum, but without generating any excess particles. Valve weight and strength are also decisive. VAT is a leader in the design of lightweight valves that can be more easily assembled in a smaller space, that can be serviced and maintained faster, but that can nevertheless tolerate the enormous forces created by the differences in pressure between vacuum process chambers.

We also invest into developing manufacturing methods to ensure we maintain our lead in supplying valves at the right quality, on time and at a competitive cost. This includes working with our key suppliers to develop a fast, flexible and top-quality supply chain.

At the same time, we work closely with our customers on shorter-term customized projects that involve incremental improvements to valve design that need to be delivered within just a few weeks. These include adjusting the size of a valve to reduce the overall footprint of a process chamber, or adding actuators or pressure sensors to improve speed and efficiency. This ability to respond quickly to our customers with high-quality and cost-competitive solutions has been key to our ability to steadily increase market share.

Pioneering R&D

Maintaining and expanding our technology lead requires a long-term commitment to research and development (R&D), where we spent approximately 6% of revenues – or CHF 33 million – in 2019. About 20% of our total workforce works in innovation, and we employ more than 150 R&D engineers and scientists worldwide. We are the only valve supplier with our own particle measurement laboratory, located in San Jose, California, where we qualify our future high-end products for 10 nm processes and even smaller. In 2019, we developed technologies with a particle emission below 0.001 nanoparticles per cycle. We also protect our intellectual property through the industry's largest portfolio of patents. In 2019, VAT once again ranked at the top of the Patent Asset Index™, which measures the total competitive impact of a company's patent portfolio using criteria such as portfolio size, technology relevance and geographic coverage.

Maintaining our technology leadership also requires a focused and adaptable organization that is both highly tuned to the needs of our customers as well as capable of continuous process improvement to ensure that we are able to deliver on time at the right quality. In 2019, we fully rolled out a new R&D organization with a clearer focus on breakthrough innovations with high value for VAT and our customers over the long term, while still securing near-term product development in the business units. This included an investment of more than CHF 10 million to develop the most advanced cleaning and machining technology in the industry, which gives VAT a clear competitive advantage.

We are also driving the development of new fast mechatronic valves and motion components that integrate mechanical, electronic and computing functionality. This is part of our efforts to be the pioneer in supplying digitalized "smart" valve products for use in semiconductor fabs to reduce downtime and increase yield.

A solid, simple strategy

We approach our long-term opportunities to create value with a solid and simple business strategy built around the three pillars of growth, profitability and free cash flow.

Our growth strategy is based on building our market share through long-term customer relationships and ensuring that we remain at the forefront of technology innovation. Despite the market slowdown in the early part of 2019, we could once again increase our market share year-over-year to 50%, compared with 34% five years earlier. We launched a number of new products, notably in our semiconductor and displays businesses, including a new pendulum valve for use in flat-panel display manufacturing, improved pressure control valves along with mechatronic transfer valves and motion components. We also delivered for the first time a fully machined cluster tool comprising eight modules with 45 different valves to a US customer specializing in physical vapor deposition (PVD) systems. We also achieved a record of more than 90 spec wins in which VAT and our customers work closely together to design new valve products for use in coming generations of fabrication equipment.

Our second strategic focus is sector-leading profitability. Since VAT went public in 2016, we have been driving increased operational flexibility, faster and more efficient internal processes, streamlined and agile supply chains, and a global footprint that brings us closer to our customers and supports a faster, more competitive business model. In 2019, we continued to invest in our facility in Penang, Malaysia, by adding advanced engineering and testing facilities and we will continue to certify product from the plant with our large customer base in Asia. A number of targeted cost and efficiency measures were taken in 2019 to offset the impact of the cyclical downturn that began in the middle of the previous year. Significant savings were achieved from purchasing as we shifted some supply sources to eastern Europe and Asia. Savings were also achieved in the areas of product development, quality, manufacturing and logistics. Taken together, these efforts helped us achieve an EBITDA margin in 2019 that was more than 200 basis points above the previous cyclical low.

Thirdly, we aim to generate healthy and sustainable free cash flows so we have the financial strength to take advantage of future growth opportunities as well as to fulfill our commitment to paying a sustainable dividend. In 2019, strong efforts to improve working capital management supported a free cash flow margin of 24.5%. With the completion of our expansion at the Malaysia plant, lower capital expenditures in the coming years will further support free cash generation.

This strategy covers our approach to creating long-term economic value, but we also recognize the responsibility to create sustainable value along social and environmental dimensions as well. In 2018, we announced our ambition to build a sustainability culture in the company that reinforces our general strategic approach as well as guides the attitudes and behaviors of all employees on a day-to-day basis. We continued to drive these efforts in 2019. We create social value in a number of ways, most directly through the investment we make in the communities where we operate. We also strive to provide people with opportunities to learn new skills and create a work environment that is diverse, equitable, safe and rewarding for all employees. On the environmental side, we continue to look for ways to reduce raw materials, make our packaging less wasteful and improve energy efficiency. Taken together, these steps will support our ability to create value for all our stakeholders over the long term.

VAT in a long-term growth market

According to VLSI, VAT's total addressable market across all its businesses in 2019 was approximately USD 2.1 billion[1] of which semiconductors make up some USD 1.2 billion, displays and solar approximately USD 230 million, and industry and research approximately USD 440 million. The services market accounts for another approximately USD 245 million. VAT's total addressable market is expected to grow at a compound annual growth rate (CAGR) of approximately 5 percent between 2020 and 2024.

1 VLSI Research, February 2020 preliminary full-year 2019

Our competitive strengths moving forward

Single focus on mission-critical vacuum valves
VAT's focus is vacuum-sealing technology. We know more about this technology than anyone else in the industry. That makes us an indispensable partner for our customers who require maximum uptime for their highly capital-intensive manufacturing processes. Deep customer relationships built on technology leadership.

We have decades of experience delivering to one of the world's most demanding markets. By integrating us into their long-term product development plans, our customers demonstrate they trust us to provide them with the advanced technology needed to address this rapidly changing market.

Undisputed Number One market position
VAT is the clear market leader in high-end vacuum valves. According to market research firm VLSI Research, VAT's market share has increased every year since 2014 and is currently several times higher than our next-biggest competitor, with more than one million valves in operation.

Multidimensional growth
VAT benefits from the growing market for semiconductors and high-performance displays driven by digitalization, along with the increasing complexity of the products manufactured under vacuum, which requires many more process steps and more innovative vacuum valves. Consolidation in the semiconductor industry has also led to more stable and predictable capital investments. These trends have reduced overall demand volatility compared to historical trends, supporting more consistent returns over the economic cycle.

Proven people
Our international and diverse management team has unprecedented experience in our core markets, with industry-leading expertise in engineering, electronics, physics, chemistry and material science, supported by ongoing training programs and a rigorous program of quality certification.

Financial strength
Our financial profile is characterized by high profitability and consistent cash flow generation over the cycle, driven by a commitment to achieving operational excellence through our flexible global footprint. Our cash-generative business model allows us to quickly pay down debt without affecting the business while supporting our attractive dividend policy.

Creating value sustainably

VAT sees sustainability as the creation of long-term stakeholder value through a business strategy based not only on the economic results, but also on social and environmental impacts. VAT's business strategy is intended to foster a long-term outlook based on transparent communications and dialog with all stakeholders.

Profitable growth over the long term
Business success is the foundation that enables a company to deliver on its commitments to social and environmental sustainability. In a virtuous circle, success in the areas of social and environmental sustainability also enhances a company's business success.

Success can be measured in many ways. For example, VAT strives to generate an attractive return on invested capital and enable long-term capital appreciation. This means investing a large portion of earnings into areas such as research and development, employee training and development, more efficient production capacity and operational excellence. In all of these areas, our business decisions reflect a balanced approach that includes their impact on our people, the communities in which we operate, customers, suppliers, shareholders and the local and global environment.

We are guided and supported in this through our membership in the Responsible Business Alliance (RBA) and the adoption of the RBA Code of Conduct. This sets standards on social, environmental and ethical issues in the electronics industry supply chain. These include the Universal Declaration of Human Rights, ILO International Labor Standards, OECD Guidelines for Multinational Enterprises, ISO and SA standards, and many more. We have also obtained certificates in quality management with ISO 9001 and environmental management through ISO 14001.

We also see sustainability in terms of the sustainability benefits from the use of our products. For example, VAT valves are integral to the high-vacuum processes needed to make the newest energy-efficient semiconductors and digital displays. The latest advances to increase the amount of sunlight that is converted to electrical energy in photovoltaic solar panels require high-precision manufacturing processes that are only possible in the purest vacuum chambers possible. The company is also the exclusive valve supplier for the international ITER project to demonstrate clean energy generation through nuclear fusion by 2025.

Social responsibility
The social dimension is reflected in part through VAT's presence and activities in the communities where it operates. As an employer to some 1,800 people around the world, VAT contributes to the economic prosperity of communities in Switzerland, Romania, Malaysia, the United States and other countries. In the past three years, VAT has invested more than CHF 40 million to dramatically expand and ramp-up its production facility in Penang, Malaysia, which employs close to 300 people. The plant has been equipped with advanced engineering and testing facilities in order to support its continuing growth in the years to come, bringing us closer to our customers and giving the company the flexibility it needs in a fast-changing global market. More than 30 products have been qualified at the plant, which requires continued investment in the technical qualifications of our people there.

In addition to the direct economic benefits to the local region, the new plant is driving the development of a regional supplier base for both components and services in order to better support the company's customers in Asia. It provides the additional benefit of shortening delivery distances and reducing the associated emissions, as well as supporting the adoption of global environmental and social standards along the entire global value chain.

VAT also sees itself as a responsible and far-sighted employer that not only provides jobs, but also offers career and personal development opportunities through various training and management development programs. The company also strives to promote open and transparent communication among production employees, supervisors and managers at all levels. Extensive training is provided in the areas of health and safety, encouraging increased environmental awareness and diversity in the workplace.

Furthermore, VAT engages an external advisor to conduct an annual survey of staff satisfaction. The survey tells us where employees are satisfied and where they see room for improvement. In 2019, the response rate was 83%, an increase of around 7 percentage points over the first survey. We believe the survey is an important tool for creating a more rewarding and motivating work environment.

Reducing environmental impacts

VAT endeavors to conserve and protect resources, minimize emissions, and improve energy efficiency along the entire value chain, from product design and procurement to production, logistics and delivery. Measures include:

- Designing products that require fewer natural resources, more energy-efficient manufacturing and less packaging
- Increasing the focus on environmental and safety criteria in supplier assessment
- Increasing recycling rates for waste metal, PET, wood and paper. The company currently recycles some 1,500 tons of materials a year.
- Cutting energy and water consumption. For example, the company is currently engaged in a project to cut electricity consumption by 15 GWh per year, enough to power 2,500 homes. This includes expanding the use of solar power at our manufacturing facilities
- Eliminating use of paper in packaging materials and reusing shipping materials
- Extending the lifetime of cooling lubricants
- Encouraging and subsidizing environmentally conscious options for traveling to and from work, and reducing business travel

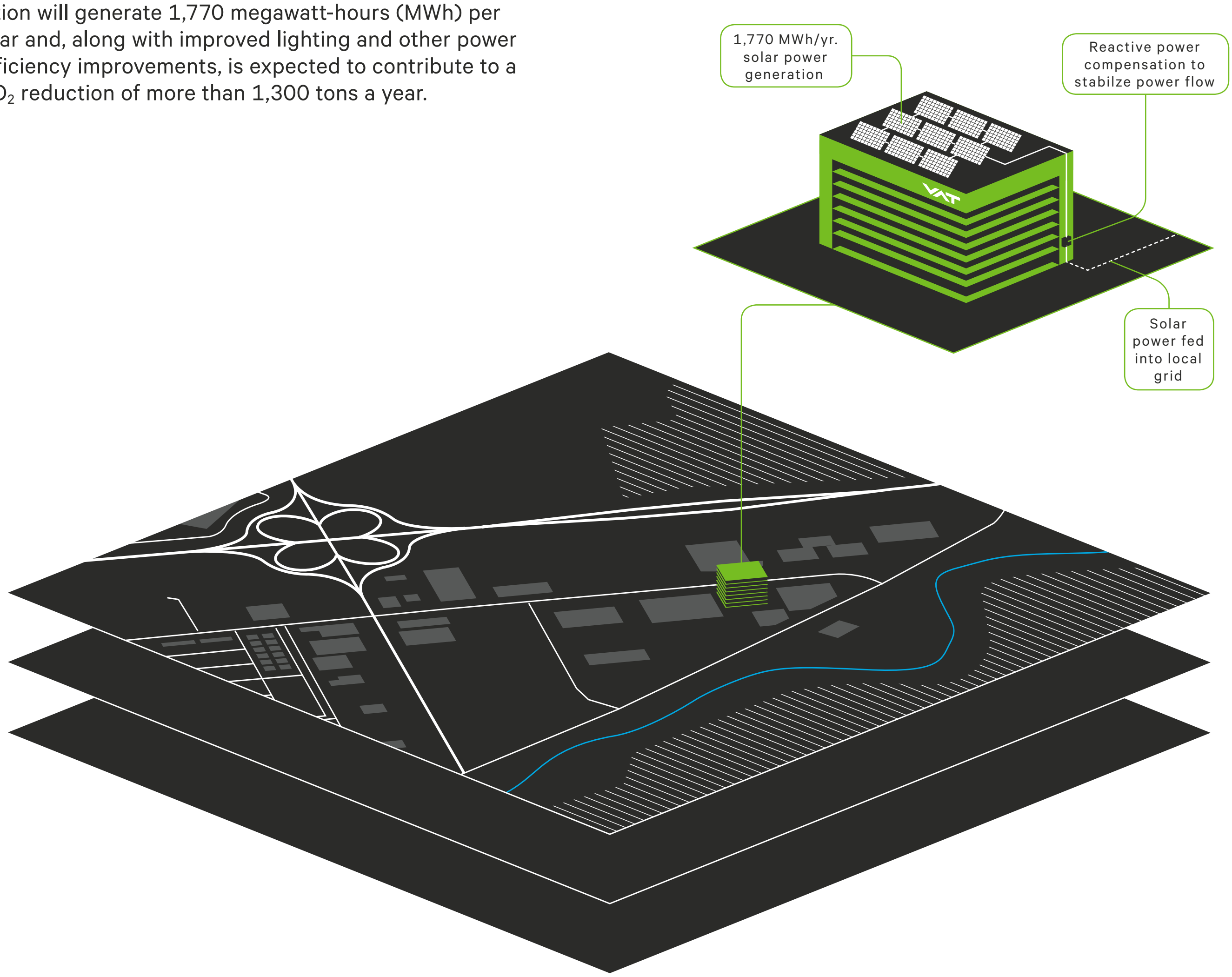
Looking ahead, VAT aims to create a sustainability culture that reinforces the company's business strategy and guides the attitudes and behaviors of all employees on a day-to-day basis. VAT believes this approach is fundamental to the creation of long-term value for all stakeholders.

Employee Engagement Survey Participation
in %

83

2017 (FIRST SURVEY) **76%**

Contributing to sustainable energy in Malaysia
VAT is taking part in a local energy-saving program in Malaysia through the deployment of photovoltaic solar panels on the roof of its plant in Penang. The installation will generate 1,770 megawatt-hours (MWh) per year and, along with improved lighting and other power efficiency improvements, is expected to contribute to a CO_2 reduction of more than 1,300 tons a year.



VAT endeavors to conserve and protect resources, minimize emissions, and improve energy efficiency along the entire value chain

MAPS:

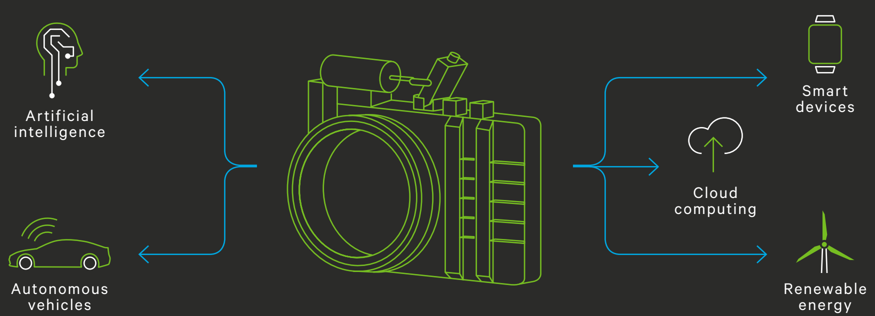
VAT's commitment to innovation and customer success drives sustainable value creation.

VAT combines clear technology leadership with a fast and flexible global footprint to generate sustainable value creation. The following pages highlight the company's ability to innovate, deliver increasing value to customers, and steadily improve operational performance.

TECHNOLOGY LEADERSHIP

Technology innovation is fundamental to our business. It is the basis of our market leadership, underpins our deep customer relationships, attracts the best talent and ensures long-term and consistent profitable growth.

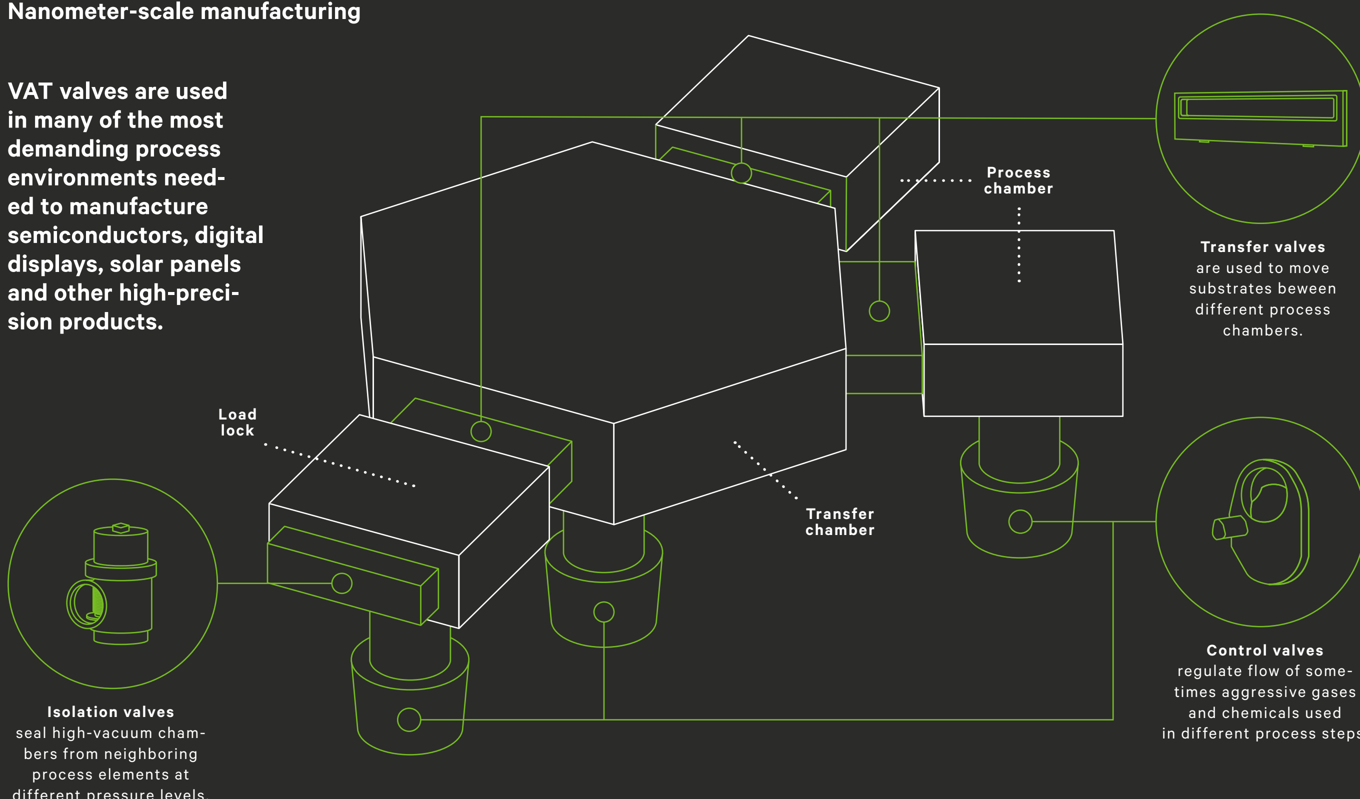
VAT valves
VAT's high-vacuum valves are mission-critical to the digital revolution, key to making everything from massive data centers to personal smart devices.



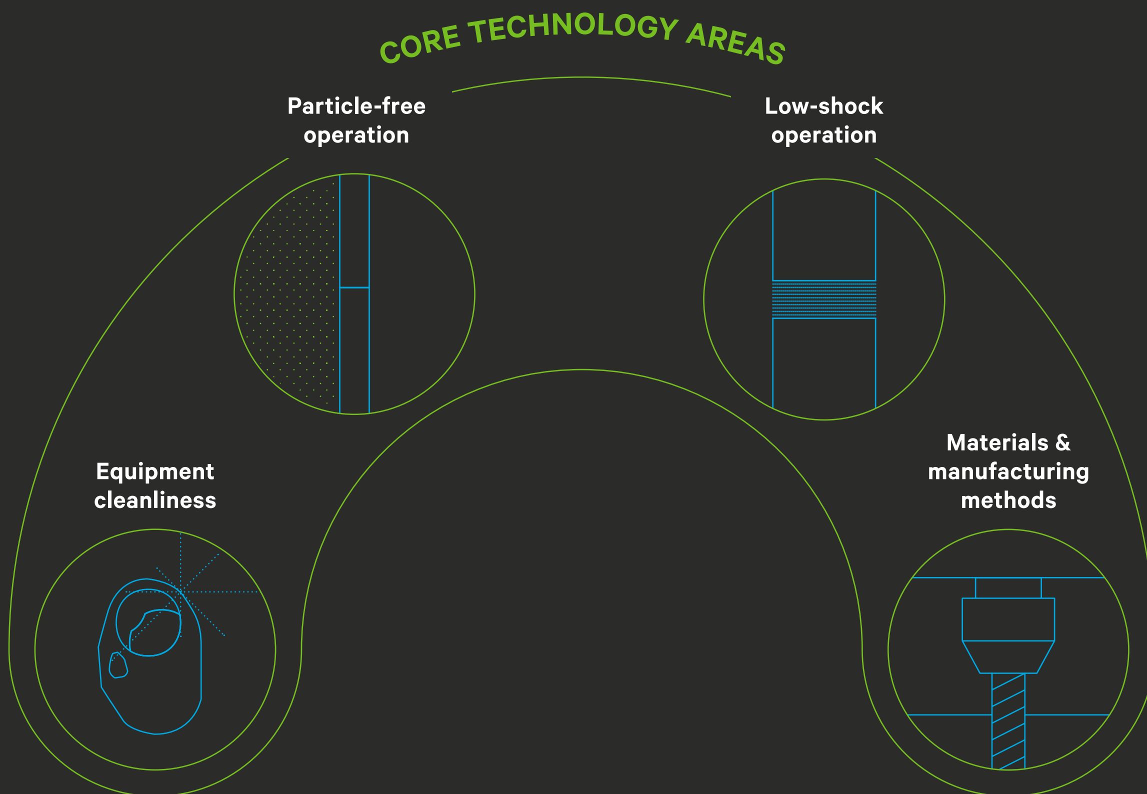
VAT vacuum innovations will be key to the next era of digitalization.

Nanometer-scale manufacturing

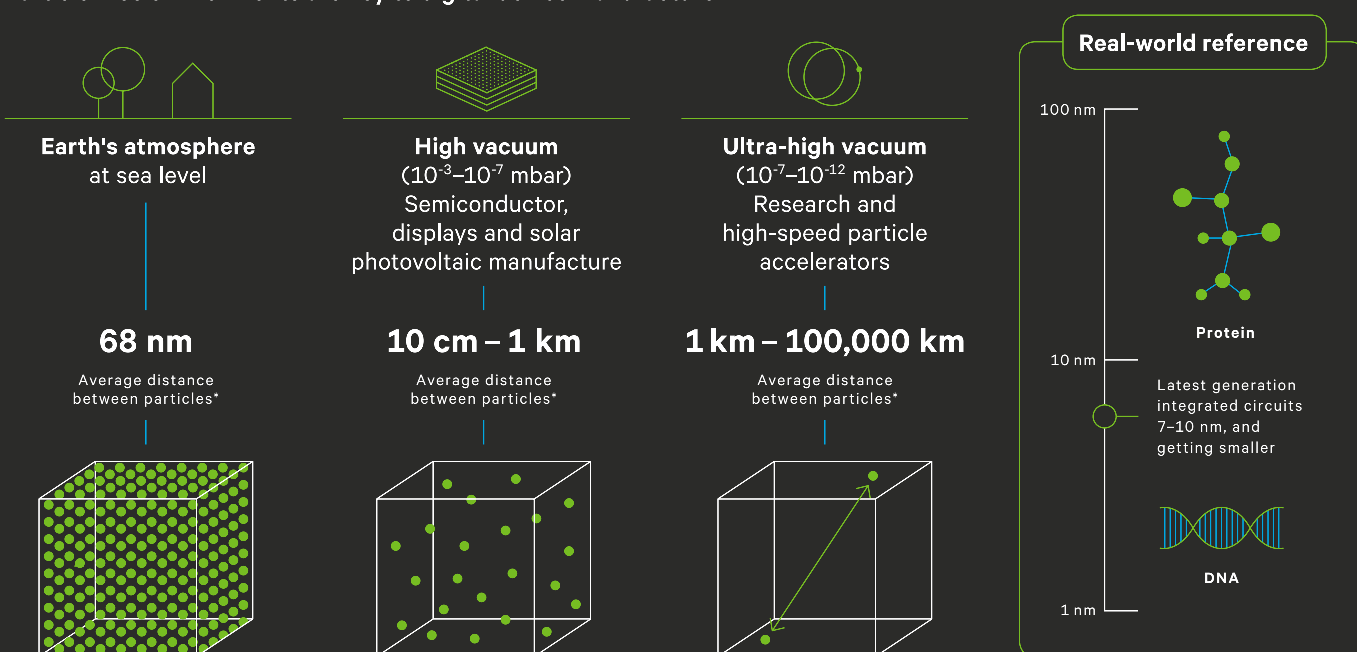
VAT valves are used in many of the most demanding process environments needed to manufacture semiconductors, digital displays, solar panels and other high-precision products.



VAT's core research areas
VAT drives long-term research in key technology areas to ensure that we can deliver breakthrough innovations when our customers need them, and to support our standard valve product platform. At the same time, we create customized valves and modules with a shorter time horizon to meet specific, more immediate customer needs.



Particle-free environments are key to digital device manufacture



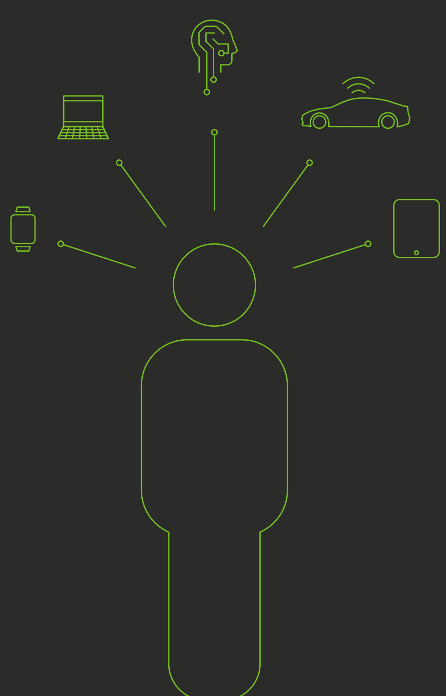
* Mean free path: the average distance travelled by a gas molecule or other particle between collisions with other particles

DIGITAL VALUE CHAIN

Progress in the Digital Era depends on constantly improving the performance of semiconductors and displays. VAT valves play a mission-critical role in the development of digital devices by providing the high purity vacuum environment needed to manufacture nanometer-size electronic components.

Example from the semiconductor market

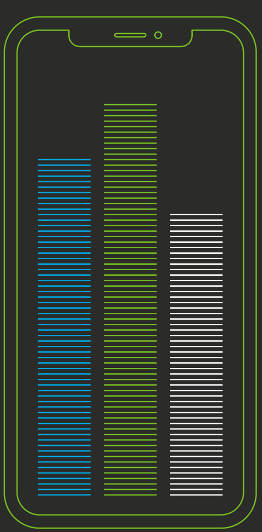
EXPANDING DIGITAL WORLD



Accelerating demand for technologies to generate, process, and store vast amounts of data

Demand drivers

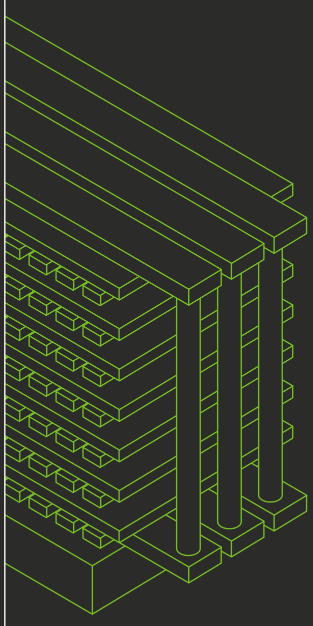
DIGITAL PRODUCT MANUFACTURER



Develops a new digital product that requires improved semiconductor or display performance (e.g., higher speed, lower energy consumption, more computing power, smaller size)

Demand drivers

SEMICONDUCTOR SUPPLIER



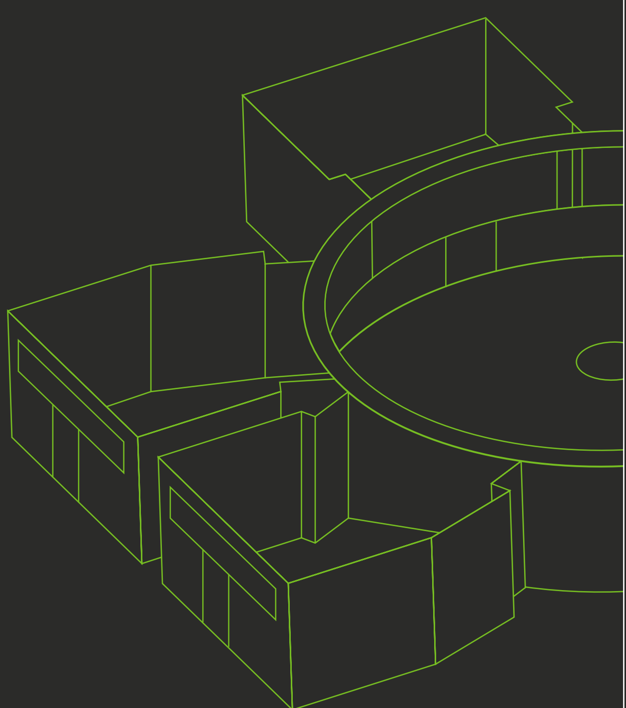
Develops chip to meet new requirements (e.g., 7-nm integrated circuits, 3D architecture, new materials) that requires new fabrication systems and equipment (e.g., for new or additional process steps)

Demand drivers

The data explosion underlying the Digital Era is the ultimate demand driver for VAT valves

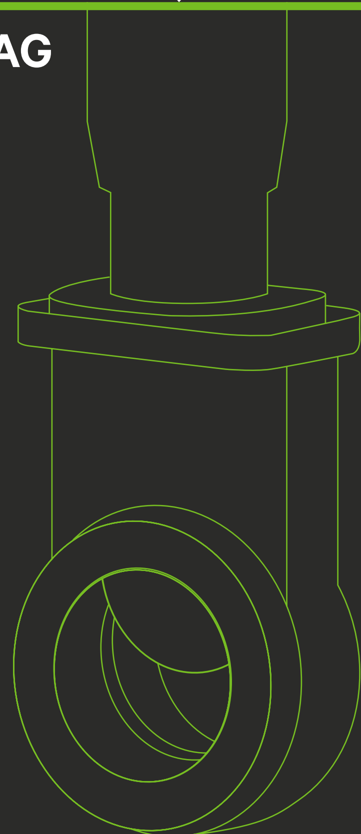
Demand drivers

FAB EQUIPMENT OEM



Designs fabrication equipment for new process steps that requires new vacuum valve solutions (e.g., purer vacuum, faster operation, easier maintenance)

VAT AG



Designs new vacuum valve that enables the increased precision needed for more demanding process environments (e.g., particle-free performance, low-shock operation, improved equipment cleanliness)

Demand drivers

GLOBAL MARKET LEADER

VAT's fast and flexible global value chain allows the company to bring technology innovation to market quickly, rapidly adjust capacity to changing markets, and secure quality and on-time delivery.

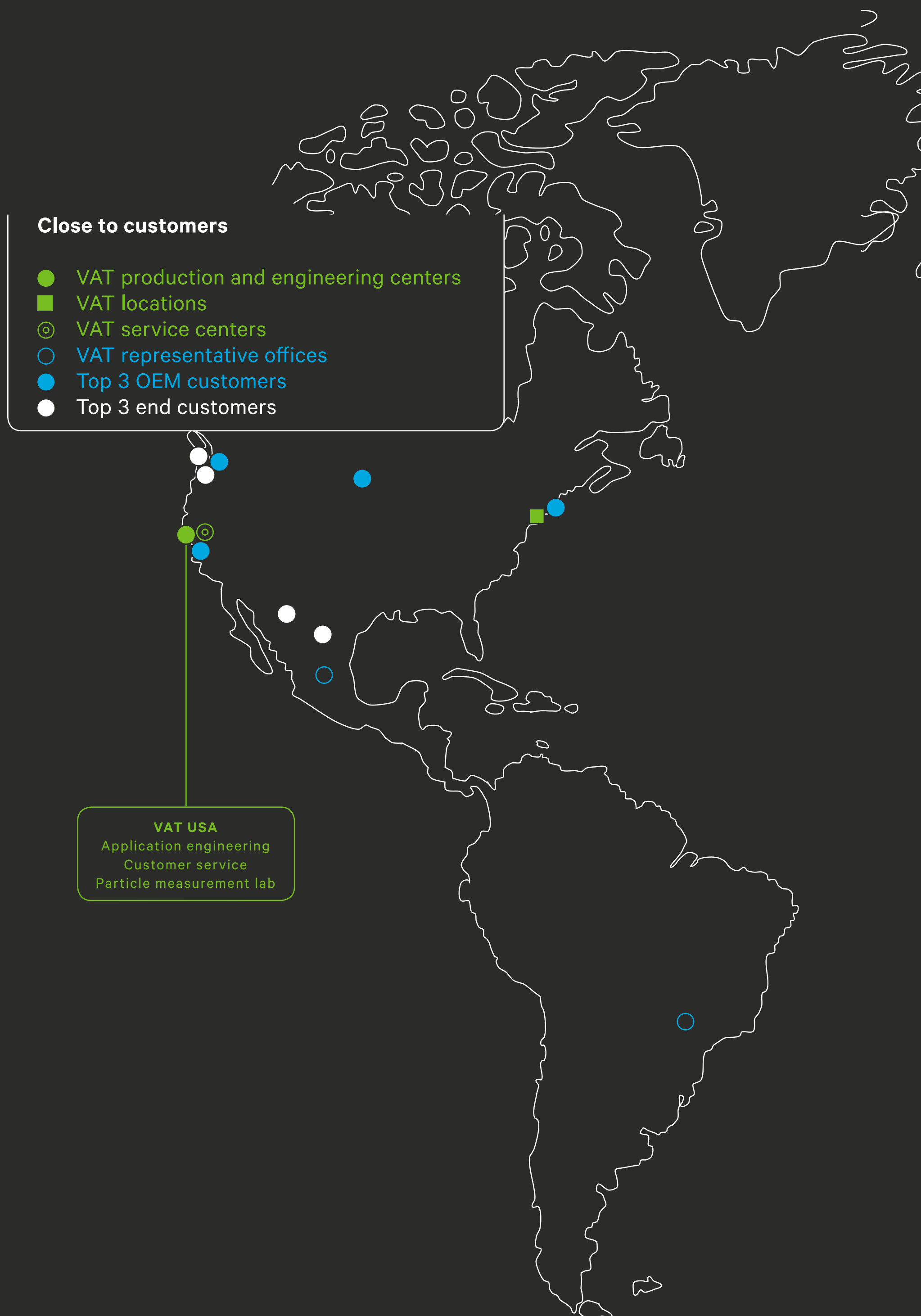
Close to half of all capital expenditures between 2017 and 2019 were invested to expand VAT's value chain in Asia, eastern Europe and the US

x3

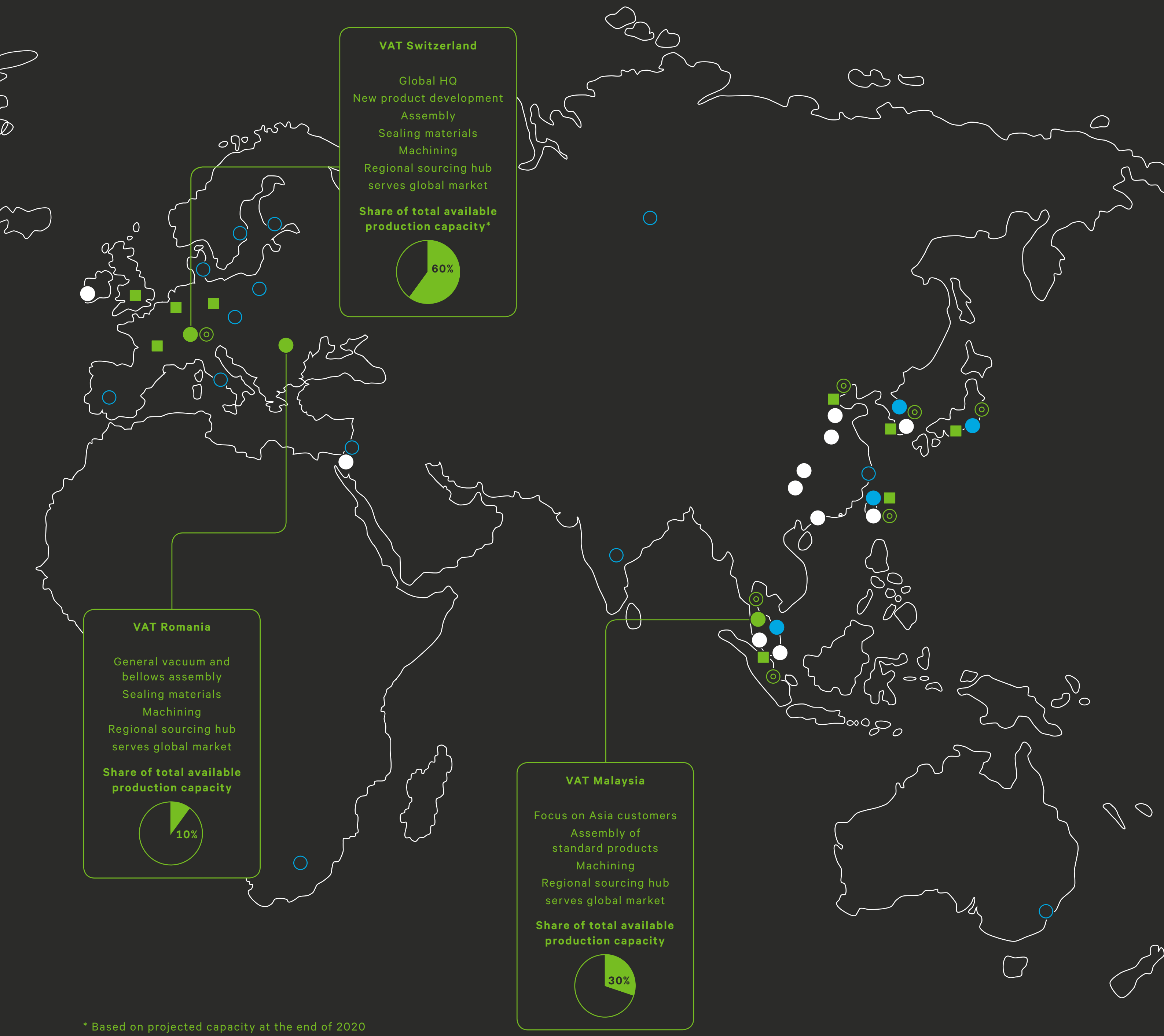
Sales from VAT's Malaysia plant more than tripled from 2016 to 2019

x4

Floor space at Malaysia plant quadrupled between 2012 and 2018 to 24,000 m², including engineering and testing facilities



“Close to customers with a balanced and flexible footprint”

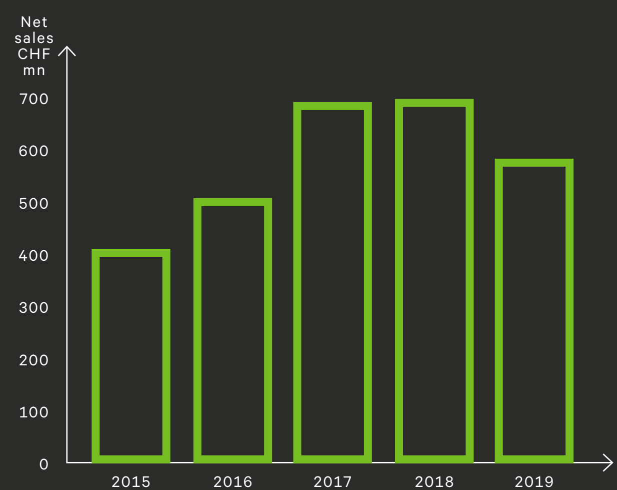


* Based on projected capacity at the end of 2020

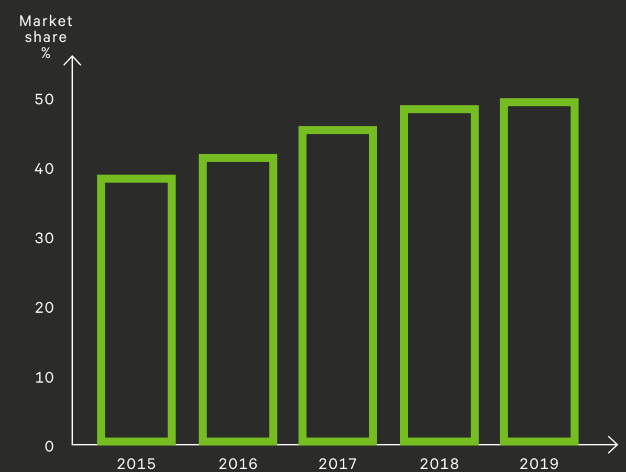
LONG-TERM VALUE CREATION

VAT aims to achieve long-term economic value creation by focusing on three areas: growth, profitability and free cash flow. This simple approach ensures a steady focus on the most important value drivers in our business and underpins our competitive success through the cycle.

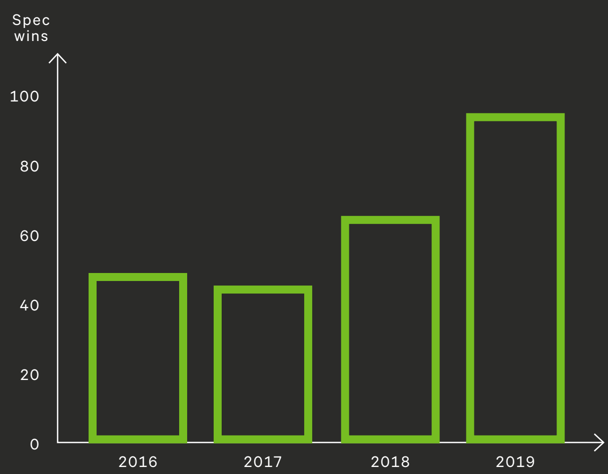
GROWTH



VAT is the leading supplier of advanced vacuum valves to a global market with a strong long-term growth outlook.



VAT has steadily built its market share by working closely with customers to develop leading edge technology solutions.

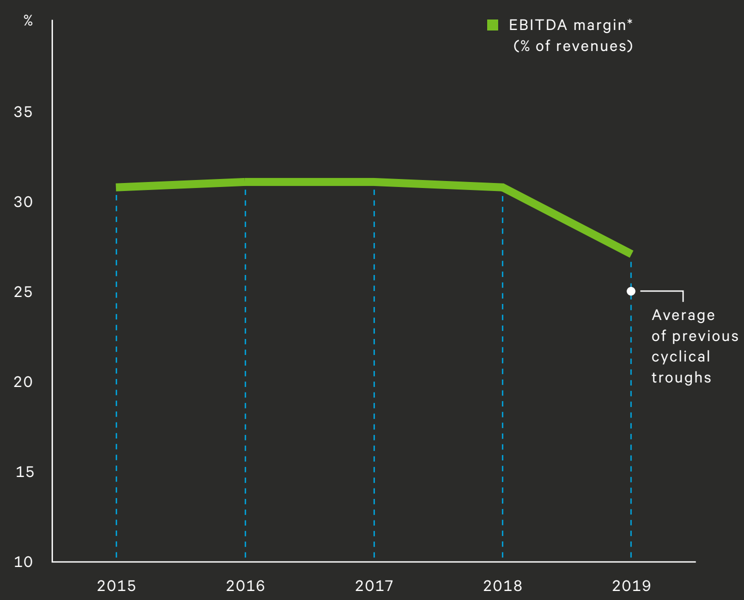


Specification wins represent successful VAT innovations that customers will use for their future product development. They lay the groundwork for VAT's future growth.

Our track record of innovation is key to our leading market share and the depth of our customer relationships.

PROFITABILITY

VAT's improved operational flexibility has allowed it to maintain profitability well above previous cyclical troughs.



Profitability drivers

Steady ramp-up of capacity and product range at Malaysia plant

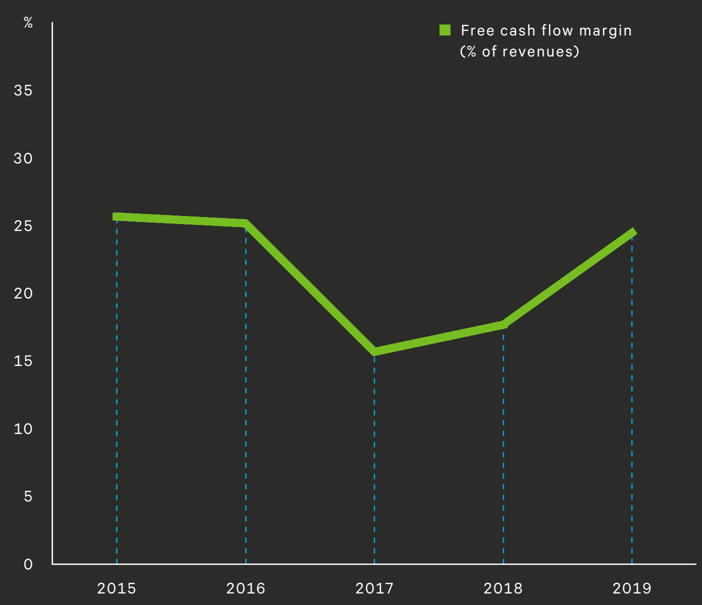
Extend supply chain into Eastern Europe and Asia

Improved operational efficiency to speed up the business and reduce waste

*EBITDA 2015–2017 adjusted to exclude one-off items related to the IPO in April 2016

FREE CASH FLOW

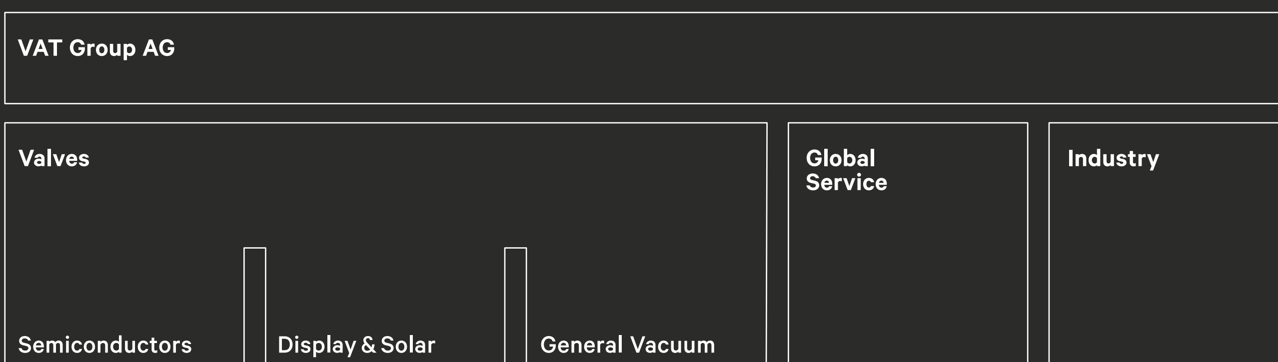
Solid growth, profitability and working capital management form the groundwork for VAT's financial strength and ability to pay an attractive sustainable dividend.



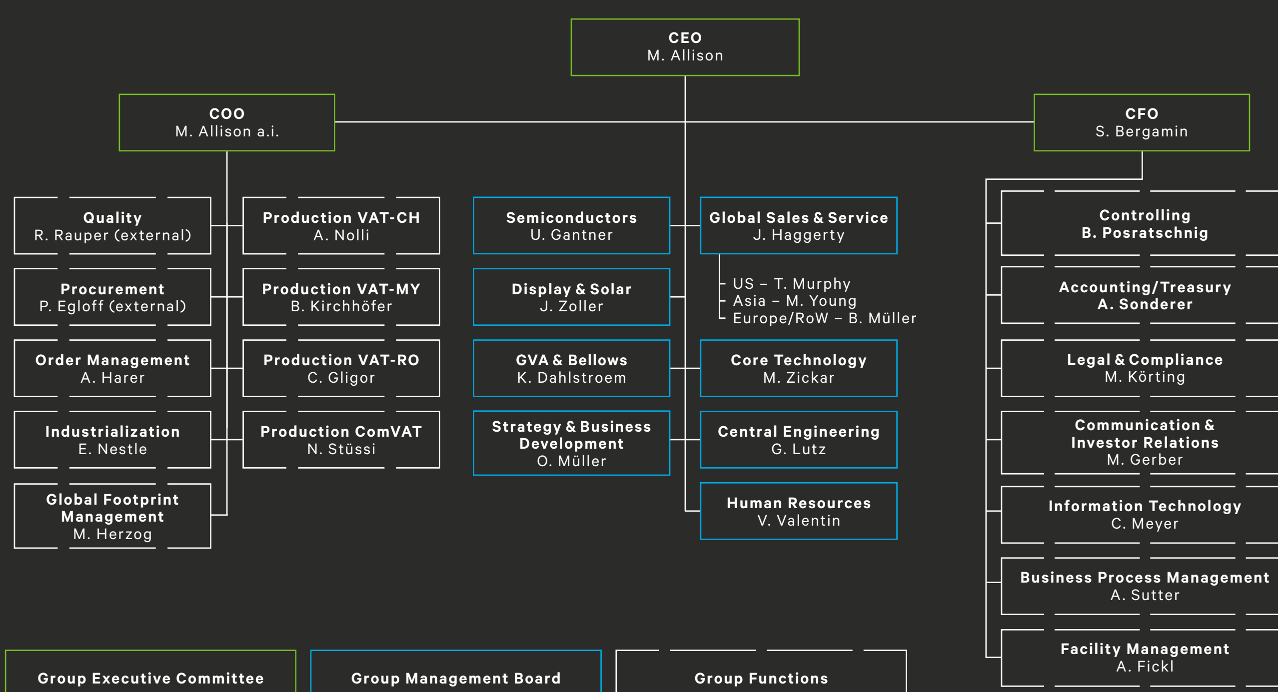
Lower working capital and capex leads to improved free cash flow

ORGANIZATION

VAT Group is organized and managed in three segments: Valves, Global Service, and Industry. Effective January 1, 2019, the Valves segment was reorganized, integrating the former Modules business unit into the Semiconductor business unit as they both serve the same customer base. As a consequence, the Valves segment now comprises the three business units Semiconductors, Display & Solar, and General Vacuum.



The VAT Group is led by the Group Executive Committee (GEC) consisting of the CEO, CFO, and COO. The GEC is supported by the Group Management Board and Group Functions.



VAT weathers down cycle and continues to build leading market share

VAT Group reported lower net sales, EBITDA, and net income in 2019, in line with the company's expectations communicated early in the year. The decrease resulted from the cyclical market downturn that started in the second half of 2018 when customers, mainly in the semiconductor-related businesses, reduced investments in new capacity after two years of strong growth. Despite the challenging market conditions, VAT continued to focus on technology innovation, investing more than CHF 30 million, or 6% of net sales, into research and development. VAT also expanded its market share across all industries to 50%, the sixth year in a row of market share growth. At the same time, VAT focused on internal measures to improve its operational efficiency and costs, allowing it to post an EBITDA margin well above historical trough levels and to generate record free cash flow, despite the lower top line results.

Improving market conditions as the year progressed

VAT's markets got off to a slow start in 2019. Especially in the semiconductor-related businesses, customers continued to postpone further capital expenditures after the intense investments that characterized 2016 and 2017, when large production capacities were added for new technologies such as 3D NAND memory chips. The combination of lower customer capital spending together with higher production yields in existing manufacturing facilities led to a significant decrease in demand for high-vacuum equipment in the second half of 2018 and the beginning of 2019. Overall, global wafer fab equipment (WFE) spending in 2019 declined by some 10%.

However, demand began to recover on a sequential quarter-over-quarter basis starting in the second quarter of 2019, and returned to year-over-year growth by the fourth quarter. Original equipment manufacturers (OEMs) developed a record number of new production platforms during the year in anticipation of further technology advances and the expected medium-term recovery in equipment spending. As the market and technology leader in vacuum valves, VAT cooperated closely with these OEMs to develop new vacuum valve solutions and posted another record year for specification wins, providing additional support for future growth and ongoing market share gains.

Business conditions were also challenging in the display and general vacuum and industry markets, while the service business benefitted from the introduction of several new products to help customers increase equipment uptime and simplify service and maintenance.

Growth in service revenues

Total order intake in 2019 amounted to CHF 585 million, down 10% from the previous year. The order backlog at year-end stood at CHF 115 million, a slight increase of 1% compared to the end of 2018. The year-end backlog includes the cancellation of a larger order related to a solar project that was halted and where it is uncertain whether it will be resumed. Compared to the record levels posted in 2018, net sales declined 18% in 2019 to CHF 570 million. Currency movements had no material impact on the change in net sales.

Net sales grew 6% in the Global Service segment to CHF 112 million, but were 23% lower in the Valves segment at CHF 441 million and down 23% in the Industry segment, to CHF 18 million, mainly the result of lower demand from the automotive industry.

Flexible global business model buffers impact of slowdown on EBITDA
Gross profit, measured as net sales minus cost of materials plus (minus) changes in inventories of finished goods and work in progress, declined 18% compared with 2018 to CHF 345 million, in line with net sales development and the company's flexible cost structure, in which about two-thirds of costs are variable. The gross profit margin improved slightly to 61% compared with 60% a year earlier.

A reduction in personnel costs in absolute terms reflects the lower number of employees (measured as full-time equivalents, FTE) and adjustments to the lower volumes produced in 2019. As a percentage of sales, personnel costs increased versus 2018. This was the result of an increase in FTEs in the second half in anticipation of a demand recovery in 2020, as well as certain external costs related to internal process improvement projects. At the end of 2019, VAT employed 1,810 people worldwide, an increase of 98, or 6%, compared with the end of 2018.

EBITDA for the year declined by 28% to CHF 154 million, reflecting the decline in net sales. The full-year EBITDA margin declined to 27% compared with 31% a year earlier. VAT's focus on costs and operational efficiency allowed it to post an EBITDA margin approximately 2 percentage points higher than the average of previous business down cycles of similar magnitude.

VAT's EBIT of CHF 108 million was CHF 72 million below the previous year. This included the negative impact of higher depreciation charges resulting from the finalization of the expansion of our Malaysian production facility in 2018. The EBIT margin amounted to 19% of sales.

Below the EBIT line, VAT incurred lower finance costs of CHF 9 million, down from CHF 13 million a year earlier and mainly the consequence of lower net foreign exchange losses on financing activities and slightly lower interest expenses.

Earnings before taxes (EBT) decreased to CHF 99 million from CHF 166 million. The effective tax rate for 2019 was 24%, a temporary result of the timing of new tax regulations in Switzerland that required the booking of some deferred tax expense in the first half. Going forward, VAT expects the effective tax rate to normalize towards 18% to 20%.

Net sales
in CHF million

570.4

2018 **698.1**

As a result of these factors, and as indicated by company management during the year, realized net income attributable to shareholders declined in 2019, amounting to CHF 75 million, a decrease of 45% compared with the record level of 2018.

On December 31, 2019, VAT's net debt amounted to CHF 144 million, representing a leverage ratio expressed as net debt to EBITDA of 0.9 times, in line with the company's long-term net debt to EBITDA target of 1.0 times. The ratio was slightly higher in 2019, primarily reflecting the lower EBIDTA versus the prior year. The equity ratio at year-end amounted to 54%.

Lower capex and trade working capital boost free cash flow

One of VAT's key performance indicators and the basis for any dividend consideration is free cash flow, which in 2019 increased compared with the previous year to a record CHF 140 million from CHF 124 million. A successful reduction of trade working capital, coupled with substantially lower capital expenditures (capex) more than offset lower cash flow from operations. Capex in 2019 of CHF 18 million was 63% lower than in 2018 – when VAT expanded its production facility in Malaysia – and represented 3% of 2019 net sales. Going forward, VAT expects capex as a percentage of sales to remain close to its target of 4% over the cycle.

At year-end 2019, net trade working capital decreased by approximately 23% compared with 2018, representing approximately 21% of net sales. VAT aims to reduce net trade working capital to 20% of net sales over time.

As a result, the free cash flow margin as a percentage of net sales was 25% and the free cash flow conversion rate was 91% of EBITDA.

At its Annual General Meeting on May 14, 2020, VAT's Board of Directors is proposing a dividend for the fiscal year ending December 31, 2019 of CHF 4.00 per share. As a result of the Swiss corporate tax referendum in 2019, companies are only permitted to pay a maximum of 50% of this amount out of the reserves from capital contributions and the other half from accumulated gains. The proposal amounts to a total dividend amount of CHF 120 million, or 89% of VAT's free cash flow to equity.

Record number of spec wins

>90

2018 **>60**

Return to growth in 2020 – order of magnitude uncertain

The medium-term growth drivers for VAT remain firmly in place. The Internet of Things, cloud computing, and storage, artificial intelligence and many other global digitalization trends are expected to fuel further demand for semiconductors and advanced displays over the next several years. Vacuum-based production processes also continue to gain importance in a variety of other industries, while the solar photovoltaic market continues its long-term growth trend based on improving energy efficiency and cost competitiveness.

For 2020, VAT expects a return to growth, driven mainly by the semiconductor-related businesses. However, market visibility remains limited. While the consensus among market research firms, OEM customers and end customers is for a positive demand development in 2020, the magnitude of the improvement remains unclear, partially reflecting uncertainty regarding the impact of the coronavirus on global supply chains in the company's markets. In semiconductors, technology advances in logic and foundry require new investments. Capacity in the memory markets is gradually being absorbed by growing demand, indicating a rebound in memory investments. In displays, investments in OLED screens for the latest generations of smartphones and the gradual adoption of OLED for large TV screens are expected to compensate for the decline in new investments in LCD displays. The solar photovoltaic industry is also expected to see higher investments as the energy-generating cost per kilowatt-hour is increasingly competitive with those of fossil-fuel-generated power. Forecasts for general vacuum growth in industrial markets and for service-related activities are also positive.

On this basis, VAT expects net sales at constant foreign exchange rates in 2020 to be higher compared with 2019. VAT will also continue to take full advantage of its flexible global organization and footprint, including the further ramp-up of its production facility in Malaysia, the realization of gains from economies of scale in global supply chains as well as operational excellence measures. At the same time, VAT remains dedicated to technology innovation and increasing market share. Investments in research and development and productivity improvements will therefore remain at the heart of VAT's strategy in 2020.

Furthermore, the company expects its 2020 EBITDA margin to be higher than in 2019, driven by higher volumes and better cost absorption as well as the ongoing focus on costs. VAT maintains its mid-term EBITDA margin target of 33%, but now expects to reach this at a lower sales level than originally anticipated. As a consequence of expected higher sales, EBITDA, and EBITDA margin, VAT also expects an increase in 2020 net income compared with 2019.

Capital expenditure in 2020 is expected to be around CHF 30 million. Free cash flow in 2020 will depend on the magnitude of sales growth and working capital requirements and may be lower than in 2019.

Mid-term EBITDA margin target
in %

33

Valves

The Valves segment offers the industry's broadest range of high-precision vacuum valves, both standard and customized products and modules. The segment serves mainly original equipment manufacturers (OEMs) and in 2019 comprised three business units: Semiconductors, serving the semiconductor sector; Display & Solar, serving high-end flat-panel display and solar photovoltaic OEMs; and General Vacuum for customers in research and OEMs in various industries. The Valves segment draws from VAT's manufacturing facilities in Switzerland and Malaysia, plus sales, service, and engineering operations in all major markets.

Demand in 2019 was weaker than the previous year, mainly reflecting the cyclical downturn in the semiconductor sector that began in the middle of 2018. This was the result of reduced capital spending by end customers following two years of intense investment in new production capacity, especially for memory chips. This new capacity led to short-term oversupply that negatively influenced demand in 2018 and through the first half of 2019. However, net sales began to increase on a sequential quarter-to-quarter basis starting in the second quarter of the year and returned to year-over-year growth in the fourth quarter, confirming that the bottom of the downturn had been reached.

The longer-term growth drivers for vacuum equipment remain firmly in place, driven by the increasing complexity of semiconductors and displays and the higher market penetration of devices that can handle more data faster and with less power consumption. This trend is expected to fuel growth for years to come.

Semiconductors: record specification wins for new products

The Semiconductor business unit, VAT's largest, reported lower net sales in 2019 in line with the cyclical downturn, mainly in the memory chip sector. Nevertheless, semiconductor equipment OEMs continued to develop new manufacturing platforms for the next generation of high-vacuum processes that will be used, for example, to make logic chips with 7 nm technology and smaller.

This provided VAT with the opportunity to take advantage of its engineering and technology leadership, resulting in a record number of specification wins despite the weaker overall market environment. These will support future sales as these products are introduced into wafer fabrication equipment coming to market in the next couple of years. In addition, a number of new customized products and modules – which comprise multiple valves and other components, such as lifters, shutters, heating and cooling, diffusors – were launched in 2019, particularly control and transfer valves, with innovations to increase the speed and precision of pressure control applications and particle-free wafer handling. These are key to increasing yield and productivity in chip manufacturing.

The business also continued to qualify its latest valves for production at the VAT plant in Penang, Malaysia, and now manufactures more than 30 products at the facility. Additional engineering and product management resources were invested in the Malaysia business, which will continue to play a key role in VAT's ability to both further build its strong customer base in the region as well as improve the overall flexibility and efficiency of its global manufacturing and supply footprint. The business also increased research and development collaboration with leading chip suppliers to ensure the company maintains its technology lead, and dedicated more engineering resources to the development of "smart" valve solutions that integrate control, computing and communication capabilities, allowing them to be used in new generations of process automation and "smart" factories.

Display & Solar: focus on improved operational performance following record 2018

Demand for high-vacuum solutions in the display and photovoltaic solar sectors was softer in 2019 following record net sales in the previous year.

In Display, organic light-emitting diode (OLED) displays remain the primary technology for most mobile devices in the higher price range. This drives demand for vacuum valves, as these displays require additional and more complex vacuum process steps. Demand was lower in 2019 as customer investments were aimed primarily at liquid-crystal displays (LCD), which is still the dominant technology in the low- to mid-segment handset product range. Demand for equipment to manufacture of large-format LCD TVs, which also requires new equipment and manufacturing lines, remained stable compared with the previous year.

Customer investments in the solar sector also declined compared with the record year in 2018. However, new technologies aimed at increasing the power conversion rate of solar photovoltaic systems – often involving new and more complex solar cell structures and materials – are expected to drive future demand for new vacuum processes and the associated vacuum valve solutions. VAT successfully qualified as a primary valve supplier to key makers of equipment for heterojunction technology (HJT), which is a high-power hybrid solar cell combining crystalline silicon with thin-film technology to increase solar conversion efficiency at lower production costs.

The Display & Solar business stepped up its efforts to improve operational performance in 2019 by relocating the manufacture of high-volume control valves to the company's expanded production facility in Malaysia. In addition, the business was able to improve on-time delivery performance and customer service with a number of key customers in Asia.

General Vacuum: softer industrial demand

Demand in the general vacuum business is driven by a combination of factors, such as industrial coating applications, the level of investment in scientific research in areas such as particle physics, and overall world economic trends.

On the industrial side, the business manufactures stainless steel and aluminum valves used in a wide variety of industrial applications in the automotive,

Key figures Valves

In CHF million	2019	2018 adjusted[1]	Change
Order intake	463.0	510.8	–9.3%
Net sales	440.9	569.3	–22.6%
Inter-segment sales	51.6	44.4	16.2%
Segment net sales	492.5	613.7	–19.7%
Segment EBITDA	136.3	195.5	–30.3%
Segment EBITDA margin	27.7%	31.9%	
Segment net operating assets	638.9	677.2	–5.7%
of wich net trade working capital	103.0	131.1	–21.5%

1 Starting January 1, 2019, VAT moved its third-party bellows business from the Industry segment into the Valves segment. The move reflects VAT's ambition to drive growth in the bellows business by better aligning it with its primary markets and the needs of customers in the semiconductor and general vacuum sectors. The prior-period figures have been adjusted accordingly, which includes the following realignments from the segment Industry to the segment Valves: Net sales CHF 18.2 million, segment net assets CHF 46.0 million of which net trade working capital CHF 9.3 million. In addition, the Inter-segment sales of the segment Industry were reduced by CHF 14.1 million. In the year 2019, the segment Valves achieved net sales of CHF 15.7 million with the bellows business.

pharmaceutical and other industries. Demand in these areas experienced a cyclical decline in 2019 after a very strong performance the year before.

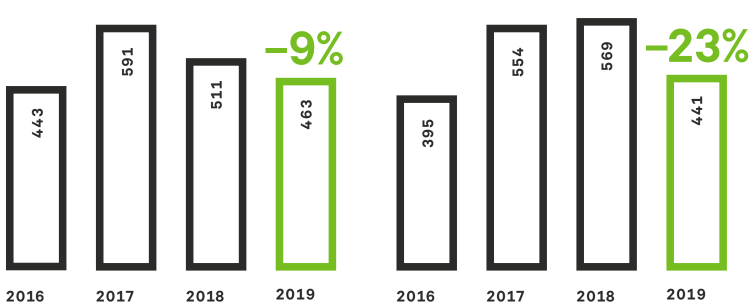
In the research sector, the number of large projects declined, partly the result of postponements out to 2020 and 2021. However, the business continued to win orders in the space simulation market, where extremely high-vacuum chambers require the use of ultraclean all-metal valves. In particular, the business confirmed its strong position in the Asia market with space simulation orders in both Japan and China.

Performance review 2019 and market outlook 2020

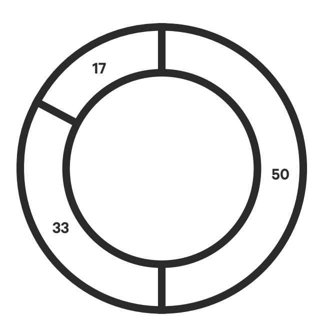
Net sales in the Valves segment in 2019 amounted to CHF 441 million, 23% lower compared with 2018, reflecting the cyclical market slowdown after three years of very strong growth. Sales were lower in all three businesses, with the largest decrease in the Display & Solar business unit, followed by Semiconductors and General Vacuum. Segment EBITDA decreased by 30% to CHF 136 million, and the EBITDA margin was lower at 28%, partly reflecting continued investments in R&D during the year to better position the segment for future growth opportunities as market demand recovers.

For 2020, VAT expects overcapacity in semiconductor-related markets to diminish and demand for vacuum valves to return to growth. The Display & Solar business is expected to see growth in OLED projects for the newest generation of smartphones, while investments into larger TV sizes is expected to compensate lower spending on LCD production. VAT also expects its General Vacuum business to see higher demand as vacuum-based manufacturing processes continue to be adopted in a broader range of industries. The record number of specification wins in 2019 is expected to support above-market growth for valves used in leading-edge vacuum processes.

Order intake & net sales in CHF mn



Net sales by region %



50 ASIA
33 AMERICAS
17 EMEA

Global Service

VAT's Global Service segment supplies both OEM and end user customers in all key markets with original spare parts, valve maintenance and service, technical support, and training. In addition, Global Service helps customers to improve equipment performance with customized product upgrades and equipment retrofits. The business is driven by the needs of customers who want to improve the performance of their existing installed base of equipment, whether increased uptime, lower energy consumption, higher process purity or faster and simpler maintenance and repair. With more than one million VAT valves installed worldwide, the company's service business provides a key lever for strengthening customer relationships, an important sales channel for VAT products, and a business with stable profitability and cash flow through the cycle.

The Global Service segment set another new sales record in 2019, despite a very significant downturn in the semiconductor market. This was primarily achieved by introducing enhanced service product portfolios for valve upgrades, in which a new VAT valve replaces an older VAT valve in a machine already installed in the field, and retrofits, where VAT valves replace competitor valves. In both cases, the aim is to allow customers to run their machines in a cleaner way or with less maintenance.

In addition to valve upgrades and retrofits, VAT offers customers a global network of service and repair centers to maintain their valves at peak working condition. Operating in eight countries, including six in Asia, these facilities provide the largest network of valve repair facilities in the market. The network is especially valued by global customers, and VAT made significant progress in 2019 to roll out its Fixed Price Repair program that provides uniform pricing and repair quality at all our service centers.

VAT's Global Service segment also develops service products for specialized valve applications such as subfab systems used in pumping and abatement systems operating in harsh conditions below the fabrication floor. This includes the supply of innovations such as the Protection Ring Gate Valve (PRGV)

Key figures Global Service

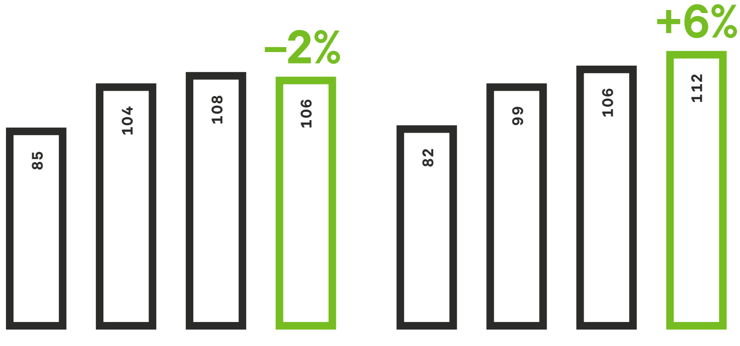
In CHF million	2019	2018 adjusted	Change
Order intake	106.4	108.4	–1.8%
Net sales	111.8	105.8	5.7%
Inter-segment sales	–	–	–
Segment net sales	111.8	105.8	5.7%
Segment EBITDA	46.3	49.6	–6.7%
Segment EBITDA margin	41.5%	46.9%	
Segment net operating assets	114.2	118.9	–4.0%
of wich net trade working capital	13.8	15.2	–9.1%

that allows operation of isolation valves in extremely dirty process environments, a technology developed to meet a specific customer requirement. VAT continues to launch new targeted service packages for specialized applications across the company's markets as part of its strategy for long-term profitable growth.

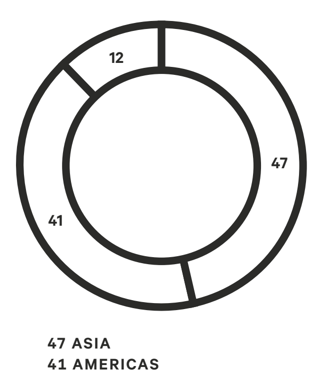
Performance review 2019 and market outlook
Net sales increased 6% in 2019 to reach CHF 112 million. Growth was strongest in the upgrade and retrofit business where customers invested more in VAT's offerings to improve their existing machines, for example by extending equipment life span and broadening their performance parameters to cope with increasingly complicated production processes. The spare parts business also grew, albeit at a slower pace, as lower capacity utilization among semiconductor manufacturers, and other customers reduced the need for preventive maintenance and lowered the wear and tear on certain parts. Sales were steady in the maintenance and service business. The EBITDA margin in the Global Services segment amounted to 42%, lower than in 2018, reflecting investments into new service offerings that yet have to provide higher volumes.

VAT expects the market for its Global Service business to continue to grow in 2020 as the semiconductor market recovers and the upgrade and retrofit portfolios continue to expand. In addition, the business will benefit from new products introduced during 2019 that will generate a full year of sales. The restart of idle capacity in the semiconductor sector is also expected to fuel service growth, especially as inventory levels for consumables were significantly reduced during the second half of 2018 and into 2019 and are expected to be restocked in 2020.

Order intake & net sales
in CHF mn



Net sales
by region %



Industry

The Industry segment primarily serves the automotive sector with thin-metal membranes used in the manufacture of dampers for high-pressure fuel injection pumps. They act to maintain a steady fuel supply, even during dramatic changes in fuel demand, and thus are essential to achieving the high levels of fuel efficiency needed in today's internal combustion engines.

Demand in the automotive sector declined in 2019, partly the result of ongoing changes in fuel efficiency standards and regulations in some of the world's largest automotive markets, such as the US, the EU, Japan, and China. This has had the effect of delaying the development of some new products as manufacturers assess the standards that may be required by the new legislation.

Nevertheless, VAT signed a long-term frame agreement at the beginning of 2019 with a major automotive components supplier to deliver pressure diaphragm cells for use in gasoline direct injection. The agreement, which runs until 2024, covers products used to reduce fuel consumption and CO_2 emissions for the same power output, while also allowing for smaller equipment footprint. Since 2006, VAT has supplied the automotive sector with more than 80 million pressure diaphragm cells.

Key figures Industry

In CHF million	2019	2018 adjusted[1]	Change
Order intake	15.5	28.9	–46.2%
Net sales	17.8	23.1	–23.1%
Inter-segment sales	8.9	7.8	15.0%
Segment net sales	26.7	30.9	–13.5%
Segment EBITDA	2.8	4.3	–34.4%
Segment EBITDA margin	10.6%	14.0%	
Segment net operating assets	29.5	37.1	–20.5%
of wich net trade working capital	5.1	10.8	–52.5%

1 Starting January 1, 2019, VAT moved its third-party bellows business from the Industry segment into the Valves segment. The move reflects VAT's ambition to drive growth in the bellows business by better aligning it with its primary markets and the needs of customers in the semiconductor and general vacuum sectors. The prior-period figures have been adjusted accordingly, which includes the following realignments from the segment Industry to the segment Valves: Net sales CHF 18.2 million, segment net assets CHF 46.0 million of which net trade working capital CHF 9.3 million. In addition, the Inter-segment sales of the segment Industry were reduced by CHF 14.1 million. In the year 2019, the segment Valves achieved net sales of CHF 15.7 million with the bellows business.

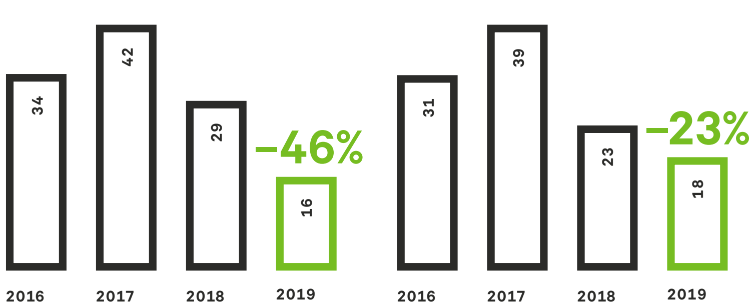
Performance review 2019 and market outlook
As of the beginning of 2019, VAT moved its third-party bellows business from the Industry segment into the Valves segment. Metal bellows are used in clean rooms and ultrahigh-vacuum applications for their precise and flexible sealing characteristics under a wide variety of pressure environments. The move reflected the company's ambition to drive growth in the bellows business by better aligning it with its primary markets and the needs of customers in the semiconductor and general vacuum sectors.

Net sales in the Industry segment, adjusted for the transfer of the bellows business to the Valves segment, declined by 23% compared with the year before, amounting to CHF 18 million. Internal sales (not included in the net sales number) increased 15% to CHF 9 million, representing sales from Romania to other VAT business units.

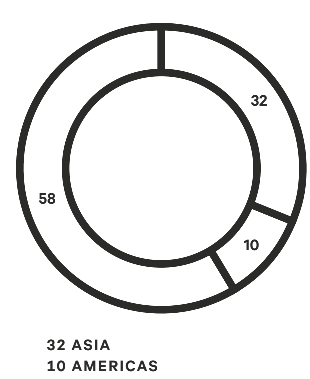
Segment EBITDA declined by 34% on a combination of lower volumes and the buildup of capacity, including investments in new equipment such as fully automatic laser-welding robots to increase productivity, that led to underabsorption of production capacity, especially in the first half of 2019.

For 2020, VAT expects demand from the automotive market to remain stable, while ongoing operational and productivity improvements are expected to support improved profitability.

Order intake & net sales in CHF mn



Net sales by region %



Michael Allison, CEO
has served as CEO of VAT Group since March 2018.

Stephan Bergamin, CFO
has served as VAT Group's Chief Financial Officer since January 2019.

Martin Komischke, Chairman of the Board of Directors
was elected chairman of VAT's Board of Directors in May 2017.

Heinz Kundert, Vice-chairman of the Board of Directors
was elected to the Board in March 2018 following three years as CEO of VAT Group.

Libo Zhang, Member of the Board of Directors
was elected to the Board of VAT Group in March 2018.

Urs Leinhäuser, Member of the Board of Directors
was elected to the Board in March 2016.

Hermann Gerlinger, Member of the Board of Directors
was elected to the Board in May 2017.

Karl Schlegel, Member of the Board of Directors
was elected to the Board in March 2016.

Corporate Governance Report

VAT Group AG is committed to the highest principles of good corporate governance, aimed at ensuring transparency, achieving a balanced relationship between management and control, and safeguarding shareholder interests. VAT Group AG regularly reviews its corporate governance framework and discloses information on Corporate Governance in accordance with the SIX Swiss Exchange Directive on Information relating to Corporate Governance, the Swiss Ordinance against Excessive Compensation with respect to Listed Stock Corporations, and the Swiss Code of Best Practice for Corporate Governance. In addition, VAT Group has implemented a Code of Conduct, setting out VAT Group's key principles.

To avoid duplication, some sections contain cross-references, in particular to the Articles of Association of VAT Group AG, published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag, Committee Charters published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/audit-committee-charter-of-vat-group-ag (please see the left-hand menu for a list of all committee charters) and the Organizational Regulations of VAT Group AG published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/organizational-regulations-of-vat-group-ag.

For those disclosures under the SIX Swiss Exchange Directive on Information relating to Corporate Governance that are included in the notes to the consolidated financial statements, please consult the Consolidated Financial Statements 2019 of VAT Group AG within this document.

The financial year of VAT Group AG ends on December 31 of each calendar year.

1. Group structure and shareholders

1.1 Group structure

VAT Group AG, a stock corporation, was founded on February 25, 2016 (registration number CHE-202.223.983, LEI: 529900MVFK7NVALR7Y83) and its registered seat is at Seelistrasse 1, 9469 Haag, Switzerland. VAT Group consists of VAT Group AG (the ultimate holding company) and its subsidiaries in Switzerland and abroad: four production companies that can also hold a distribution function in Switzerland, Romania, and Malaysia; ten distribution companies in Europe, North America and Asia; and three holding and financing companies. An overview of this structure, with Company names, place of incorporation, share capital and VAT Group AG's participation is provided in the Consolidated Financial Statements 2019 of VAT Group AG on page 111.

VAT Group's operational structure is organized into three business segments aimed at delivering maximum value to customers: Valves, Global Service, and Industry. This structure is described in more detail in the segment information in the notes to the financial statements on pages 78 to 81.

1.2 Significant shareholders

As of December 31, 2019, 11,498 shareholders were registered in VAT Group AG's share register. 18,725,537 shares (as defined below under 2.1) were held by minority shareholders, holding each less than 3% of VAT Group AG's share capital.

Disclosure notifications of significant shareholdings in VAT Group AG that were filed in 2019 with VAT Group AG and the SIX Swiss Exchange are available from the online publication platform of the SIX Swiss Exchange: http://www.six-exchange-regulation.com/en/home/publications/significant-shareholders.html.

As of December 31, 2019, VAT Group AG was notified of the following shareholders, representing 3% or more of the share capital of VAT Group AG:

Name of shareholder

	In % of total share capital
Rudolf Maag, Switzerland	10.00%
Invesco Ltd.	6.62%
Allianz SE[1], Germany	3.11%
The Capital Group Companies, Inc.	3.04%

1 Position for Allianz SE as per filing dated April 26, 2019

During 2019, VAT was informed on May 26, 2019 that Invesco Ltd. had merged with and acquired the Oppenheimer Funds Inc. Therefore, Invesco Ltd. became the ultimate beneficial owner of the shares formerly owned by the Massachusetts Mutual Life Insurance Company. UBS Fund Management (Switzerland) AG informed VAT on June 14, 2019 that they had reduced their position in VAT shares to below the threshold of 3%. On July 2, 2019, George Loening Inc., USA, informed VAT that it reduced its position to below 5% and on October 4, 2019, George Loening Inc. reported a further reduction to below 3%. Further details are available from the online publication platform of the SIX Swiss Exchange: http://www.six-exchange-regulation.com/en/home/publications/significant-shareholders.html.

VAT Group AG is not aware of any other person or institution holding, at the date of this report, directly or indirectly, on its own account or in concert with third parties, 3% or more of VAT Group AG's share capital.

1.3 Cross-shareholdings

VAT Group AG does not have any cross-shareholdings exceeding 5% of capital holdings or voting rights.

2. Capital structure

2.1 Company's share capital

The share capital of VAT Group AG amounts to CHF 3,000,000 divided into 30,000,000 registered shares with a nominal value of CHF 0.10 each. The shares are fully paid in. The shares have been listed on the SIX Swiss Exchange since the Company's Initial Public Offering on April 14, 2016. The VAT Group AG's International Securities Identification Number (ISIN) is CH0311864901, its market capitalization as of December 31, 2019 was CHF 4.9 billion with a free float as defined by SIX Swiss Exchange of approximately 90%. During 2019, the free float remained unchanged compared to a year ago.

VAT Group AG issues its registered shares only as uncertificated securities and registers them as book-entry securities. Shareholders have no right to request conversion of the form in which the registered shares are issued into another form. Shareholders may, however, at any time require from VAT Group AG the delivery of an attestation certifying their current shareholdings. Uncertificated securities may only be transferred by way of assignment, provided that they are not registered as book-entry securities. The transfer of book-entry securities and grants of security rights on book-entry securities have to be compliant with the Book Entry Securities Act. The transfer of book-entry securities or grants of security rights on book-entry securities by way of assignment are excluded.

2.2 Conditional and authorized capital

According to art. 3a of the Articles of Association[1], VAT Group AG's share capital of CHF 3,000,000 may be increased by a conditional capital of up to CHF 150,000, i.e. up to 5% of the share capital, by issuing up to 1,500,000 fully paid-in registered shares with a nominal value of CHF 0.10 each, upon the exercise of option rights or in connection with similar rights regarding shares (including restricted stock units) granted to officers and employees at all levels of the Company. The preemptive rights and the advance subscription rights of the shareholders are excluded. The acquisition and subsequent transfer of registered shares is limited under art. 5 of the Articles of Association. The conditions for the allocation and exercise of the option rights and similar rights are determined by the Board of Directors. The shares may be issued at a price below the market price.

VAT Group AG does not have any authorized share capital.

2.3 Changes in share capital

There have been no changes in the share capital during the reporting year.

2.4 Participation certificates, profit-sharing certificates, preference shares and modified voting rights

As of December 31, 2019, VAT Group AG has not issued any participation certificates or profit-sharing certificates, nor has it issued any preference shares or shares with increased, limited, privileged or restricted voting rights.

2.5 Own shares

As of December 31, 2019, VAT Group AG held 12,683 of its own shares. None of its subsidiaries held any shares in VAT Group AG.

2.6 Transfer restrictions and nominee registrations

Persons acquiring registered shares will on application be entered in the share register without limitation as shareholders with voting rights, provided they expressly declare themselves to have acquired the shares in their own name and for their own account and comply with the disclosure requirement stipulated by the Swiss Financial Market Infrastructure Act (FMIA). Entry in the share register as shareholder with voting rights is subject to the approval of VAT Group AG and may be refused if the applicant fails to declare expressly that he/she has acquired and will hold the shares on his/her own behalf and for his/her own account.

A resolution of the shareholders' meeting passed by at least two thirds of the represented share votes and the absolute majority of the represented shares par value is required for the easement or abolition of the restriction of the transferability of the registered shares.

Persons not expressly declaring themselves to be holding shares for their own account (nominees) will be entered in the share register with voting rights without further inquiry up to a maximum of 3% of the share capital outstanding at that time. Above this limit, registered shares held by nominees will be entered in the share register with voting rights only if the nominee in question makes known the names, addresses and shareholdings of the persons for whose account he is holding 0.5% or more of the share capital outstanding at that time and provided that the disclosure requirement stipulated by the FMIA is complied with. The Board of Directors has the right to conclude agreements with nominees concerning their disclosure requirements. Legal entities or partnerships or other associations or joint ownership arrangements which are linked through capital ownership or voting rights, through common management or in like

1 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.

manner, as well as individuals, legal entities or partnerships (especially syndicates) which act in concert with the intent to circumvent the entry restriction are considered as one shareholder or nominee. VAT Group AG may in special cases approve exceptions to these restrictions. No such cases were approved in 2019.

2.7 Convertible bonds and options

VAT Group AG has neither convertible bonds nor options regarding its shares outstanding.

3. Board of Directors

3.1 Members of the Board of Directors

The Articles of Association[2] provide that the Board of Directors shall consist of a minimum of three members, including the Chairman of the Board of Directors who is appointed by the meeting of shareholders. The Board of Directors currently consists of six non-executive members (including the Chairman).

Only Heinz Kundert (Vice Chairman of the Board of Directors) has held executive functions in VAT Group AG and of its Group companies during the last three business years prior to December 31, 2019. Namely, Heinz Kundert was CEO of VAT Group AG from June 2015 to March 2018 and registered in affiliated VAT Group companies during this period.

Other than as disclosed below, none of the members of the Board of Directors has or had any significant business connection with VAT Group AG or any of its Group companies during the three years prior to December 31, 2019.

Board of Directors

Name	Age	Position	Year of 1st election
Martin Komischke	62	Chairman	2017
Heinz Kundert	67	Vice-Chairman	2018
Hermann Gerlinger	66	Member	2017
Urs Leinhäuser	60	Member	2016
Karl Schlegel	66	Member	2016
Libo Zhang	49	Member	2018

2 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.

3.2 Background, other activities and functions

As of December 31, 2019, the members of the Board of Directors were:

Dr. Martin Komischke, Chairman, was born in 1957 and is a German citizen. Martin Komischke became the Chairman of the Board of Directors of VAT Group AG in May 2017 and was re-elected as Chairman of the Board of Directors at the Anual General Meeting (AGM) in May 2018 and May 2019.
From 2004 to 2016, Martin Komischke served as CEO of HOERBIGER Holding AG, following his function as Head of the Strategic Business Unit Drive Technology and member of the Executive Board from 1996 to 2003. Before that, he held various functions at Kolbenschmidt AG and Mannesmann-Sachs AG.

In 2018, Martin Komischke served as Chairman of the Board of HOERBIGER Holding AG (since 2016). He was also a member of the Board of Directors of Stäubli Holding AG (since 2016), a member of the Supervisory Board of Aixtron SE (2013 until May 2019) and the Vice President of the Board of Trustees of HOERBIGER Foundation (since 2016).

Martin Komischke holds a degree and a doctorate in electrotechnics and mechanical engineering from the University of Aachen.

Heinz Kundert, Vice-Chairman, was born in 1952 and is a Swiss citizen. Heinz Kundert became the Vice-Chairman of the Board of Directors of VAT Group AG in May 2018 and was re-elected as Vice-Chairman of the Board of Directors at the AGM in May 2019. From June 2015 to March 13, 2018, he was CEO of VAT Group AG.
Heinz Kundert has extensive experience in the semiconductor industry. Starting 1981, Mr. Kundert served in various management positions for Balzers AG, Balzers & Leybold, Oerlikon-Bührle AG and Unaxis Holding AG. From 1999 to 2004, Heinz Kundert served as COO and then CEO of Unaxis Holding AG (later renamed OC Oerlikon AG). Thereafter, Heinz Kundert worked as a strategy consultant until 2015. Heinz Kundert was CEO of VAT Group AG from June 2015 to March 2018.

Between 2002 and 2015, Heinz Kundert served on the Board of Directors of SEMI International, a global semiconductor industry association serving the manufacturing supply chain for the micro- and nano-electronics industries, in San Jose, CA, USA, and was elected Vice President in 2005. In 2005, he was also appointed President of SEMI Europe in Berlin.

From 2014 to July 2019, Heinz Kundert served on the Board of Directors of Camox GP Ltd, an investment fund.

Currently, Heinz Kundert is the Chairman of the Board of Directors (since June 2019) and CEO (since April 2019) of Comet Group AG. He is also a Board member of Variosystems AG (since January 2019) and on the Advisory Board of the Fraunhofer Society in Germany (since 2010).

Heinz Kundert holds a federal certificate of mechanical engineering and a degree in industry management from ITA Switzerland as well as a degree in business management from the FAH I University of St. Gallen.

Dr. Hermann Gerlinger was born in 1953 and is a German citizen. Hermann Gerlinger became a member of the Board of Directors of VAT in May 2017 and was re-elected in May 2018 and May 2019.
Between 2001 and 2016, Hermann Gerlinger was CEO of Carl Zeiss SMT GmbH and from 2006 to 2016 also member of the Executive Board of Carl Zeiss AG. Before that, he held various functions for ZEISS AG.

In 2019, Hermann Gerlinger served as advisor to the Executive Board of Carl Zeiss AG (2017 until March 2019), as member of the Supervisory Board of Siltronic AG (since 2011) and as member of the Advisory Board of the German National Metrology Institute (PTB) (2015 until May 2019).

Hermann Gerlinger holds a degree and a doctorate in physics and astronomy from the University of Würzburg.

Urs Leinhäuser was born in 1959 and is a Swiss citizen. Urs Leinhäuser became a member of the Board of Directors of VAT Group AG in March 2016 and since then was re-elected annually.
From 1995 to 1999, Urs Leinhäuser was Head of Corporate Controlling at Georg Fischer AG and later CFO of Georg Fischer's Piping Systems Division. Between 1999 and 2003, he was CFO of Mövenpick Holding AG. From 2003 until 2011, he was CFO and Head Corporate Center at Rieter Holding AG. After the spin-off of Autoneum Holding AG from Rieter Holding AG in 2011, Urs Leinhäuser was CFO and Deputy CEO of Autoneum Holding AG until 2014.

Since 2014, Urs Leinhäuser is self-employed and since 2016 he is partner (respectively from 2017 managing partner) at Adulco GmbH.

Currently, Urs Leinhäuser serves on the Board of Directors of Ammann Group Holding AG (since 2013), Burckhardt Compression Holding AG (since 2007) and Liechtensteinische Landesbank AG (since 2014). Since 2017, he is Chairman of the Board of Directors of Avesco AG and since 2019 he is also member of the Board of Directors of PENSADOR Partner AG.

Urs Leinhäuser holds a degree in business administration from the University of Applied Sciences Zurich.

Karl Schlegel was born in 1953 and is a Swiss citizen. He became a member of the Board of Directors of VAT Group AG in March 2016 and was since then re-elected annually.
Karl Schlegel served as CEO of Hamilton Medical AG between 1997 and 2003. Between 2004 and 2013, he was the CEO of VAT Group. From 2014 to 2016, he was a member of the Board of Directors of VAT Holding AG.

Karl Schlegel was a member of the foundation Board of Stiftung Arwole (a charity for individuals with disabilities from 2014 to 2018).

Karl Schlegel holds a Bachelor of Science degree from the medical engineering department of the University of Applied Sciences and Technology Buchs (NTB) and an Executive MBA from the University of St. Gallen.

Dr. Libo Zhang was born in 1970 and is a German citizen. She became a member of the Board of Directors of VAT Group AG in May 2018 and was re-elected in 2019.
Libo Zhang is an independent senior consultant of finance, controlling and corporate structuring. She has been the CFO of FFG Europa & Americas, MAG IAS GmbH, a German machine manufacturer and Borgward Group AG, a German auto manufacturer. From 2010 to 2015, she held various senior financial management positions in Germany and Asia at SGL Group, a leading global manufacturer of carbon-based products, including regional CFO and senior manager of corporate development, mergers and acquisitions. Prior to that, for more than ten years, she held senior positions in finance and commercial operations in the German engineering and aerospace sector.

Currently, Libo Zhang serves on the Scientific Advisory Board of CIC Controlling GmbH in Dortmund, Germany.

Libo Zhang holds a degree and a doctorate in economics and a MBA from Georg-August University in Göttingen, Germany.

3.3 Mandates and other permitted activities

According to art. 23 of the Articles of Association[3], the members of the Board of Directors may have, as a member of the Board of Directors or any other superior management or administrative body, up to six mandates in publicly traded companies, up to ten mandates in private companies and up to 20 mandates in other commercial legal entities. Mandates are activities in the superior management or administrative bodies in legal entities that are obliged to register themselves in a Swiss commercial register or a foreign equivalent and which are not controlled by VAT Group AG, do not control VAT Group AG or do not constitute pension funds insuring employees of the VAT Group. Board members may also exercise up to ten mandates of any function in associations, charity foundations and employee assistance foundations.

Mandates in companies that are under uniform control or the same beneficial ownership are deemed one mandate.

3.4 Election and term of office

Each member of the Board of Directors, including the Chairman, has to be elected, and may only be removed by a shareholders' resolution. The maximum term of office for a member of the Board of Directors is one year. In this context, a year means the time period between one ordinary shareholders' meeting and the next or, if a member is elected at an extraordinary shareholders' meeting, between such extraordinary shareholders' meeting and the next ordinary shareholders' meeting. Re-election is allowed as long as the relevant member has not completed the age of 72 at the time of re-election and has not served on the Board of Directors for more than nine years. The Board of Directors appoints the secretary who does not need to be a member of the Board of Directors.

3.5 Powers and duties

The Board of Directors is entrusted with the ultimate direction of VAT Group AG's business and the supervision of the persons entrusted with VAT Group AG's management. It represents VAT Group AG towards third parties and manages all matters, which have not been delegated to another body of VAT Group AG by law, the Articles of Association[3] or by other regulations.

The Board of Directors has the following non-transferable and irrevocable duties:

- ultimately directing VAT Group AG and issuing the necessary directives,
- determining the organization,
- organizing the accounting, the internal control system (ICS), the financial control and the financial planning as well as performing a risk assessment,
- appointing and recalling the persons entrusted with the management and representation of VAT Group AG and granting signatory power,
- ultimately supervising the persons entrusted with the management, in particular with respect to compliance with the law, the Articles of Association, regulations and directives,
- preparing the annual report, as well as the shareholders' meeting and implementing the latter's resolutions,
- preparing the compensation report,
- informing the judge in the event of overindebtedness,

3 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.

- passing resolutions regarding the subsequent payment of capital with respect to non-fully paid-in shares and regarding the amendments to the Articles of Association entailed thereby,
- passing resolutions confirming increases in share capital regarding the preparation of the capital increase report and regarding the amendments to the Articles of Association entailed thereby,
- examining compliance with the legal requirements regarding the appointment, election and the professional qualifications of the auditors,
- executing the agreements pursuant to Articles 12, 36 and 70 of the Swiss Merger Act.

If the office of the Chairman of the Board of Directors is vacant, the Board of Directors shall appoint, for the time period until the conclusion of the next ordinary General Meeting, a substitute who must be a member of the Board of Directors.

3.6 Meetings of the Board of Directors

According to the Organizational Regulations[4], the Board of Directors meets at the invitation of the Chairman as often as required to fulfill its duties and responsibilities, but at least quarterly, or whenever a member or the CEO indicating the reasons requests so in writing. If the Chairman of the Board of Directors does not comply with such a request within ten working days, the Vice-Chairman of the Board of Directors will be entitled to convene such meetings.

Resolutions of the Board of Directors are passed with the majority of the votes cast. In the case of a tie, the Chairman has a casting vote. To validly pass a resolution, at least the majority of the members of the Board of Directors must attend the meeting or be present by telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other. Absent members cannot be represented. A resolution in writing is permitted, provided that no member of the Board of Directors requests oral deliberation. No quorum is required for confirmation resolutions and amendments of the Articles of Association[5] in connection with capital increases or measures related thereto pursuant to Articles 651a, 652e, 652g and 653g of the Swiss Code of Obligations. If a conflict of interest is believed to exist, a member of the Board of Directors shall abstain from voting upon all matters involving the interest at stake.

The three members of the Group Executive Committee attended all meetings of the Board of Directors in an advisory capacity. The members of the Group Management Board can attend the meetings of the Board of Directors at which the strategy of VAT Group or other specific topics related to their responsibilities are on the agenda.

3.7 Committees of the Board of Directors

In compliance with the Articles of Association[5], the Board of Directors issued Organizational Regulations[4] that govern tasks and areas of responsibility of the Board of Directors and its Committees as described in this section 3. They are regularly reviewed and updated.

The Board of Directors established the Audit Committee (AC) and the Nomination and Compensation Committee (NCC) which aim to strengthen and support VAT Group AG's corporate governance structure. In addition, the VATmotion Committee and the Technology Committee (TC) were introduced in 2017.

The Committees may conduct or authorize investigations within their areas of responsibility; if necessary, they may involve external experts.

The table below outlines the Committee memberships of the current members of the Board of Directors as of December 31, 2019.

4 The Organizational Regulations of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/organizational-regulations-of-vat-group-ag.
5 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.

Board of Directors

	Audit Committee (AC)	Nomination and Compensation Committee (NCC)	VATmotion Committee	Technology Committee
Martin Komischke	–	Chairman	Chairman	–
Heinz Kundert	–	Member	–	–
Libo Zhang	Member	–	–	–
Hermann Gerlinger	–	–	Member	Chairman
Urs Leinhäuser	Chairman	–	Member	–
Karl Schlegel	–	Member	Member	Member

3.8 Audit Committee (AC)

In accordance with the AC charter[6], the AC consists of at least two members of the Board of Directors. The members of the AC and the AC Chairman are appointed by the Board of Directors. The term of office of the members of the AC is one year. Re-appointment is possible.

The AC is currently chaired by Urs Leinhäuser who is supported by Libo Zhang.

The AC assists the Board of Directors in fulfilling its duties to supervise management. In particular, the AC has the following duties:

- ensuring and monitoring that the Group is properly funded and financed,
- evaluating the external auditors and submitting a proposal to the Board of Directors for the election of the auditors at the Annual General Meeting,
- approving the audit plan as well as the respective budgets and fees of the external and internal auditors; approving any non-audit services provided by the external auditor if the fee on an individual basis is equivalent to more than 10% of the total annual audit fees, or if all non-audit service fees taken together amount to more than 40% of the total annual audit fees; assessing the performance and effectiveness of the external and internal auditors during the year,
- assessing the Enterprise Risk Management System and Report (ERM),
- assessing the Internal Control System (ICS),
- assessing compliance with statutory and regulatory provisions, organizational rules and corporate governance within the Group (compliance),
- assessing the statutory and consolidated annual and interim financial statements,
- discussing the results of the audits proactively with the external auditor and the CFO and issuing proposals or recommendations to the Board of Directors,
- proposing to the Board of Directors changes or amendments of accounting principles (e.g., the implementation of new accounting standards) at the request of the CFO,
- assessing the annual business expenses incurred by the members of the Group Executive Committee,
- overseeing the Group's whistleblower process,
- reviewing talent development in the finance and corporate organizations,
- periodically checking the performance and effectiveness of the AC and submitting proposals to the Board of Directors regarding any changes that may be needed.

6 The AC charter of VAT Group AG is published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/audit-committee-charter-of-vat-group-ag.

3.9 Nomination and Compensation Committee (NCC)

In accordance with the NCC charter[7], the NCC consists of at least three members of the Board of Directors. The members of the NCC are each elected by the shareholders' meeting. The term of office of the members of the NCC is one year. In this context, a year means the time period between one ordinary shareholders' meeting and the next or, if a member is elected at an extraordinary shareholders' meeting, between such extraordinary shareholders' meeting and the next ordinary shareholders' meeting. Re-election is possible. If there are vacancies on the NCC, the Board of Directors shall appoint substitutes from amongst its members for the remaining term of office.

The NCC is currently chaired by Martin Komischke who is supported by Heinz Kundert and Karl Schlegel.

The function of the NCC is to support the Board of Directors in establishing and reviewing a compensation strategy as well as in preparing the proposals to the shareholders' meeting regarding the compensation of the Board of Directors and the Group Executive Committee.

The NCC is responsible for preparing proposals to the full Board of Directors regarding:

– the compensation of the executive management,
– the compensation scheme of the VAT Group pursuant to the principles of art. 25 and 26 of the Articles of Association[8],
– the determination of compensation-related targets for the executive management,
– the approval of the individual compensation of the Chairman of the Board of Directors, the other members of the Board of Directors as well as the maximum individual aggregate compensation of the CEO,
– the individual compensation (fixed and variable compensation) of the members of the executive management as well as their further terms of employment and titles,
– amendments to the Articles of Association with respect to the compensation scheme for members of the executive management,
– mandates pursuant to art. 23 of the Articles of Association and further additional occupation of the members of the executive management.

Further duties and responsibilities may be provided in the Articles of Association, the Organizational Regulations[9] such as the NCC charter[7] or law.

Further information about the NCC and its duties is provided in the Compensation Report on pages 57 to 58.

3.10 VATmotion Committee and Technology Committee

In accordance with the Organizational Regulations[9], the Board of Directors can appoint committees to prepare and execute its resolutions and to supervise the Company. In 2017, the Board of Directors established the VATmotion Committee and the Technology Committee (TC).

In accordance with the VATmotion Committee Charter, the VATmotion Committee consist of at least two members of the Board of Directors and supports the full Board of Directors with regard to the global orientation and strategic developments of VAT to optimize the value chain in terms of capacity, delivery reliability and costs. The VATmotion Committee is chaired by Martin Komischke who is supported by Hermann Gerlinger, Urs Leinhäuser and Karl Schlegel.

7 The NCC charter of VAT Group AG is published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/ncc-charter-of-vat-group-ag.
8 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.
9 The Organizational Regulations of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/organizational-regulations-of-vat-group-ag.

In accordance with the TC Charter[10], the TC consists of at least two members of the Board of Directors. It provides advice to the full Board of Directors in technological terms. It supports the management team in the development of the technology strategy and the evaluation of the Company's research, development and product portfolio. The TC is currently chaired by Hermann Gerlinger who is supported by Karl Schlegel.

3.11 Meetings of the Committees of the Board of Directors

According to the Organizational Regulations[11], the meetings of the Committees are convened by their Chairman, usually ahead of each ordinary Board of Directors meeting, and are held as often as required but in general at least three times a year.

In order to perform their duties, at least half of the Committee members have to be present in person or participate in electronic communications. In any case, a minimum attendance of two is required. Resolutions or motions to the Board of Directors must be passed by a majority of the votes cast. Abstentions from voting are regarded as non-delivered votes. Resolutions and motions to the Board of Directors may also be made in writing, unless a member requires oral deliberation. Upon the invitation of its Chairman and in consultation with the Chairman of the Board of Directors and, if applicable, the CEO, other representatives of the Group Executive Committee and other persons may participate in the Committee's meetings. If a conflict of interest is believed to exist, a member of the Committee shall abstain from voting upon all matters involving the interest at stake.

The Committees inform the Board of Directors about the essential parts of discussion, decisions and proposals at the following regular meeting of the Board of Directors, in case of urgency also immediately.

3.12 Overview of meetings in 2019

During 2019, the Board of Directors and the Committees conducted regular formal meetings and conference calls.

Formal meetings and conference calls

	BoD	AC	NCC	VATmotion Committee	Technology Committee
Total number of meetings/calls in 2019	5/8	6/3	4/0	4/0	5/0
Usual average duration, approx. (in hours)	4/1	2/1	2	2	2
Martin Komischke	5/8	–	4	4	–
Heinz Kundert	5/8	–	4	–	–
Libo Zhang	5/8	6/3	–	–	–
Hermann Gerlinger	5/7	–	–	3	5
Urs Leinhäuser	5/7	6/3	–	4	–
Karl Schlegel	5/7	–	4	4	5
Internal Audit, PwC	–	2/0	–	–	–
External Audit, KPMG	–	4/1	–	–	–
External Advisors	–	–	4	–	–

The members of the Group Executive Committee attended all meetings and calls of the Board of Directors and the meetings of the Committees if necessary. The CFO joined all meetings of the AC. The Head Legal

10 The TC Charter of VAT Group AG is published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/tc-charter.
11 The Organizational Regulations of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/organizational-regulations-of-vat-group-ag.

and Compliance joined all BoD, AC and NCC meetings to act as secretary. VAT employees were invited to the respective meetings and calls occasionally when required.

In addition, the Board of Directors and the Committees held several informal meetings and calls (with and without VAT management and/or guests to discuss current subjects between formal meetings and calls).

3.13 Determination of areas of responsibility of Board of Directors and Group Executive Committee

The Board of Directors is responsible for the ultimate direction of VAT Group AG as well as the supervision of the Group Executive Committee. The Board of Directors attends to all matters which are not delegated to or reserved for another corporate body of VAT Group AG by applicable laws, the Articles of Association[12] or the Organizational Regulations[13]. The Board of Directors is regularly informed about developments of VAT Group AG and the VAT Group and decides upon proposals and reports provided by the Committees or the Group Executive Committee.

The Board of Directors delegated the executive management of VAT Group AG and of the VAT Group to the Group Executive Committee acting under the leadership of the CEO, subject to applicable laws and the Articles of Association[12]. Further, the Board of Directors may delegate the preparation, proposal and execution of its resolutions or the supervision of certain projects and topics to one or several members of the Board of Directors, to a Committee, to the CEO, or to one of the members of the Group Executive Committee.

3.14 Information and control instruments vis-à-vis the Group Executive Committee

Each Member of the Board of Directors can anytime require any information on each and all matters relating to VAT Group AG and its Group companies.

Meetings of the Board of Directors are attended by the CEO, COO and the CFO. At each meeting, the Board of Directors is to be informed by the attending members of the Group Executive Committee on the current course of business and significant business transactions. This includes, but is not limited to, a consolidated annual budget, monthly financial reporting, quarterly financial projections, profit and loss forecasts, monthly KPI reports and strategic risk management reports. Extraordinary events have to be reported immediately to the members of the Board of Directors by means of a circular, if necessary after prior information by phone or e-mail. Any member of the Board of Directors may, anytime, require information or disclosure of business documents. Such requests are to be addressed in writing to the Chairman of the Board of Directors. As far as necessary for the completion of a task, each member of the Board of Directors may request the Chairman to provide him/her with accounts and files. Financial reports are submitted to the Board of Directors on a monthly basis. Full financial consolidation, including the cash flow statement, is performed on a monthly basis.

Based on the Organizational Regulations[13] of the Board of Directors, the AC has implemented a comprehensive system for monitoring and controlling the risks linked to the Company's business activities. This includes risk identification, analysis, control and periodical reporting to the AC. Operationally, the Group Executive Committee is responsible for controlling risk management. In addition, responsible persons are designated in the Company for significant individual risks and control activities, such as periodic internal audits of internal control systems (more details can be found in Section 8.1 herein).

12 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.
13 The Organizational Regulations of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/organizational-regulations-of-vat-group-ag.

4. Group Executive Committee

Subject to those affairs, which lie within the responsibility of the Board of Directors according to Swiss law, the Articles of Association[14] and the Organizational Regulations[15], the Board of Directors has delegated the executive management of VAT Group AG to the Group Executive Committee acting under the leadership of the CEO. The Group Executive Committee is mainly responsible for the financial and operational management and for the efficiency of the corporate structure and organization of the VAT Group AG.

4.1 Members of the Group Executive Committee

In 2019, the Group Executive Committee (GEC) consisted of three members, the CEO, CFO and COO, headed by the CEO. Jürgen Krebs (COO) stepped down from the GEC on 31 July 2019. Currently, the GEC consists of two members and the CEO acts as interim COO until a successor is appointed.

The CEO is appointed and dismissed by the Board of Directors upon recommendation of the NCC. The other Group Executive Committee members are appointed and dismissed by the Board of Directors upon recommendation of the CEO and the NCC.

As of December 31, 2019, the members of the Group Executive Committee were:

Michael (Mike) Allison, CEO, born in 1962, British citizen, joined VAT on January 1, 2018 and succeeded Heinz Kundert as CEO on March 13, 2018.

Mike Allison joined Edwards in 2008 as Vice President of Global Sales & Services and, after the acquisition by Atlas Copco in 2014, became President of the Semiconductor division at Edwards/Atlas Copco. In this role and always having sustainable value creation in mind, Mike Allison achieved substantial business success and helped transform Edwards into one of the leading companies in the Semiconductor Vacuum sector. In addition to his roles at Edwards/Atlas Copco, Mike Allison also spent 20 years with KLA-Tencor where he had many significant roles including Executive Vice President and General Manager of Global Services, based in San Jose, USA. Other roles included significant positions in business strategy, sales, marketing and technical positions in Germany, UK and the USA.

Mike Allison is a member of the International Board of SEMI, the global industry association for the semiconductor equipment and material suppliers.

He holds a BSc Honors in Electrical & Electronic Engineering from Glasgow University.

14 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.
15 The Organizational Regulations of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/organizational-regulations-of-vat-group-ag.

Effective as of January 1, 2019, Dr. Stephan Bergamin, born in 1966, Swiss citizen, was appointed as CFO of VAT Group AG.
Stephan Bergamin joined VAT Group AG from Gearbulk Group, a specialized global cargo shipping company, where he was CFO from 2015 to 2018. Prior management positions include CFO roles at Goldbach, Cofely, the Steiner Group and companies within Swissair Group. He also worked in the corporate finance department at Credit Suisse as a finance consultant and project leader.

Stephan Bergamin holds a PhD in economics from the University of St. Gallen, specializing in Corporate Finance, and completed the Advanced Management Program (AMP 177) at Harvard Business School in 2009.

Dr. Jürgen Krebs[16], COO, was born in 1967 and is a German citizen. Jürgen Krebs was appointed Chief Operating Officer of VAT Group AG from June 1, 2017 until July 31, 2019.
Previously, Jürgen Krebs was Executive Vice President Operations and a member of the Group Executive Board at Hauni Maschinenbau AG, Hamburg, Germany, a position he held from 2004. Before that, Jürgen Krebs held various management positions at Heidelberg Druckmaschinen AG and Heidelberg Web Systems Inc.

Jürgen Krebs holds an engineering degree from the Technical University of Kaiserslautern, Germany, and a PhD in Mechanical Engineering from the University of Auckland, New Zealand.

4.2 Mandates and other permitted activities

According to art. 23 of the Articles of Association[17], with the approval of the NCC, the members of the Group Executive Committee may have, as a member of the Board of Directors or any other superior management or administrative body, up to three mandates in publicly listed companies, up to five mandates in companies pursuant to art. 727 para. 1 number 2 of the Swiss Code of Obligations, and up to five mandates in other legal entities. Mandates are activities in the superior management or administrative bodies in legal entities that are obliged to register themselves in a Swiss commercial register or a foreign equivalent and which are not controlled by VAT Group AG, do not control VAT Group AG or do not constitute pension funds insuring employees of the VAT Group.

Mandates in companies that are under uniform control or the same beneficial ownership are deemed to be one mandate.

4.3 Management contracts

There are no management contracts with companies not belonging to the VAT Group.

4.4 Transactions of members of the Board of Directors or the Group Executive Committee

Detailed information regarding related-party transactions with members of the Board of Directors and Group Executive Committee is provided on the website of SIX Swiss Exchange: http://www.six-exchange-regulation.com/en/home/publications/management-transactions.html.

16 Registered under his 2nd forename as "Ernst Krebs" in the commercial register.
17 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.

5. Compensation of the Board of Directors and Group Executive Committee

5.1 Compensation, shareholdings and loans

Information on compensation and shareholdings of the members of the Board of Directors and the Group Executive Committee can be found in the Compensation Report starting on page 56. The provisions regarding the principles of performance-related compensation, the allocation of equity securities, participation plans, the additional amount for payments to members of the Group Executive Committee appointed after the vote on remuneration by the shareholders' meeting, as well as regarding loans, credits and pension benefits are set in art. 25 to 29 of the Articles of Association[18]. The rules regarding the approval of the remuneration by the shareholders' meeting are set in art. 12 of the Articles of Association[18].

According to the Articles of Association[18], VAT Group AG may not grant loans, credits, pension benefits other than from occupational pension funds or securities to members of the Board of Directors or the Group Executive Committee; advance payments of fees for lawyers, court fees and similar costs relating to the defense against corporate liability claims up to a maximum of CHF 1,000,000 are not subject to this provision. See also information provided in the Compensation Report on page 57, 58, 59 and 64.

6. Shareholders' participation

6.1 Voting rights restrictions

The identity of the owners or beneficiaries shall be entered in the share register stating first/last name (company name), domicile (registered seat), address and citizenship.

Voting rights may be exercised only after a shareholder has been registered in VAT Group AG's share register as a shareholder with voting rights. In shareholders' meetings, each shareholder has equal rights, including equal voting rights. According to the Articles of Association[18], each share carries one vote. All shares are entitled to dividends. At shareholders' meetings, shareholders may be represented by a proxy appointed in writing, a representative by law or the independent proxy. The proxy need not be a shareholder. Under the Articles of Association[18] and after due consultation with the persons concerned, VAT Group AG is authorized to delete entries in the share register with retroactive effect if they were effected on the basis of false information or if the respective person does not provide the information. The person concerned has to be immediately informed about the deletion.

6.2 Independent proxy

The provisions of the Swiss Ordinance against Excessive Compensation provide that the Board of Directors must ensure that the shareholders are able to electronically grant proxies and instruct the independent proxy on (i) agenda items included in the invitation to the shareholders' meeting, and (ii) new motions which were not disclosed in the invitation to the shareholders' meeting. The independent proxy is required to exercise the voting rights granted by shareholders only in accordance with shareholder instructions. Further, absent express voting instructions, the independent proxy is required to abstain from voting. If VAT Group AG does not have an independent proxy, the Board of Directors shall appoint a substitute for the time period until the conclusion of the next ordinary shareholders' meeting.

18 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.

At the ordinary shareholders' meeting held on May 16, 2019, Mr. Roger Föhn of ADROIT, Kalchbühlstrasse 4, 8038 Zurich, Switzerland, was elected as the independent proxy for the term ending at the conclusion of the next ordinary shareholders' meeting.

6.3 Quorums required

No statutory quorums other than those defined by Swiss corporate law and the Swiss Federal Merger Act apply. Any article of the Articles of Association[19] providing for a greater voting requirement than is prescribed by law or the existing Articles of Association must be adopted by a qualified majority of at least two thirds of the represented share votes and the absolute majority of the represented shares par value. The Articles of Association do not prescribe that a quorum of shareholders is required to be present at a shareholders' meeting.

6.4 Convocation of shareholders' meetings

Shareholders may be convened by the Board of Directors or, if necessary, by a company's statutory auditor or liquidator. The Board of Directors is further required to convene an extraordinary shareholders' meeting within two months if resolved at a shareholders' meeting or requested by one or more shareholders representing in aggregate at least 10% of VAT Group AG's nominal share capital registered in the commercial register.

Registered shareholders with voting rights individually or jointly representing at least 5% of the share capital of VAT Group AG may demand that items be put on the agenda. Such demands have to be submitted to the Chairman of the Board of Directors at least 45 calendar days before the date of the shareholders' meeting and shall be in writing, specifying the items and the proposals.

A shareholders' meeting is convened by publishing a notice of such meeting in the Swiss Official Gazette of Commerce at least 20 days before the date of the meeting. To the extent the post or e-mail addresses of the shareholders are known, notice shall be sent simultaneously by post or e-mail. The notice shall state the day, time and place of the meeting, the agenda, the proposals of the Board of Directors and the proposals of the shareholders who have requested the shareholders' meeting or that an item be included on the agenda.

6.5 Entry in the share register

The Articles of Association[19] do not specify the date by when shareholders have to be entered into the share register to participate in the shareholders' meeting. For organizational reasons, no shareholders will be registered 12 calendar days prior to the shareholders' meeting.

7. Change of control provisions

7.1 Duty to make an offer/Opting-out, opting-up

Under the Swiss Financial Market Infrastructure Act (FMIA), if a person acquires shares of a listed Swiss company exceeding more than 33⅓% of the voting rights, that person must make a takeover bid to acquire all of the other listed shares of that company. A company's Articles of Association may either eliminate this provision (opting-out) or may raise the relevant threshold to 49% (opting-up).

19 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.

Art. 33 of VAT Group AG's Articles of Association[20] provides for a selective "opting-out" for the stated entities of Partners Group[21] and Capvis[22], which are, when acting alone or in concert, exempted from the duties pursuant to the FMIA. This opting-out provision will automatically expire on December 31, 2020, meaning that if following such date any of the exempted persons (alone or acting in concert) newly exceeds the threshold of 33⅓% of the voting rights (whether exercisable or not), art. 135 FMIA will apply to that person as well. As neither Partners Group nor Capvis hold any shares in VAT Group AG as of December 31, 2019, this opting-out provision is currently not applicable.

7.2 Change of control

There are no change of control clauses for the members of the Board of Directors, except for the restricted shares, for which the three-year blocking period will be released in case of a successful takeover bid or the delisting of VAT Group AG. Information on the restricted shares is provided in the Compensation Report, page 63.

There are no change of control clauses for the members of VAT Group AG's Group Executive Committee or of senior management.

8. Audits

8.1 Internal Audit

Internal Audit is an independent function acting on behalf of the Board of Directors under the guidance and oversight of the AC. VAT Group AG chose to co-source with PricewaterhouseCoopers (PwC) in order to execute the individual audits and PwC has the responsibility to plan, execute and report the audits. According to the audit plan approved by the AC, the internal audit function conducts three audits a year and yearly issues a risk report to the Board of Directors.

8.2 External Audit

The external auditor is elected for a period of one year at the shareholders' meeting. KPMG AG, St. Gallen, was appointed as statutory auditor and group auditor in 2016 (and re-elected in 2017, 2018 and 2019), auditing the consolidated financial statements and the individual financial statements of VAT Group AG. Mr. Toni Wattenhofer was named lead auditor in 2019. The holder of this office changes every seven years, in accordance with Swiss law.

In 2019, aggregate audit fees for KPMG's audit of VAT Group AG and the VAT Group amounted to CHF 283,284.

KPMG rendered in 2019 additional services, in respect to compliance, tax returns and tax advice amounting to aggregate fees of CHF 251,444.

The Board of Directors is responsible for the supervision and control of the external audit process. Its remit includes reviewing internal and external audit reports; it is assisted by the AC when discharging this duty. The AC discusses the audit report results and evaluates their quality and comprehensiveness. The lead auditor in charge who represents the external auditor attended five meetings (in person or by telephone) of the AC in the year under review. An overview of meetings and attendance can be found in section 3.12 herein.

20 The Articles of Association of VAT Group AG are published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag.
21 Comprising Partners Group Client Access 8, L.P. Inc., Partners Group Barrier Reef, L.P., Partners Group Direct Inv. 2012 (EUR), L.P. Inc., St Peter Port, Guernsey GY1 1BT, Channel Islands, and Partners Group Private Equity (Master Fund), LLC, New York, NY 10036, USA, all of whose ultimate sole shareholder is Partners Group Holding AG, Zugerstrasse 57, CH-6341 Baar.
22 Comprising Capvis Equity III L.P., Capvis III Limmat L.P. (both acting through its general partner Capvis General Partner III Limited), and Capvis Equity IV L.P. (acting through its general partner Capvis General Partner IV Limited), St. Helier, Jersey JE2 3TE, Channel Islands.

Once per year, the Board of Directors verifies the selection of potential auditors, in order to propose the preferred audit firm for election at the annual shareholders' meeting. Evaluating the effectiveness of the auditors, the AC considers in particular the following criteria: independence of both the audit firm and the lead auditor, qualification, including technical and operational competence, focus on significant risk areas, effectiveness and practicability of recommendations, efficiency of collaboration and transparency of communication.

The AC also examines the proportion between the external audit fees for the annual financial statements and the fees for additional non-audit services performed by the auditors quarterly.

9. Information policy

VAT Group AG engages in transparent, timely and regular communication with its shareholders, the capital markets and the general public.

VAT Group AG publishes its annual results, interim reports (semi-annually) and quarterly trading updates on the dates listed in the financial calendar published on the Investor Relations website at http://www.vatvalve.com/InvestorRelations/investor-relations/financial-calendar. The financial statements are prepared according to the International Financial Reporting Standards (IFRS). Printed annual reports are available upon request. All interim reports, Company press releases and ad hoc publications are also available on the VAT Group AG's website, as are subscription services for all such publications.

VAT Group AG convenes media and investor conferences on a regular basis. Press releases and ad hoc publications containing potentially price-sensitive information are published regularly and in accordance with the rules of the SIX Swiss Exchange. The SIX Swiss Exchange regulations can be found at http://www.six-exchange-regulation.com.

Information about the share price, annual results and interim reports, financial calendar, minutes of the annual shareholders' meeting, press releases as well as the Articles of Association are available at http://www.vatvalve.com/InvestorRelations/Investor-relations.

All upcoming dates can be found in the financial calendar on page 130 of this annual report.

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Financial reports: http://www.vatvalve.com/InvestorRelations/investor-relations/financial-reports
Newsletter subscription: http://www.vatvalve.com/InvestorRelations/investor-relations/newsletter

Notices to shareholders are validly made by publication in the Swiss Official Gazette of Commerce (Schweizerisches Handelsamtsblatt). The Board of Directors may designate further means for official publications. Notices of VAT Group AG to shareholders are to be made by official publications of VAT Group AG. Notices to shareholders may also be made in writing to the addresses of the shareholders recorded in the share register.

Compensation Report

The Compensation Report describes the compensation principles and programs as well as the governance framework related to the compensation of the Board of Directors (Board) and the members of the Group Executive Committee (GEC) of VAT Group AG. The report also provides details on the compensation awarded to members of the Board and GEC in the 2019 financial year.

The Compensation Report is written in accordance with the Swiss Ordinance against Excessive Compensation with respect to Listed Stock Corporations, the SIX Swiss Exchange Directive on Information relating to Corporate Governance and the principles of the Swiss Code of Best Practice for Corporate Governance of economiesuisse.

1. Letter from the Nomination and Compensation Committee

Dear Shareholders,

On behalf of the Board, we are pleased to present VAT's compensation report.

VAT's business performance in 2019 was marked by the significant cyclical slow-down in capex in the semiconductor and display industries following the exceptional growth experienced between 2016 and 2018. Net sales for the year declined by 18% to CHF 570 million, with most of the decline in the first six months. Sales began to recover on a sequential quarter-by-quarter basis in the second quarter, reflecting the gradually improving market environment, and returned to year-over-year growth in a strong fourth quarter. Reflecting the soft market early in the year, VAT posted a solid full-year EBITDA margin based on cost and efficiency improvement efforts, with the second half substantially more profitable than the first.

The Board is convinced that VAT's compensation system is key to attracting, motivating and retaining talented people who can strengthen the Company's leading global position in high-end vacuum valve technology. Our aim is to balance fixed and variable compensation and short- and long-term incentives so that management's interests are aligned with those of other stakeholders. In short, we want to create a culture of sustainable value creation.

In 2019, the NCC conducted a review of the compensation system for the GEC. The NCC concluded that the GEC compensation system is in line with prevalent market practice and will remain unchanged for 2020. Furthermore, the NCC decided to harmonize the committees' chair and membership fees for the Board to simplify the compensation structure. Finally, the NCC performed its regular annual activities throughout the year, such as setting the performance goals and assessing the performance of GEC members, determining the level of compensation of the Board and the GEC, as well as preparing the Compensation Report and the say-on-pay vote for the 2020 Annual General Meeting (AGM). You will find further information on the NCC activities and on VAT's compensation system and governance on the following pages.

This Compensation Report will be submitted to a non-binding, consultative shareholders' vote at the upcoming AGM. You will also be asked to vote on the maximum aggregate compensation amount of the Board for the term of office from the 2020 until the 2021 AGM, on the short-term variable compensation amount to be paid out to GEC members for the financial year 2019, on the maximum aggregate amount of fixed compensation of the GEC for financial year 2021, and on the maximum grant values for the GEC under the long-term incentive plan for financial year 2021.

In the future, we will continue to review our compensation programs to ensure that they support the achievement of our business goals, are aligned to the interests of shareholders and fully comply with the various regulations applying to a Swiss listed company. We trust that you will find this report interesting and informative.

NCC of VAT Group — Haag, March 2, 2020

2. Compensation governance

2.1 Articles of Association

The Articles of Association of VAT can be found on the corporate website http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/articles-of-association-vat-group-ag and are summarized below in Table 1. The provisions on compensation in the Articles of Association include the principles of compensation applicable to the Board and the GEC, the structure of the shareholders' vote on compensation, the additional compensation amount for GEC members appointed after the approval of the maximum aggregate compensation amount by the shareholders and provisions on credit and loans.

Table 1: Articles of Association

Compensation principles (Board) – Article 25	Members of the Board shall receive a fixed basic fee and fixed fees for memberships in committees of the Board, as well as lump sum compensation for expenses. The compensation may be awarded in cash and in shares.
Compensation principles (GEC) – Article 26	The compensation of the GEC members consists of a fixed compensation and of variable compensation components, which comprise short-term and long-term compensation elements. The short-term variable compensation is paid in cash and depends on the level of achievement of specific predefined targets for a one-year performance period. The long-term variable compensation is awarded in shares or rights to receive shares. The Board determines the terms and conditions of the long-term variable compensation.
Compensation vote – Article 12	Shareholders approve the maximum aggregate compensation amount for the Board for the upcoming term until the next ordinary AGM. Shareholders approve the short-term variable compensation of the GEC for the preceding business year, the maximum fixed compensation of the GEC to be paid in the subsequent business year and the maximum long-term variable compensation of the GEC to be granted in the subsequent business year.
Additional compensation amount – Article 29	For each GEC member newly appointed after the approval by shareholders of the maximum aggregate compensation amount, the company may pay an aggregate compensation of up to 50% of the last aggregate compensation amount approved by the AGM.
Credit and loans – Article 28	The company shall not grant loans, credits, pension benefits other than from occupational pension funds to the members of the Board or GEC.

2.2 Nomination and Compensation Committee

In accordance with the NCC charter[1], the NCC consists of at least three members of the Board who are elected annually by the shareholders for a term of one year until the next Annual General Meeting. At the AGM 2019, Martin Komischke (Chair), Heinz Kundert and Karl Schlegel have been re-elected as members of the NCC.

It is the responsibility of the Nomination and Compensation Committee to:

- periodically review the company's compensation policy and principles applicable to the Board and the GEC,
- annually review and propose to the Board the total compensation of the CEO and other members of the GEC, subject to shareholders' approval,
- prepare all relevant Board proposals and recommendations related to the nomination and compensation of the members of the Board and of the GEC.

Additional information on the responsibilities of the NCC is provided in section 3.9 of the Corporate Governance Report on page 47.

The NCC acts in a preparatory capacity while the Board retains the decision authority on compensation matters, except for the maximum aggregate compensation amounts of the Board and of the GEC, which are subject to shareholders' approval at the AGM. The approval and authority levels of the different bodies on compensation matters are detailed in Table 2.

1 The NCC charter of VAT Group AG is published at http://www.vatvalve.com/InvestorRelations/investor-relations/corporate-governance/ncc-charter-of-vat-group-ag.

Table 2: Decision authorities in compensation matters

	CEO	NCC	Board	AGM
Maximum aggregate compensation amount Board		Proposes	Reviews	Approves
Individual compensation of Board members		Proposes	Approves	
Group compensation policy and principles		Proposes	Approves	
Maximum aggregate compensation amount GEC		Proposes	Reviews	Approves
Performance target setting and assessment of CEO		Proposes	Approves	
Performance target setting and assessment of other GEC members	Proposes	Reviews	Approves	
CEO compensation		Proposes	Approves	
Individual compensation of other GEC members	Proposes	Reviews	Approves	
Compensation report		Proposes	Approves	Consultative vote

The NCC meets as often as business requires, but at least three times a year. In 2019, the NCC held four formal meetings. Details on meeting attendance of the individual NCC members are provided in section 3.12 of the Corporate Governance Report on page 48.

The Chair of the NCC reports to the Board on the activities of the Committee after each meeting. The minutes of the NCC meetings are available to all members of the Board. The Chair of the NCC may decide to invite executives to attend the meetings as appropriate. Executives do not attend the meeting when their own compensation and/or performance are being discussed.

The NCC may decide to consult external advisors for specific compensation matters. In 2019, Agnès Blust Consulting was mandated to provide consulting services related to executive compensation matters. The company has no other mandate with VAT Group.

3. Compensation principles

VAT Group's compensation principles support the Company's business strategy and foster the commitment of all employees to the Company's long-term goals. The compensation principles are:
– internal fairness,
– reward for performance,
– focus on sustainable long-term value creation,
– alignment to shareholders' interest,
– market competitiveness,
– simplicity and transparency.

4. Compensation structure: Board of Directors

Members of the Board receive a fixed compensation consisting of both cash and restricted shares, which is aimed at better aligning their economic interests with the long-term interests of shareholders. The compensation period relates to the term of office, which starts with the election at the ordinary AGM and ends at the next ordinary AGM. The amount of the fixed basic fee and the fixed committee fees reflect the responsibility and time requirement inherent to the function, as illustrated in Table 3. Board members do not receive any performance-based remuneration and do not participate in the occupational pension plans of VAT Group.

Table 3: Structure and levels of Board compensation AGM 2019 until AGM 2020

In CHF per year (gross)	Chair of the Board	Member of the Board
Fixed basic fee	200,000	75,000

	Chair of the Committee	Member of the Committee
Audit Committee (AC)	25,000	10,000
Nomination and Compensation Committee (NCC)	25,000	10,000
Technology Committee	15,000	10,000
VATmotion Committee	25,000	15,000

70% of total compensation is awarded in cash and 30% is awarded in restricted shares. The restricted shares are subject to a three-year blocking period during which they cannot be transferred, sold, pledged or otherwise disposed of. The blocking period of the restricted shares can only lapse prior to the predefined date of unblocking (and will do so automatically) in case of death or due to a successful takeover bid or the delisting of the company. Shares remain blocked in any other cases, including if the Board member leaves the office during the blocking period.

In exceptional circumstances, members of the Board may be asked to perform special tasks or projects that go beyond their function and normal duties of their mandate. Such additional work may be compensated at a daily rate of maximum CHF 3,500 (gross) in cash. Further, Board members receive a lump sum expense reimbursement of CHF 1,500 (gross) per annum in cash to cover all expenses that occur in relation to meetings of the Board or its committees, as well as shareholder meetings.

The cash compensation is paid out on a quarterly basis and the restricted shares are allocated and transferred to each Board member's depository account within one month after the end of the compensation period. The number of restricted shares is determined by dividing 30% of each Board member's compensation by the average closing share price over the last 20 trading days prior to the AGM preceding the payment and rounded up to the next whole number of shares.

The compensation of the Board is periodically benchmarked against the compensation of non-executive Board members of publicly traded companies in Switzerland that are comparable to VAT in terms of size and complexity. In 2018, a thorough review was conducted by Agnès Blust Consulting in order to determine the competitiveness of the Board compensation in terms of structure and overall level. For this purpose, a peer group of Swiss multinational industrial companies listed on the Swiss Stock Exchange (SIX) was selected and includes Bachem, Bobst, Burckhardt Compression, Conzzeta, Dätwyler, Georg Fischer, Inficon, Interroll, Landis+Gyr, LEM, OC Oerlikon, SFS, Siegfried, Sulzer, Tecan and U-Blox. This peer group is well balanced in terms of market capitalization, revenue size and headcount. The analysis concluded that while the compensation structure is in line with market practice, the compensation level is generally below market. Nonetheless, the decision has been taken in 2018 not to change the compensation structure and overall levels of the Board for 2019.

In 2019, the NCC reviewed the Board compensation structure and levels again and decided to harmonize the committee fees for the coming Board term from the AGM 2020 to the AGM 2021 to simplify the compensation structure. Therefore, the fee for the chair of the Technology Committee is aligned to the other committee chair fees to CHF 25,000 (from CHF 15,000) and the fees for the VATmotion Committee members are reduced to CHF 10,000 (from CHF 15,000), in alignment with the other committee fees.

5. Compensation structure: GEC

In 2018, a benchmarking of the GEC compensation was conducted by Willis Towers Watson on the basis of the same peer group of Swiss multinational industrial companies as for the benchmarking of the compensation of the Board: Bachem, Bobst, Burckhardt Compression, Conzzeta, Dätwyler, Georg Fischer, Inficon, Interroll, Landis+Gyr, LEM, OC Oerlikon, SFS, Siegfried, Sulzer, Tecan and U-Blox. The results of this benchmark analysis served as basis to determine the compensation level of the GEC for 2019 and for 2020. The compensation target levels of the GEC will remain unchanged for 2020 except for the CEO, whose STI target will be increased from 45% to 60% of Annual Base Salary (ABS) to lower the gap to market compensation level.

The compensation structure of GEC members consists of several elements: a fixed remuneration comprising an ABS and benefits, a variable component consisting of an annual cash incentive (Variable Cash Compensation, STI) and a long-term share-based compensation (LTI) as illustrated in Table 4.

Table 4: Structure of compensation for GEC

	Program	Purpose	Plan period
ABS	Monthly cash	Attract and retain	Continuous
STI	Cash bonus	Reward annual financial and individual performance	1 year
LTI	Share plan	Reward long-term performance Align to shareholders' interests	3 years
Benefits	Pension and insurances	Protect against risks	Continuous
Non-tangible rewards such as work environment and culture, personal development and career opportunities			

5.1 Annual base salary (ABS)

The ABS is a fixed component of compensation paid in cash, typically monthly. It reflects the scope and key responsibilities of the role as well as the qualification and skills required to perform the role, along with the employee's skill set and experience.

The ABS is reviewed annually on the basis of the following factors:
– external benchmark: market value of the role,
– internal benchmark: internal pay structure and internal peer comparison,
– individual profile and past performance of the employee,
– financial considerations such as budget and affordability.

5.2 Variable Cash Compensation (STI)

The STI is designed to drive outstanding performance throughout the organization by closely aligning compensation with the achievement of annual financial and non-financial objectives.

The target STI value is expressed as a percentage of ABS and amounts to 45% for the CEO and from 49% to 50% for the other GEC members, assuming an average performance achievement of 100%. The plan also includes a minimum performance threshold below which the STI payout is zero, and a maximum level of performance above which the payout factor is capped at 150% of the target STI value.

For the GEC members, company performance accounts for 70% of the total STI, while individual performance accounts for 30%.

The company performance conditions are proposed annually by the NCC and approved by the Board. They are directly derived from the business strategy of profitable growth and are illustrated in Table 5. In 2019, the company performance indicators were harmonized across the GEC. After year-end, the NCC assesses the achievement of those performance measures and calculates the corresponding payout factor, which is subject to Board approval. For the individual performance component, the NCC conducts an assessment of the individual contributions of each GEC member at the end of the year based on a predetermined grid of criteria related to operational performance and to environment, social and governance aspects (as illustrated in Table 6) and proposes the corresponding payout percentage to the Board for approval.

Table 5: STI key performance indicators for the CEO and other GEC members in 2019

Focus in 2019	Performance objectives	Weighting
Profitability	EBITDA margin	14%
	Free cash flow	14%
Growth	Specification wins: number of auditable significant specification wins, co-development agreements, new business models or sales channels	21%
	Non-SEMI growth	21%
Individual performance	Operational results & Environment, Social and Governance (ESG) – see table 6	30%
Total		**100%**

Table 6: STI evaluation grid for individual performance of the CEO and other GEC members in 2019

Operational results	Environment, Social and Governance (ESG)
Growth: entry in new markets, opening of new subsidiaries, development of new products, M&A transactions, key strategic projects to support growth	**Environment:** GHG emission, energy efficiency, mobility programs (business travel), waste reduction, water consumption, etc.
Profitability: process efficiencies, cost-saving initiatives, pricing, supply chain management, projects to support profitability	**Social:** – **Employees:** health & safety, accident rate, diversity & non-discrimination, working conditions, training & development, employee satisfaction & engagement, turnover, labor rights – **Customers:** customer satisfaction, data privacy, product safety, product quality – **Society:** human rights, philanthropy, impact on local communities – **Supply chain monitoring**
	Governance: Bribery & corruption, risk management, conflicts of interest

The STI is paid out in cash, at the latest by June 30 of the following year, subject to shareholder approval.

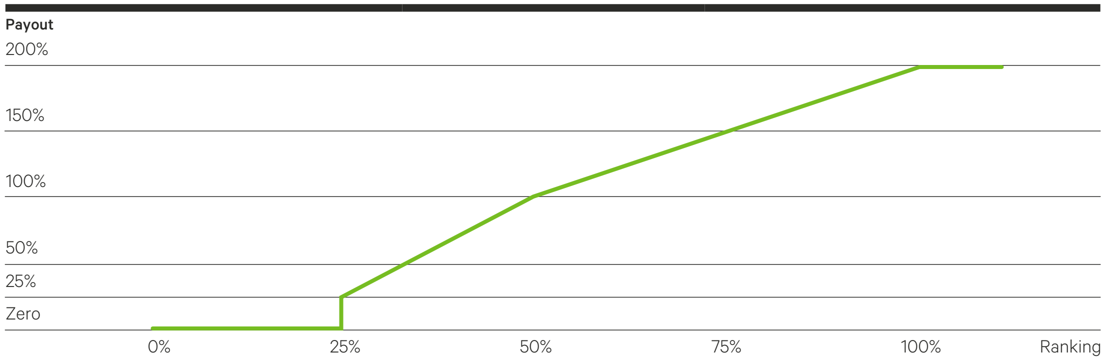
5.3 Long-term share-based compensation (LTI)

GEC members are also eligible to participate in a LTI plan, designed to motivate executives to create value for the company and its shareholders in a sustainable manner. The LTI is awarded in the form of performance share units (PSUs), subject to a three-year cliff vesting period depending on the achievement of the following performance conditions:
– relative net sales growth, with a 50% weight,
– relative total shareholder return (TSR), with a 50% weight.

In 2019, the LTI nominal value amounts to 80% of ABS for the CEO and to between 49% and 50% of ABS for the other GEC members. To determine the number of PSU granted, the LTI nominal value is divided by the average daily closing share price of the VAT shares during the 20 trading days preceding the grant date.

At vesting, relative net sales growth and relative TSR performance will be compared to peer companies and expressed as a percentile rank, which determines a payout factor between 0% and 200% as follows:
– ranking below the lower quartile of the peer group (threshold): 0% payout,
– ranking at the lower quartile of the peer group: 25% payout,
– ranking at the median of the peer group: 100% payout,
– ranking at the upper quartile of the peer group: 150% payout,
– ranking as best of the peer group (cap): 200% payout,
– linear interpolation between those points.

Table 7: Vesting schedule of the LTI



The weighted average of the two payout factors (relative sales growth and relative TSR) provides for the overall vesting level of the LTI award.

This LTIP is specifically designed for rewarding the performance of VAT relative to a selected peer group of companies. The intention is to reward the relative performance of the company rather than its absolute performance because absolute performance may be strongly impacted by market factors that are outside the control of senior management. The relative performance is measured based on an evaluation provided by an independent Swiss consulting firm, Obermatt.

The peer group is confirmed by the Board prior to the annual grant of PSU and may be adjusted if required due to corporate events such as merger, acquisition, business combination transaction, delisting or bankruptcy of peer companies. The peer group is illustrated in Table 8.

Table 8: Peer group for the 2019 grant

Advantest	Applied Materials	ASM international	ASML	Belimo
Brooks Automation	CKD Corporation	Comet	dormakaba	Geberit
Hitachi High-Technologies	Inficon	KLA-Tencor	LAM Research	LEM
MKS	Pfeiffer Vacuum	SMC	Teradyne	Tokyo Electron
Ulvac				

Given that the LTI plan is part of total compensation and designed to create sustainable value, a sound and fair vesting formula was determined at the time of introduction. The LTI plan is based on relative performance measures, i.e., performance compared to peer companies that are subject to similar market cycles as VAT Group. The intention is to neutralize market effects and to assess the "raw" performance of the company. The vesting formula under the plan limits both the upside potential as well as the downside risk in order to create the right culture and a balanced pay-for-performance alignment. There is no vesting below the threshold performance (25^{th} percentile) and the vesting level is capped at 200% for the best performance in the peer universe.

In case of termination of employment, the PSUs forfeit without any compensation, except in the situation of retirement or disability, in which case the PSUs are subject to a pro rata vesting at regular vesting date or in the situation of death or of change of control with termination of employment or cessation of the LTIP, in which case the PSUs are subject to an immediate pro rata vesting.

5.4 Benefits

GEC members participate in the benefit plan available in the country of their employment contract. Benefits consist mainly of retirement, insurance and health care plans that are designed to provide a reasonable level of protection for the employees and their dependents with respect to retirement, risk of disability, death and illness/accident. The current members of the GEC are all employed under a Swiss employment contract. They participate in VAT's pension plan offered to all employees in Switzerland, in which a base salary and the STI are insured up to the maximum amount permitted by law. VAT's pension benefits exceed the legal requirements of the Swiss Federal Law on Occupational Retirement, Survivors' and Disability Pension Plans (BVG) and are in line with what other international industrial companies offer.

In addition, GEC members are eligible for standard benefits, such as a representation allowance and other benefits in kind, according to competitive market practice. The monetary value of these other elements of compensation is evaluated at fair value and is disclosed in the compensation tables.

5.5 Employment contracts

GEC members are employed under employment contracts of unlimited duration with a notice period of six months. GEC members are not contractually entitled to termination payments, change-of-control provisions (except the accelerated vesting under the LTI plan) or non-competition compensation.

5.6 Clawback and malus provisions

Clawback and malus provisions apply on STI and LTI awards for GEC members and other executives: if VAT (or one of its companies) is required to prepare an accounting/financial restatement, the Board will determine the amount of variable compensation that would have been due under the restated financial results. VAT will have the right to forfeit (malus provision) and/or to obtain reimbursement (clawback provision) of any parts of the variable compensation that were paid or granted in excess of the amount determined. This forfeiture or clawback is limited to accounting/financial restatements of the previous three financial years and to variable compensation whose amount is determined, exclusively or in combination with other performance metrics, on the basis of the financial results and performance of VAT as reported in its financial statements.

6. Compensation awarded to the Board and to GEC in 2019

6.1 Compensation awarded to the Board in 2019

For 2019, the members of the Board received a total compensation of CHF 0.8 million (2018: CHF 0.8 million) in the form of fixed basic fees of CHF 0.6 million (2018: CHF 0.6 million), committee fees and other expenses of CHF 0.2 million (2018: CHF 0.2 million) and social security contributions of CHF 0.1 million (2018: CHF 0.1 million). Out of the total compensation of CHF 0.8 million (2018: CHF 0.8 million), CHF 0.2 million (2018: CHF 0.2 million) are awarded in form of restricted shares. The decrease of 0.5% compared to previous-year results from a slight decrease of social security contributions due to changes in the demographics of the Board. The compensation system remained unchanged compared to previous year.

Table 9: Compensation of the Board in 2019

(CHF, gross)	Fixed basic fee	Committee fees	Other payments	Social security	Total compensation	Thereof in shares
Martin Komischke, Chair	200,000	50,000	1,500	19,261	270,761	75,022
Heinz Kundert, Vice-Chair	75,000	10,000	1,500	4,743	91,243	25,519
Herman Gerlinger	75,000	30,000	1,500	6,104	112,604	31,502
Urs Leinhäuser	75,000	40,000	1,500	9,210	125,710	34,519
Karl Schlegel	75,000	35,000	1,500	6,444	117,944	33,036
Libo Zhang	75,000	10,000	1,500	6,838	93,338	25,518
Total	**575,000**	**175,000**	**9,000**	**52,600**	**811,600**	**225,116**

At the AGM on May 17, 2018, shareholders approved a maximum aggregate compensation amount of CHF 920,000 for the Board for the compensation period from the AGM 2018 until the AGM 2019. The remuneration paid to the Board for this term was CHF 813,814 and is therefore within the approved limits.

At the AGM of May 16, 2019, shareholders approved a maximum aggregate compensation amount of CHF 920,000 for the Board for the term from the AGM 2019 until the AGM 2020. The remuneration paid to the Board for this term is anticipated to be approximately CHF 815,000. The final amount will be disclosed in the 2020 Compensation Report.

In the year under review, no compensation was paid to former members of the Board or to closely related parties to members or former members of the Board.

No member, former member, or closely related parties of the Board were granted a loan during the reporting year. No loans were outstanding at the end of the year under review.

Table 10: Compensation of the Board in 2018

(CHF, gross)	Fixed basic fee	Committee fees	Other payments	Social security	Total compensation	Thereof in shares
Martin Komischke, Chair	200,000	50,000	1,500	19,199	270,699	75,010
Heinz Kundert, Vice-Chair	43,750	5,833	875	3,024	53,482	14,875
Ulrich Eckhardt	31,250	8,334	625	3,132	43,341	11,882
Alfred Gantner	31,250	–	625	2,483	34,358	9,404
Herman Gerlinger	75,000	30,000	1,500	7,874	114,374	31,527
Urs Leinhäuser	75,000	40,000	1,500	8,895	125,395	34,548
Karl Schlegel	75,000	35,000	1,500	8,191	119,691	33,037
Libo Zhang	43,750	5,833	875	3,799	54,257	14,875
Total	**575,000**	**175,000**	**9,000**	**56,597**	**815,597**	**225,158**

6.2 Compensation awarded to the GEC in 2019

In 2019, the members of the GEC received a total compensation of CHF 2.4 million (2018: CHF 3.0 million). This amount comprises annual base salaries of CHF 1.2 million (2018: CHF 1.2 million), STI of CHF 0.4 million (2018: CHF 0.5 million), other expenses of CHF 0.0 million (2018: CHF 0.3 million), contributions to social security and post-employment benefits of CHF 0.4 million (2018: CHF 0.4 million) and an LTI grant value of CHF 0.4 million (2018: CHF 0.7 million). The variable compensation amounts to 65% (2018: 68%) of the fixed compensation for the CEO and 48% (2018: 71%) on average for the other GEC members.

Table 11: Compensation of the GEC in 2019

(CHF, gross)	ABS	Other payments[2]	Pension & social security (fixed)	Total fixed compensation	STI payout[3]	LTI grant[4]	Total compensation[5]
Michael Allison	500,000	2,962	152,297	655,259	198,648	228,451	1,082,358
Other GEC	715,669	0	198,921	914,590	240,330	199,894	1,354,814
Total GEC[1]	**1,215,669**	**2,962**	**351,218**	**1,569,849**	**438,978**	**428,345**	**2,437,172**

1 Two GEC members were in office on 31 December 2019; includes compensation under the employment contract during the notice period to one GEC member who stepped down on 31 July 2019.
2 Includes the value of benefits in kind.
3 STI for 2019 to be paid out until June 30, 2020.
4 Grant value of the LTI awarded in the reporting year based on the Monte Carlo evaluation of the PSU. Includes the entire 2019 LTI grant value for the COO who stepped down during the year, despite the fact, that all outstanding PSUs granted are forfeited due to his leaving.
5 All compensation amounts are disclosed gross.

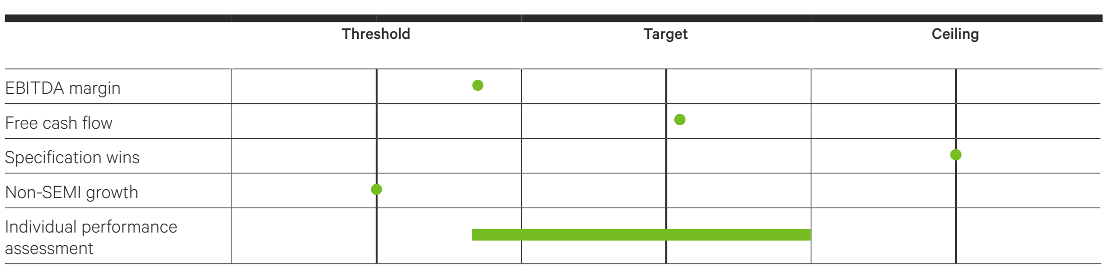
Explanatory comments to the compensation table

The total aggregate annual base salaries of the GEC increased by 6% overall (2018: +16%). This is due to the fact that the annual base salary for the CEO has been increased. At the time of his appointment, the Board established his compensation below market level, intending to adjust his compensation over time, subject to performance and specific achievements in relation to the business strategy.

The annual base salaries of the other GEC members have also been adjusted compared to the previous year to align with the benchmarking level.

The STI payout decreased by 20% compared to previous year. The overall performance achievement under the STI was lower than in the previous year, with an average payout factor of 75% (2018: 95%). Further, the STI target value for 2019 was lower due to the change in GEC composition in 2018 (new CEO as of January 1, 2018, transition period with the former CEO until March 31, 2018). The overall financial and individual performance achievement of the GEC of 75% was marked by the significant cyclical slow-down in capex in the semiconductor and display industries. Further, net sales for the year declined by 18% to CHF 570 million. Reflecting the soft market early in the year, VAT posted a solid full-year EBITDA margin based on cost and efficiency improvement efforts. While the free cash flow and specification wins targets outperformed, the individual performance ranged from 30% to 125% of target for the GEC members.

Table 12: summary of 2019 performance for the STI



The LTI grant value amounted to CHF 0.4 million (compared to CHF 0.7 million in previous year). The decrease is due to the fact that in 2018, both the new CEO and the former CEO at that time received an LTI grant (duplication) and that the LTI nominal value of the CEO was reduced in 2019 compared to 2018. Additionally, the grant value of the LTI award in 2019 was significantly lower than in 2018, due to the lower average share price before grant date in 2019 compared to the previous year (LTI grant value 2019: CHF 53.88, 2018: CHF 101.54).

The “other payments” decreased significantly due to the fact that, in 2018, the CEO received payments related to his joining of VAT Group, which included a replacement award and relocation costs. There was no such payment in 2019.

In line with the overall decrease of the compensation in 2019 for the GEC, the social security and pension contributions decreased compared to the previous year.

The total fixed compensation of CHF 1.57 million (including pension and social security contributions) awarded for the financial year 2019 is within the maximum aggregate compensation amount of CHF 1.95 million approved by the shareholders.

The aggregate grant value of CHF 0.4 million awarded under the LTIP is within the maximum amount of CHF 1.7 million approved by the shareholders.

The STI of CHF 0.4 million will be submitted to shareholders’ vote at the 2020 AGM.

In the year under review, no compensation was paid to former members of the GEC or to closely related parties to members or former members of the GEC.

No member or former member of the GEC was granted a loan during the reporting year. No loans were outstanding at the end of the year under review.

Table 13: Compensation of the GEC in 2018

(CHF, gross)	ABS	Other payments[1]	Pension & social security (fixed)	Total fixed compensation	STI payout[2]	LTI grant[3]	Total compensation[4]
Michael Allison	450,000	205,133	170,649	825,782	222,825	335,691	1,384,298
Other GEC	700,000	52,309	217,488	969,797	326,167	364,833	1,660,797
Total GEC	**1,150,000**	**257,442**	**388,138**	**1,795,579**	**548,992**	**700,524**	**3,045,095**

1 Includes the value of benefits in kind and the payment of remaining vacation days for GEC members who left the company. For the CEO, includes relocation costs as well as a replacement award of CHF 160,000 (CHF 85,000 in cash and CHF 75,000 in shares restricted for three years) for compensation forfeited at the previous employer as a result of joining VAT Group.
2 STI for 2018 paid out until June 30, 2019.
3 Grant value of the LTI awarded in the reporting year. Includes the entire LTI grant value for the former CEO, despite the fact that the majority of the PSU (11/12) were forfeited due to retirement.
4 All compensation amounts are disclosed gross.

7. Shareholdings and vesting of outstanding LTI award

7.1 Shareholdings as of December 31, 2019

At the end of 2019, members of the Board held a total of 78,034 (2018: 74,482) registered shares of VAT Group AG[2]. GEC members held a total of 508 (2018: 34,625) registered shares of VAT Group AG and a total of 13,573 (2018: 7,621) performance share units.

The details on shareholdings of the members of the Board and the GEC is included in note 4.3 of the statutory financial statements of VAT Group AG on page 122 of the Annual Report.

At the end of 2019, members of the Board and the GEC did not hold any stock options.

7.2 Vesting of outstanding LTI award

The first PSU grant under the LTI plan in 2017 is scheduled to vest at the end of 2019. Since the two performance conditions (relative sales growth and relative TSR) are measured relatively to peer companies over the three-year period from 2017 to 2019, the final vesting level will only be available in May 2020, i.e., once the annual results of the peers for 2019 have been published.

Based on the latest estimate, the vesting of the 2017 LTI award is likely to be below 100%. While VAT Group had a strong year in 2017, relative performance in 2018 (and expectedly in 2019) decreased. The final vesting level for the 2017 LTI grant will be disclosed in the 2020 Compensation Report.

2 In addition, Heinz Kundert owns 770 performance share units from the LTI plan that were awarded to him in his previous function as CEO.

KPMG

Report of the Statutory Auditor

To the General Meeting of Shareholders of VAT Group AG, Sennwald

We have audited the remuneration report dated 2 March 2020 of VAT Group AG for the year ended 31 December 2019.

The audit was limited to the information according to articles 14–16 of the Ordinance against Excessive compensation in Stock Exchange Listed Companies contained in the tables 9 and 10 "Compensation of the Board in 2019 and 2018" on pages 64 and 65 and tables 11 and 13 "Compensation of the GEC in 2019 and 2018" on pages 65 and 67 of section 6 of the compensation report.

Responsibility of the Board of Directors

The Board of Directors is responsible for the preparation and overall fair presentation of the remuneration report in accordance with Swiss law and the Ordinance against Excessive compensation in Stock Exchange Listed Companies (Ordinance). The Board of Directors is also responsible for designing the remuneration system and defining individual remuneration packages.

Auditor's Responsibility

Our responsibility is to express an opinion on the accompanying remuneration report. We conducted our audit in accordance with Swiss Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the remuneration report complies with Swiss law and articles 14–16 of the Ordinance.

An audit involves performing procedures to obtain audit evidence on the disclosures made in the remuneration report with regard to compensation, loans and credits in accordance with articles 14–16 of the Ordinance. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements in the remuneration report, whether due to fraud or error. This audit also includes evaluating the reasonableness of the methods applied to value components of remuneration, as well as assessing the overall presentation of the remuneration report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, the remuneration report for the year ended 31 December 2019 of VAT Group AG complies with Swiss law and articles 14–16 of the Ordinance.

KPMG AG

Toni Wattenhofer Licensed Audit Expert Auditor in Charge	Jan Bellinger Licensed Audit Expert

St. Gallen, 2 March 2020

Financial Statements

Due to rounding, numbers presented throughout this report may not add up precisely to the totals provided.

Consolidated financial statements for the financial year from January 1 to December 31, 2019

Consolidated income statement

January 1–December 31 In CHF thousand	Note	2019	2018
Net sales	**2.1,2.2**	**570,376**	**698,136**
Raw materials and consumables used		–211,890	–257,350
Changes in inventories of finished goods and work in progress		–13,050	–21,248
Personnel expenses	4.1	–141,989	–148,596
Other income	2.3	9,252	8,588
Other expenses	2.4	–58,691	–64,291
Earnings before interest, taxes, depreciation and amortization (EBITDA)[1]		**154,008**	**215,239**
Depreciation and amortization		–46,272	–35,558
Earnings before interest and taxes (EBIT)[1]		**107,736**	**179,682**
Finance income	5.1	108	390
Finance costs	5.1	–8,840	–13,580
Earnings before income taxes		**99,004**	**166,491**
Income tax expenses	6.1	–24,179	–30,804
Net income attributable to owners of the Company		**74,825**	**135,687**
Earnings per share (in CHF)			
Basic earnings per share	5.4	2.50	4.53
Diluted earnings per share	5.4	2.49	4.52

1 Interest includes other items as reported in the financial results.

Consolidated statement of comprehensive income

January 1–December 31 In CHF thousand	Note	2019	2018
Net income attributable to owners of the Company		**74,825**	**135,687**
Other comprehensive income			
Items that will not be reclassified to profit or loss:			
Remeasurements of defined benefit obligations	4.3	86	–12,273
Related tax	6.1	–12	1,878
Subtotal		**74**	**–10,395**
Items that are or may be subsequently reclassified to profit or loss:			
Changes in the fair value of hedging reserves		4,356	–283
Related tax	6.1	–626	43
Currency translation adjustments		–136	426
Subtotal		**3,594**	**186**
Other comprehensive income for the period (net of tax)		**3,668**	**–10,209**
Total comprehensive income for the period attributable to owners of the Company		**78,493**	**125,478**

The above consolidated income statement and consolidated statement of comprehensive income should be read in conjunction with the accompanying notes, which can be found in the VAT annual report page 76 ff.

Consolidated balance sheet

As of December 31 In CHF thousand	Note	2019	2018
Assets			
Cash and cash equivalents		109,822	79,063
Trade and other receivables	3.1	97,409	94,778
Other investments, including derivatives		3,184	314
Prepayments and accrued income		4,417	3,127
Inventories	3.2	84,231	104,158
Current tax assets		747	4
Current assets		**299,809**	**281,442**
Property, plant and equipment	3.3	162,125	170,524
Investment properties		1,823	1,873
Intangible assets and goodwill	3.4	498,564	505,614
Trade and other receivables	3.1	2,631	1,965
Other investments, including derivatives		831	23
Deferred tax assets	6.1	6,893	6,746
Non-current assets		**672,866**	**686,745**
Total assets		**972,675**	**968,187**

As of December 31 In CHF thousand	**Note**	**2019**	**2018**
Liabilities			
Trade and other payables	3.5	66,387	45,021
Loans and borrowings	5.3	50,221	27,608
Provisions	3.7	2,242	2,577
Derivative financial instruments		53	1,539
Accrued expenses and deferred income	3.6	20,158	20,739
Current tax liabilities		17,747	24,094
Current liabilities		**156,809**	**121,579**
Loans and borrowings	5.3	203,867	199,078
Other non-current liabilities, including derivatives		377	767
Deferred tax liabilities	6.1	45,934	42,829
Defined benefit obligations	4.3	42,252	39,763
Non-current liabilities		**292,430**	**282,438**
Total liabilities		**449,239**	**404,017**
Equity			
Share capital	5.4	3,000	3,000
Share premium	5.4	133,950	253,891
Reserves		5,878	2,284
Treasury shares	5.4	–571	–687
Retained earnings[1]		381,179	305,683
Total equity attributable to owners of the Company		**523,436**	**564,170**
Total liabilities and equity		**972,675**	**968,187**

1 Includes remeasurements of DBO and other reserves. In prior year, this information was disclosed separately.

The above consolidated balance sheet should be read in conjunction with the accompanying notes, which can be found in the VAT annual report page 76 ff.

Consolidated statement of changes in equity

In CHF thousand	Share capital	Share premium	Hedging reserves	Translation reserves	Treasury shares	Retained earnings[1]	Total equity
VAT Group AG Equity as of 01.01.2018	**3,000**	**373,823**	**–826**	**2,925**	**–790**	**179,845**	**557,976**
Net income attributable to owners of the Company						135,687	135,687
Total comprehensive income for the period attributable to owners of the Company			–241	426		–10,395	–10,209
Dividend payment		–119,932					–119,932
Share-based payments (net of tax)					103	546	649
Equity as of 31.12.2018	**3,000**	**253,891**	**–1,067**	**3,351**	**–687**	**305,683**	**564,170**

In CHF thousand	Share capital	Share premium	Hedging reserves	Translation reserves	Treasury shares	Retained earnings[1]	Total equity
VAT Group AG Equity as of 01.01.2019	**3,000**	**253,891**	**–1,067**	**3,351**	**–687**	**305,683**	**564,170**
Net income attributable to owners of the Company						74,825	74,825
Total comprehensive income for the period attributable to owners of the Company			3,730	–136		74	3,668
Dividend payment		–119,941					–119,941
Share-based payments (net of tax)					116	598	714
Equity as of 31.12.2019	**3,000**	**133,950**	**2,663**	**3,215**	**–571**	**381,179**	**523,436**

1 Includes remeasurements of DBO and other reserves. In prior year, this information was disclosed separately.

The above consolidated statement of changes in equity should be read in conjunction with the accompanying notes, which can be found in the VAT annual report page 76 ff.

Consolidated statement of cash flows

January 1–December 31 In CHF thousand	Note	2019	2018
Net income attributable to owners of the Company		**74,825**	**135,687**
Adjustments for:			
Depreciation and amortization		46,272	35,558
(Profit)/loss from disposal of property, plant and equipment		–17	166
Change in defined benefit liability		2,552	–5
Net impact from foreign exchange		763	–4,410
Income tax expenses	6.1	24,179	30,804
Net finance costs	5.1	8,732	13,190
Other non-cash-effective adjustments		328	197
Change in trade and other receivables		–8,403	32,459
Change in prepayments and accrued income		–1,330	–446
Change in inventories		18,260	6,294
Change in trade and other payables		21,752	–47,198
Change in accrued expenses and deferred income		–880	–550
Change in provisions		–243	779
Cash generated from operations		186,791	202,524
Income taxes paid		–29,052	–30,813
Cash flow from operating activities		**157,739**	**171,711**
Purchases of property, plant and equipment	3.3	–6,645	–41,953
Proceeds from sale of property, plant and equipment		186	230
Purchases of intangible assets	3.4	–11,497	–6,245
Interest received	5.1	101	122
Cash flow from investing activities		**–17,857**	**–47,845**
Proceeds from borrowings[1]	5.3	110,000	223,936
Repayments of borrowings	5.3	–90,000	–214,678
Repayments of lease liabilities	5.3	–2,692	0
Dividend paid	5.4	–119,941	–119,932
Interest paid		–4,502	–4,308
Other finance expenses paid		–951	–1,423
Cash flow from financing activities		**–108,086**	**–116,406**
Net increase/(decrease) in cash and cash equivalents		**31,796**	**7,460**
Cash and cash equivalents at beginning of period		79,063	72,021
Effect of movements in exchange rates on cash held		–1,036	–418
Cash and cash equivalents at end of period		**109,822**	**79,063**

1 Includes financing costs in the amount of CHF 0.0 million (prior year: CHF 1.1 million)

The above consolidated statement of cash flows should be read in conjunction with the accompanying notes, which can be found in the VAT annual report page 76 ff.

Notes to the consolidated financial statements

1. General information and accounting policies

General information

VAT Group AG ("the Company") is a limited liability company incorporated in accordance with Swiss law. The registered office of the Company is Seelistrasse 1, CH-9469 Haag, Switzerland.

The consolidated financial statements as at and for the year ended December 31, 2019, comprise VAT Group AG and all companies under its control (together referred to as "VAT" or "Group").

These consolidated financial statements were authorized for issue by the Group's Board of Directors on March 2, 2020.

Basis of accounting

The consolidated financial statements of the Group have been prepared in accordance with IFRS. The presentation currency is Swiss Francs, which is the Company's functional currency. All amounts have been rounded to the nearest thousand, unless otherwise indicated.

These consolidated financial statements have been prepared on the historical cost basis, except for items that are required to be accounted for at fair value (e.g. derivative financial instruments) and the defined benefit liability which is measured at the present value of the defined benefit obligation less the fair value of plan assets.

This is the first set of the Group's annual financial statements in which IFRS 16 "Leases" has been applied. Details to the Group's material accounting policies that are relevant for the understanding of these consolidated financial statements are included in the corresponding notes.

Changes in accounting policies

The accounting policies adopted are consistent with those of the previous financial year except for the changes related to leases. This accounting policy has changed as of January 1, 2019, due to the adoption of the new IFRS 16 "Leases." Additionally, a number of standards have been modified on miscellaneous points with effect from January 1, 2019. None of these amendments had a material effect on the Group's financial statements.

IFRS 16 introduced a single, on-balance sheet accounting model for lessees. As a result, the Group as a lessee, has recognized right-of-use assets representing its rights to use the underlying assets and lease liabilities representing its obligation to make lease payments. Lessor accounting remains similar to previous accounting policies.

The Group has applied IFRS 16 using the modified retrospective approach, under which the cumulative effect of initial application is recognized in retained earnings at 1 January, 2019. Accordingly, the comparative information presented for 2018 has not been restated – i.e. it is presented, as previously reported, under IAS 17 and related interpretations.

Definition of a lease

Previously, the Group determined at contract inception whether an arrangement was or contained a lease under IFRIC 4 "Determining Whether an Arrangement Contains a Lease." The Group now assesses whether a contract is or contains a lease based on the new definition of a lease. Under IFRS 16, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

On transition to IFRS 16, the Group elected to apply the practical expedient to grandfather the assessment of which transactions are leases. It applied IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 were not reassessed.

Therefore, the definition of a lease under IFRS 16 has been applied only to contracts entered into or changed on or after January 1, 2019.

As a lessee

The Group applied the exemption not to recognize right-of-use assets and liabilities for leases with less than 12 months of lease term and some leases of low-value assets.

The Group presents right-of-use assets in “Property, plant and equipment,” the same line item as it presents underlying assets of the same nature that it owns. The carrying amounts of right-of-use assets are as below:

In CHF thousand	Buildings	Other equipment	Total
Balance at January 1, 2019	8,909	976	9,884
Balance at December 31, 2019	**6,422**	**691**	**7,113**

When measuring lease liabilities for leases that were classified as operating leases, the Group discounted lease payments using its incremental borrowing rate at January 1, 2019. The weighted-average rate applied is 1.8%.

Transition

At transition, for leases classified as operating leases under IAS 17, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Group’s incremental borrowing rate as at January 1, 2019. Right-of-use assets are measured at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments – the Group applied this approach to all other leases.

The Group used the practical expedient when applying IFRS 16 to leases previously classified as operating leases under IAS 17 not to recognize right-of-use assets and liabilities for leases for which the lease term ends within 12 months of the date of initial application and not recognize right-of-use assets nor liabilities for leases of low value assets.

In CHF thousand	January 1, 2019
Operating lease commitment at December 31, 2018, as disclosed in the Group’s consolidated financial statements	9,187
Discounted using the incremental borrowing rate at January 1, 2019	8,084
Recognition exemption for leases of low-value assets	–14
Recognition exemption for leases with less than 12 months of lease term at transition	–236
Extension options reasonably certain to be exercised	2,051
Lease liabilities recognized at January 1, 2019	**9,884**

Use of judgments and estimates

In preparing these consolidated financial statements, management has made judgments, estimates and assumptions that affect the application of the Group's accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from estimates. Estimates and underlying assumptions are reviewed frequently. Revisions to estimates are recognized prospectively. Important estimates and assumptions with the related uncertainties were primarily made in the following areas:

a) intangible assets and goodwill, see note 3.4,
b) property, plant and equipment, see note 3.3,
c) income taxes, see note 6.1,
d) employee benefits, see note 4.3,
e) provisions, see note 3.7.

2. Operating Performance

2.1 Segment Information

Background

The segment information is presented as provided to the Board of Directors and the Group Executive Committee in their role as Chief Operating Decision Maker (CODM).

Basis of segmentation

The Group is divided into and managed on the basis of three reporting segments. The segments are identified based on the products and services provided: Valves, Global Service and Industry.

- **Valves:** The Valves segment is a global developer, manufacturer and supplier of vacuum valves for the semiconductor, displays, photovoltaics and vacuum coating industries as well as for the industrial and research sector.
- **Global Service:** Global Service provides local expert support to customers and offers genuine spare parts, repairs and upgrades.
- **Industry:** The Industry segment combines the activities of VAT Romania and non bellow related businesses of Comvat. VAT Romania is well situated in the machining ancillary industry and offers manufacturing parts and mechanical components in the medium service range. Comvat is one of the leaders in the production of edge-welded bellows and specialized in automating processes.

Starting January 1, 2019, VAT moved its third-party bellows business from the Industry segment into the Valves segment. The move reflects VAT's ambition to drive growth in the bellows business by better aligning it with its primary markets and the needs of customers in the semiconductor and general vacuum sectors. The prior-period figures have been adjusted accordingly, which includes the following realignments from the segment Industry to the segment Valves: Net sales CHF 18.2 million, segment net assets CHF 46.0 million of which net trade working capital CHF 9.3 million. In addition, the Inter-segment sales of the segment Industry were reduced by CHF 14.1 million. In the year 2019, the segment Valves achieved net sales of CHF 15.7 million with the bellows business.

Corporate and eliminations

Inter-company transactions, balances, income and expenses between segments are eliminated and reported in the column "Corporate and eliminations." In addition, this column contains figures relating to the cross functions Corporate Research, Corporate Quality, Corporate Finance, HR and IT.

While net sales in the segments Valves and Industry only arise from sales of goods, net sales in the segment Global Service of CHF 19.0 million (prior year: CHF 19.2 million) came from sales of services.

The segment information provided to the CODM is measured in a manner consistent with that of the financial statements. Interest income and expenditure are not allocated to segments, as this type of activity is driven by the central treasury function, which manages the cash position of the Group. Therefore, a profit measure based on EBITDA is reported by segment. Sales between segments are carried out at arm's length and are eliminated on consolidation. Sales from Valves to Global Service are also included as inter-segment sales. Segment assets are measured in the same way as in the financial statements and allocated based on the operations of the segment and the physical location of the asset.

Information about reportable segments

January 1–December 31, 2019 In CHF thousand	Valves	Global Service	Industry	Total segments	Corporate and eliminations	Total
Net sales	440,855	111,759	17,762	570,376	–	570,376
Inter-segment sales	51,621	–	8,941	60,562	–60,562	–
Segment net sales	**492,476**	**111,759**	**26,703**	**630,938**	**–60,562**	**570,376**
Segment EBITDA	**136,335**	**46,325**	**2,844**	**185,503**	**–31,495**	**154,008**

January 1–December 31, 2018 In CHF thousand Adjusted	Valves	Global Service	Industry	Total segments	Corporate and eliminations	Total
Net sales	569,255	105,770	23,111	698,136	–	698,136
Inter-segment sales	44,417	–	7,775	52,192	–52,192	–
Segment net sales	**613,672**	**105,770**	**30,886**	**750,328**	**–52,192**	**698,136**
Segment EBITDA	**195,493**	**49,634**	**4,335**	**249,462**	**–34,223**	**215,239**

As of December 31, 2019 In CHF thousand	Valves	Global Service	Industry	Total segments	Corporate and eliminations	Total
Segment assets	676,966	120,331	34,670	831,967	1,823	833,790
Segment liabilities	38,062	6,175	5,139	49,377	545	49,922
Segment net operating assets	**638,904**	**114,156**	**29,531**	**782,591**	**1,278**	**783,868**
Of which net trade working capital	102,985	13,801	5,115	121,902	–545	121,356

As of December 31, 2018 In CHF thousand Adjusted	Valves	Global Service	Industry	Total segments	Corporate and eliminations	Total
Segment assets	703,170	121,597	39,291	864,059	1,873	865,932
Segment liabilities	25,951	2,720	2,156	30,828	84	30,912
Segment net operating assets	**677,219**	**118,877**	**37,135**	**833,231**	**1,789**	**835,020**
Of which net trade working capital	131,138	15,187	10,767	157,093	–84	157,009

Net operating assets by reportable segment include trade receivables, inventories, property, plant and equipment, investment properties, intangible assets and goodwill as well as trade payables. Intangible assets and goodwill are allocated to the segments based on quotes defined as a result of the purchase price allocation.

Reconciliation of segment results to income statement and balance sheet

Income statement

January 1–December 31 In CHF thousand	2019	2018
Segment EBITDA	185,503	249,462
Corporate and eliminations	–31,495	–34,223
Depreciation and amortization	–46,272	–35,558
Finance costs net	–8,732	–13,190
Earnings before income taxes	**99,004**	**166,491**

Assets

As of December 31 In CHF thousand	2019	2018
Segment assets	831,967	864,059
Corporate and eliminations	1,823	1,873
Cash and cash equivalents	109,822	79,063
Other assets[1]	29,063	23,192
Assets	**972,675**	**968,187**

Liabilities

As of December 31 In CHF thousand	2019	2018
Segment liabilities	49,377	30,828
Corporate and eliminations	545	84
Loans and borrowings	254,088	226,686
Other liabilities[2] and provisions	145,229	146,419
Liabilities	**449,239**	**404,017**

1 The main positions included in other assets are other receivables and deferred tax assets.
2 Only trade payables are allocated to segments.

Geographic information

Net sales

January 1–December 31 In CHF thousand	2019	2018
Switzerland	5,075	10,043
Europe excl. Switzerland	88,222	98,739
USA	190,262	227,292
Japan	91,560	110,208
Korea	59,410	64,603
Singapore	48,444	73,236
Asia excl. Japan, Korea and Singapore	78,247	100,639
Other	9,155	13,377
Total	**570,376**	**698,136**

No other individual country represented more than 10% of net sales in 2019 and 2018.

Non-current assets

As of December 31 In CHF thousand	2019	2018
Switzerland	596,244	610,942
Europe excl. Switzerland	7,613	8,873
USA	4,645	2,944
Asia	54,010	55,252
Total	**662,512**	**678,011**

Non-current assets by location include property, plant and equipment, investment properties, intangible assets and goodwill. No other individual country represented more than 10% of non-current assets in 2019 and 2018.

Major customers

Revenues from two customers of the Group's Valves, Global Service and Industry segments represented approximately 18% and 17% (prior year: two customers represented approximately 19% and 16%) of the Group's total revenues.

2.2 Revenue

In the following table, revenue from contracts with customers is disaggregated by net sales by region and reportable segments. The table also includes a disaggregation of order intake by segments.

Disaggregation of order intake and net sales

January 1 – December 31, 2019 In CHF thousand	Valves	Global Service	Industry	Total
Order intake	463,039	106,446	15,530	585,015
Net sales by region				
Asia	220,321	51,759	5,582	277,662
Americas	143,402	46,245	1,824	191,471
EMEA	77,132	13,755	10,356	101,244
Net sales	**440,855**	**111,759**	**17,762**	**570,376**

January 1 – December 31, 2018 In CHF thousand	Valves	Global Service	Industry	Total
Order intake	510,775	108,376	28,877	648,028
Net sales by region				
Asia	286,638	51,660	10,388	348,686
Americas	185,595	39,245	4,830	229,669
EMEA	78,819	14,866	26,096	119,781
Net sales	**551,051**	**105,770**	**41,315**	**698,136**

Accounting policies
Revenue is measured based on the consideration specified in a contract with a customer. The Group recognizes revenue when it transfers control over a good or service to a customer. Customers obtain control of the goods dependent on standard trade terms (Incoterms) or when services are rendered. The Group uses different Incoterms, generally EXW, FCA and DDP. Contracts include only standard warranty clauses and do not provide for separate purchase of warranty. Payment conditions are short term and therefore do not contain significant financing components.

2.3 Other income

January 1–December 31 In CHF thousand	2019	2018
Net foreign exchange gains on operating and investing activities	0	2,777
Work performed by the entity and capitalized	8,272	3,919
Rental income from investment properties	74	88
Change in provision for impairment on trade receivables	0	167
Gains from sale of fixed assets	56	96
Other income	851	1,540
Total other income	**9,252**	**8,588**

2.4 Other expenses

January 1–December 31 In CHF thousand	2019	2018
Marketing and advertising	990	1,173
Distribution	5,807	7,346
Office rent	307	2,543
Administrative expenses	13,287	16,064
Travel expenses	3,836	4,586
Repair and maintenance	13,065	15,737
Energy and supplies	6,992	7,839
Insurance, duties and other charges	2,317	2,126
Losses from sale of fixed assets	39	263
Net foreign exchange losses on operating and investing activities	7,248	0
Research and development expenses[1]	1,559	2,035
Other operating expenses	3,246	4,579
Total other expenses	**58,691**	**64,291**

1 Includes only third-party expenses.

3. Operating assets and liabilities
3.1 Trade and other receivables

As of December 31 In CHF thousand	2019	2018
Trade receivables – gross	87,975	84,105
Less provision for impairment of trade receivables	–928	–342
Trade receivables – net	**87,048**	**83,763**
Recoverable VAT and withholding tax	6,301	5,256
Deposits	2,235	834
Receivables from social security	3,608	1,816
Receivables under finance lease	0	3,798
Other	848	1,276
Total trade and other receivables	**100,039**	**96,743**
Thereof:		
Current trade and other receivables	97,409	94,778
Non-current other receivables	2,631	1,965

Deposits for office rent have no fixed due date and are considered to be non-current.

Receivables under finance lease

Lease agreements in which the other party, as lessee, is to be regarded as the economic owner of the leased assets give rise to accounts receivable in the amount of the discounted future lease receipts. The finance lease contract expired in 2019.

Accounting policies
Trade and other receivables used in the ordinary course of business are disclosed as current items in the balance sheet. A trade receivable without a significant financing component is initially measured at the transaction price. Trade and other receivables are subsequently measured at amortized cost less impairment losses. Amounts charged to the allowance account are generally written off when there is no expectation of recovering additional cash.

3.2 Inventories

As of December 31 In CHF thousand	2019	2018
Raw materials and consumables	35,969	42,618
Work in progress	12,176	12,389
Semi-finished goods	17,616	23,132
Finished goods	18,471	26,019
Total inventories	**84,231**	**104,158**

In the financial year 2019, inventories of CHF 4.7 million (previous year: CHF 1.0 million) were scrapped and recognized as expense.

Accounting policies
Inventories are measured at the lower of cost and net realizable value. Cost is determined using the weighted average cost method. The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs and related production overheads (based on normal operating capacity). It excludes borrowing costs. Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

3.3 Property, plant and equipment

January 1–December 31, 2019 In CHF thousand	Land	Buildings	Buildings right-of-use assets	Machinery	Furniture/ fixtures	Other equipment	Other equipment right-of-use asset	Assets under con-struction	Total
Balance at 01.01.2019	**8,042**	**77,265**	**0**	**98,257**	**8,731**	**18,228**	**0**	**30,373**	**240,898**
Recognition of right-of-use asset on initial application of IFRS 16			8,909				976		9,884
Adjusted balance at 01.01.2019	**8,042**	**77,265**	**8,909**	**98,257**	**8,731**	**18,228**	**976**	**30,373**	**250,781**
Additions		44		60	226	407		5,908	6,645
Additions non-cash			65	3,798			72		3,935
Disposals		–18		–213	–136	–519			–885
Transfer		20,034		4,825	461	1,922		–27,242	0
Exchange differences	–15	–400	–173	–1,373	–65	–169	–6	105	–2,095
Balance at 31.12.2019	**8,027**	**96,926**	**8,802**	**105,354**	**9,217**	**19,870**	**1,043**	**9,145**	**258,383**
Accumulated depreciation and impairment									
Balance at 01.01.2019	**–161**	**–16,537**	**0**	**–39,875**	**–3,838**	**–9,963**	**0**	**0**	**–70,374**
Depreciation charge	–34	–4,270	–2,428	–16,071	–1,186	–3,334	–354		–27,677
Impairment loss									0
Disposals		11		131	98	476			716
Transfer				512	26	–538			0
Exchange differences	2	39	48	839	41	105	2		1,076
Balance at 31.12.2019	**–193**	**–20,756**	**–2,380**	**–54,463**	**–4,859**	**–13,254**	**–352**	**0**	**–96,259**
Net book amount 31.12.2019	**7,834**	**76,169**	**6,422**	**50,891**	**4,359**	**6,615**	**691**	**9,145**	**162,125**

January 1–December 31, 2018 In CHF thousand	Land	Buildings	Machinery	Furniture/ fixtures	Other equipment	Assets under construction	Total
Balance at 01.01.2018	**8,065**	**73,202**	**70,602**	**5,935**	**15,423**	**28,227**	**201,456**
Additions		307	13,942	1,820	1,162	24,721	41,953
Disposals			–222	–40	–543		–805
Transfer		3,893	15,012	1,084	2,263	–22,252	0
Exchange differences	–23	–136	–1,077	–68	–77	–323	–1,705
Balance at 31.12.2018	**8,042**	**77,265**	**98,257**	**8,731**	**18,228**	**30,373**	**240,898**
Accumulated depreciation and impairment							
Balance at 01.01.2018	**–129**	**–12,652**	**–30,537**	**–2,885**	**–7,500**	**0**	**–53,704**
Depreciation charge	–34	–3,912	–9,941	–948	–2,782		–17,619
Impairment loss			–2	–43			–45
Disposals			123	12	274		409
Transfer		–1					–1
Exchange differences	3	28	482	27	46		586
Balance at 31.12.2018	**–161**	**–16,537**	**–39,875**	**–3,838**	**–9,963**	**0**	**–70,374**
Net book amount 31.12.2018	**7,881**	**60,729**	**58,383**	**4,893**	**8,266**	**30,373**	**170,524**

Commitments for future capital expenditures

Firm contractual commitments for future capital investment in property, plant and equipment as of December 31, 2019, aggregated CHF 9.0 million (prior year: CHF 15.6 million).

Accounting policies
Property, plant and equipment are measured at historic or manufacturing costs less accumulated depreciation and any accumulated impairment losses. If significant parts of an item of property, plant and equipment have different useful lives, these are accounted for as separate items of property, plant and equipment.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate. In case of replacements, the carrying amount of the replaced part is derecognized.

Depreciation of property, plant and equipment is calculated using the straight-line method based on the following useful lives:

Category	Useful life (in years)
Long-leased land	60
Buildings	20–40
Machinery	5–8
Furniture/fixtures	3–8
Other equipment	3–12

Land is not depreciated. Repairs and maintenance are charged to the income statement during the financial period in which they are incurred.

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Property, plant and equipment are assessed for impairment when there is a triggering event that provides evidence that an asset may be impaired. To assess whether any impairment exists, estimates of expected future cash flows are used. Actual outcomes could vary significantly from such estimates. Factors such as changes in discount rates, the planned use of buildings, machinery or equipment or closure of facilities, the presence of competition, technical obsolescence and lower than anticipated product sales could lead to shorter useful lives or impairments.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognized in the income statement.

Leases – as a lessee

The Group leases warehouses, factory facilities and offices. Lease payments are determined in corresponding contracts. Most of these leases were entered into many years ago as combined leases of land and buildings. In addition the Group leases vehicles and IT equipment. In prior year, these leases were classified as operating leases under IAS 17.

The Group recognizes a right-of-use asset at the lease commencement date. Some property leases contain extension options exercisable by the Group. Where practicable, the Group seeks to include extension options in new leases to provide operational flexibility. The Goup assesses at lease commencement date whether it is reasonably certain to exercise the extension options. The Group reassesses whether it is reasonably certain to exercise the options if there is a significant event or significant changes in circumstances within its control.

In relation to those leases under IFRS 16, the Group has recognized depreciation and interest costs, instead of operating lease expense. During the period ended December 31, 2019, the Group recognized CHF 2.8 million of depreciation charges and CHF 0.2 million of interest costs from these leases.

In 2019, expenses related to short-term leases as well as leases of low-value assets amount to CHF 0.3 million. Total cash outflows for leases amount to CHF 2.9 million.

Accounting policies
The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property, plant and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

3.4 Intangible assets and goodwill

January 1–December 31, 2019 In CHF thousand	Goodwill	Software	Acquired technology and customer relationships	Brands and trademarks	Other intangible assets	Construction in progress	Total
Balance at 01.01.2019	**183,717**	**11,947**	**263,600**	**120,900**	**3,131**	**4,553**	**587,848**
Additions		9				11,488	11,497
Disposals		–99			–270		–369
Transfer		160			473	–633	0
Exchange differences		–25				–1	–26
Balance at 31.12.2019	**183,717**	**11,992**	**263,600**	**120,900**	**3,334**	**15,407**	**598,950**
Accumulated amortization and impairment							
Balance at 01.01.2019	**0**	**–6,113**	**–75,265**	**0**	**–856**	**0**	**–82,234**
Amortization charge		–2,269	–15,308		–633		–18,210
Impairment loss		–65			–270		–335
Disposals		99			270		369
Exchange differences		24					24
Balance at 31.12.2019	**0**	**–8,324**	**–90,573**	**0**	**–1,489**	**0**	**–100,386**
Net book value 31.12.2019	**183,717**	**3,668**	**173,027**	**120,900**	**1,845**	**15,407**	**498,564**

January 1–December 31, 2018 In CHF thousand	Goodwill	Software	Acquired technology and customer relationships	Brands and trademarks	Other intangible assets	Construction in progress	Total
Balance at 01.01.2018	**183,717**	**8,178**	**263,600**	**120,900**	**1,338**	**4,079**	**581,812**
Additions		34				6,211	6,245
Disposals		–19			–178		–197
Transfer		3,766			1,971	–5,737	0
Exchange differences		–12					–12
Balance at 31.12.2018	**183,717**	**11,947**	**263,600**	**120,900**	**3,131**	**4,553**	**587,848**
Accumulated amortization and impairment							
Balance at 01.01.2018	**0**	**–4,148**	**–59,957**	**0**	**–494**	**0**	**–64,599**
Amortization charge		–1,995	–15,308		–365		–17,668
Impairment loss					–175		–175
Disposals		19			178		197
Exchange differences		11					11
Balance at 31.12.2018	**0**	**–6,113**	**–75,265**	**0**	**–856**	**0**	**–82,234**
Net book value 31.12.2018	**183,717**	**5,834**	**188,335**	**120,900**	**2,275**	**4,553**	**505,614**

Commitments for future capital expenditures

Firm contractual commitments for future capital investment in intangible assets as of December 31, 2019, aggregated CHF 1.0 million (prior year: CHF 0.7 million).

Research and development costs

In 2019, research and development expenses amounting to CHF 33.4 million (previous year: CHF 34.1 million) were included in the items "Personnel expenses," "Other operating expenses" and "Depreciation and amortization." For 53 development projects, the capitalization criteria according to IAS 38.57 were met and expenses of CHF 5.5 million (previous year: CHF 3.3 million) were capitalized.

Impairment testing for goodwill and intangible assets with indefinite useful lives

The intangible assets and goodwill to be tested were allocated to and measured on cash-generating units (CGUs) at the segment levels as follows. Starting January 1, 2019, VAT moved its third-party bellows business from the Industry segment into the Valves segment (see also note 2.1). The allocation was adapted accordingly.

As of December 31 In CHF thousand				2019				2018
	Valves	Global Service	Industry	Total	Valves	Global Service	Industry	Total
Goodwill	139,886	35,742	8,089	183,717	128,673	35,742	19,302	183,717
Brand and trademarks	94,618	26,282	0	120,900	94,618	26,282	0	120,900
Total carrying amount	**234,504**	**62,024**	**8,089**	**304,617**	**223,291**	**62,024**	**19,302**	**304,617**

Goodwill and intangible assets with indefinite useful lives have been allocated to the CGUs by using the relative fair value approach based on the financial performance of those CGUs as well as management best estimate. The allocation corresponds with the lowest level at which those assets are monitored by management.

Recoverable amounts used in the impairment testing are based on the value in use and on the latest forecasts approved by management, discounting the future cash flows to be generated from the continuing use. The forecast period used for future cash flows covers the years 2020 to 2022. The discount rates used are based on the weighted average cost of capital (WACC) derived from peer groups adjusted to specific risks of the businesses concerned and the countries in which they operate. The capital costs were determined using the capital asset pricing model (CAPM). The annual impairment tests carried out supported the carrying amounts and, therefore, no need for impairment was identified.

The key assumptions used in the estimation of fair value in use were as follows:

As of December 31, 2019	Valves	Global Service	Industry
Discount rate (WACC) before tax	10.4%	10.4%	10.5%
Terminal value growth rate	1.6%	1.6%	1.6%

As of December 31, 2018	Valves	Global Service	Industry
Discount rate (WACC) before tax	10.8%	10.7%	10.4%
Terminal value growth rate	1.7%	1.7%	1.7%

Management believes that no reasonably possible change in any of the above key assumptions would cause the recoverable amount to be less than the carrying amount.

Accounting policies

Goodwill and intangible assets

Goodwill arising on the acquisition of subsidiaries is measured at cost less accumulated impairment losses. Goodwill is not amortized.

Intangible assets, including technology and customer relationships that are acquired by the Group and have finite useful lives, are measured at cost less accumulated amortization and any accumulated impairment losses. Intangible assets with indefinite useful lives, such as brands and trademarks are measured at cost less accumulated impairment losses. The Group considers that the acquired brands and trademark have an indefinite useful life as they are well established in the respective markets and have a history of strong performance.

Acquired computer software licenses are capitalized on the basis of costs incurred to acquire and bring to use the specific software. Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognized in profit or loss as incurred. Amortization is calculated using the straight-line method over the estimated useful lives and is generally recognized in the consolidated income statement.

The estimated useful lives are as follows:

Category	Useful life (in years)
Acquired technology and customer relationships	13.5–20
Brand and trademarks	indefinite
Software	3–5
Other intangible assets	3–5

Amortization methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

The capitalization of internally generated intangible assets is subject to the following development categories: development of own software applications or product-related development activities. Development costs that are directly attributable to the design and testing of identifiable and unique products controlled by the Group are recognized as intangible assets when the criteria are met. Directly attributable costs capitalized as part of the developed product include employee costs, third-party material and advisory expenses. Other development expenditures that do not meet these criteria are recognized as an expense as incurred. Development costs previously recognized as an expense are not recognized as an asset in a subsequent period. Development costs recognized as assets are amortized over their estimated useful lives, which does not exceed five years.

Impairment of non-financial assets

Goodwill, intangible assets that have an indefinite useful life and intangible assets not ready to use are not subject to amortization and are tested annually for impairment or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Tangible and intangible assets that are subject to depreciation or amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are largely independent cash inflows (cash-generating units). Prior impairments of non-financial assets (other than goodwill) are reviewed for possible reversal at each reporting date. An impairment loss is recognized if the carrying amount of an asset exceeds its recoverable amount. The recoverable amount is the greater of the value in use of the asset and its fair value less costs of disposal. Value in use is based on the estimated future cash flows, discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Impairment losses are recognized in the consolidated income statement and will be reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

Research and development costs The majority of the expenses are incurred in relation to basic research product management and R & D support/overheads, and these are charged directly to the income statement. Expenses directly related to development costs for new products are capitalized and amortized over a period of five years if these concern major development projects. They are reviewed at the end of each reporting period in order to verify if the capitalization criteria of IAS 38.57 are fulfilled.

3.5 Trade and other payables

As of December 31 In CHF thousand	2019	2018
Trade payables	49,922	30,912
Sales tax and other non-income tax payables	3,856	4,829
Employee benefit liabilities	8,041	3,264
Prepayments received from customers	3,487	4,249
Other liabilities	1,081	1,767
Total trade and other payables	**66,387**	**45,021**

The carrying amounts of the Group's trade and other payables are denominated in the following currencies:

As of December 31 In CHF thousand	2019	2018
Swiss Franc	29,333	22,382
Euro	12,423	7,811
US Dollar	14,899	4,338
Malaysian Ringgit	3,215	2,771
Romanian Leu	2,379	1,743
Chinese Yuan	2,580	3,185
Other currencies	1,558	2,791
Total trade and other payables	**66,387**	**45,021**

Accounting policies
Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Trade payables are subsequently measured at amortized cost using the effective interest method.

3.6 Accrued expenses and deferred income

As of December 31 In CHF thousand	2019	2018
Accrued expenses – personnel related	10,122	10,288
Accrued expenses – other	10,037	10,434
Deferred income	0	17
Total accrued expenses and deferred income	**20,158**	**20,739**

3.7 Provisions

January 1–December 31, 2019 In CHF thousand	Warranties	Other provisions	Total provisions
Balance at 01.01.2019	**2,483**	**94**	**2,577**
Additions	721	255	976
Used	–1,077	–142	–1,219
Exchange differences		–5	–5
Balance at 31.12.2019	**2,127**	**201**	**2,329**
Thereof:			
Current provisions	2,127	114	2,242
Non-current provisions[1]	0	87	87

1 Non-current provisions are included in other non-current liabilities.

Warranties

Warranty provisions cover the risk of expenses in regard to product liability claims that are expected to occur before the warranty period expires. Warranty provisions are calculated on the basis of effective warranty cases and past experience and are used as payments are made. The warranty provisions are subject to a degree of uncertainty with regard to timing and the amount to be paid.

No other significant provisions were deemed required at the reporting date.

Accounting policies

Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as finance cost. A provision for warranties is recognized when the underlying products or services are sold, based on effective warranty cases on historical warranty data and a weighting of possible outcomes against their associated probabilities.

4. Employees

4.1 Employee FTE and personnel expenses

January 1–December 31 In CHF thousand	2019	2018
Wages and salaries	114,766	123,738
Share based payment	783	705
Social security costs	11,524	11,805
Pension costs – defined contribution plans	838	983
Pension costs – defined benefit plans	8,814	6,479
Other personnel expenses	5,264	4,886
Total personnel expenses	**141,989**	**148,596**
Number of employees (FTE)	1,810	1,712

4.2 Share-based payments

At December 31, 2019, the Group had the following share-based payment arrangements.

Board member share compensation (equity-settled share-based payment)

Members of the Board receive 30% of the total compensation in restricted shares. The restricted shares are subject to a three-year blocking period during which they cannot be transferred, sold, pledged or otherwise disposed of. VAT Group granted 1,852 shares (prior period 1,478 shares) with a fair value of CHF 108.15 per share for the period 2018/19. For the period 2019/20, the Group allocated 1,125 shares (prior period 2,132 shares).

Long-term incentive plan – LTIP (equity-settled share-based payment)

Long-term incentive plans (LTIP) are in place for the Group's senior management. So-called performance share units (PSUs) were allocated to the senior management. One PSU represents a conditional right to receive a certain number of underlying shares free of charge pursuant to the vesting period of three years and perfomance conditions. The number of shares allocated to each PSU ranges between zero and two shares. The allocation is dependent upon achievement of the performance targets of VAT compared to a predefined peer group on the two equal weighted metrics relative sales growth and relative total shareholder return (TSR). This LTIP is specifically designed for rewarding the performance of VAT relative to a selected peer group of companies. The inputs used in the measurement of the fair values at grant date were as follows:

	Share price at grant date	TSR fair value at grant date (50%)	Sales growth fair value at grant date (50%)	Volatility	Risk-free rate	Dividend yield
Long-term incentive plan 2017	CHF 128.28	CHF 104.94	CHF 105.15	25.3%	0.5%	3.3%
Long-term incentive plan 2018	CHF 139.18	CHF 101.19	CHF 109.16	26.7%	0.5%	3.8%
Long-term incentive plan 2019	CHF 86.30	CHF 53.55	CHF 58.08	32.1%	0.5%	7.1%

As of December 31, 2019, the number of outstanding performance share units (PSUs) under the plan are 26,578 (prior year: 12,982).

Accounting policies

The grant date fair value of the equity-settled share-based payment arrangement granted to senior management (LTIP) is recognized as an expense, with a corresponding increase in equity, over the vesting period of the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized is based on the number of awards that meet the related service and non-market performance conditions at the vesting date.

4.3 Post-employment benefits

The present value of the defined benefit obligations depend on a number of factors that are determined on an actuarial basis using a number of assumptions. Any changes in these assumptions will impact the carrying amount of the defined benefit liabilities. The assumptions used in determining the net cost for pensions include the discount rate. The Group determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension obligations. In determining the appropriate discount rate, the Group considers the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the terms of the related pension obligations.

Throughout the world, the Group maintains defined contribution plans for its employees under which the relevant contributions are expensed as they accrue.

There are three defined benefit plans in place: the members of the Board of Directors of the Japanese subsidiary as well as all French employees are covered by a non-funded defined benefit plan and all Swiss entities have a funded contributory defined benefit pension plan covering their employees with the following amounts recognized in balance sheet and income statement:

Balance sheet

As of December 31 In CHF thousand	2019	2018
Japan	177	146
France	63	83
Switzerland	42,012	39,534
Net defined benefit liability in the balance sheet	**42,252**	**39,763**

Income statement

January 1–December 31 In CHF thousand	2019	2018
Japan	32	48
France	–17	85
Switzerland	8,800	6,346
Pension costs – defined benefit plans	**8,814**	**6,479**

Swiss plan

The Swiss pension plan is governed by the Swiss Federal Law on Occupational Retirement, Survivors' and Disability Pension Plans (BVG), which stipulates that pension plans are to be managed by independent, legally autonomous units. The assets of the pension plan are held within a separate foundation and cannot revert to the employer. Pension plans are overseen by a regulator as well as by a state supervisory body.

The Swiss Group entities are affiliated to a semi-autonomous foundation. The Board of Trustees, which consists of employee and employer representatives in parity ratio, governs the semi-autonomous foundation. All governing and administration bodies have an obligation to act in the interests of the plan participants. They are also responsible for the investment strategy. When defining the investment strategy, they take into account the foundation's objectives, benefit obligations and risk capacity.

Plan participants, their spouse and children are insured against the financial consequences of old age, disability and death. Their benefits are defined in pension plan rules compliant with the BVG, which is specifying the minimum benefits that are to be provided. Retirement benefits are based on the accumulated retirement capital which can either be drawn as a lifelong annuity or as a lump sum payment. The annuity is calculated by multiplying the retirement capital with the currently applicable conversion rate. The accumulated retirement capital is made of the yearly contributions towards the old-age risk by both employer and employee and the interest thereon until retirement. Contributions towards the old-age risk are based on the rules defined by the Board of Trustees of the semi-autonomous foundation. Minimum contributions and interest are defined by the BVG and the Swiss Parliament. In 2019, the minimum interest was 1.00% (prior year: 1.00%).

Some demographic risks are safeguarded through a life insurance company (disability and death). There is a risk that the insurance coverage is only temporary in nature (e.g. cancellation by the life insurance firm), and that the inherent risks of the plan may lead to variable insurance premiums over time.

All other actuarial risks are borne by the foundation. These risks consist of demographic risks (primarily life expectancy) and financial risks (primarily the discount rate, future increases in salaries and the return on plan assets) and are regularly assessed by the Board of Trustees. In case of an underfunding, various measures can be taken such as the adjustment of the pension commitment by altering the conversion rates or increasing current contributions. The employer can also make additional restructuring contributions. The BVG prescribes how employees and employer have to jointly fund potential restructurings.

The foundation decided in 2018 to increase the annual old-age credits, starting from January 1, 2019. This resulted in a plan amendment, which was recognized as part of the service costs in the financial year 2018. The amounts recognized in the balance sheet are determined as follows:

As of December 31 In CHF thousand	2019	2018
Present value of defined benefit obligation	210,188	191,097
Fair value of plan assets	168,176	151,563
Net defined benefit liability	**42,012**	**39,534**

The movement in the defined benefit obligation over the period is as follows:

January 1–December 31 In CHF thousand	2019	2018
Opening defined benefit obligation	**191,097**	**180,831**
Service costs	8,673	6,550
Plan participants contributions	6,456	6,510
Interest expense	1,307	1,147
Remeasurement (gains)/losses	11,535	5,139
Plan amendment	0	–253
Benefits paid through pension assets	–8,880	–8,827
Closing defined benefit obligation	**210,188**	**191,097**

January 1–December 31 In CHF thousand	2019	2018
Opening fair value of plan assets	**151,563**	**153,594**
Interest income	1,075	1,012
Return on plan assets (excl. amounts in net interest)	11,621	–7,134
Plan participants contributions	6,456	6,510
Employer contributions	6,456	6,510
Benefits received/(paid) through pension assets net	–8,880	–8,827
Administration expense	–115	–102
Closing fair value of plan assets	**168,176**	**151,563**

As of the reporting date, the present value of the defined benefit obligation was comprised of:

As of December 31 In CHF thousand	2019	2018
Defined benefit obligation for active employees	165,196	151,527
Defined benefit obligation for pensioners	44,992	39,570
Total defined benefit obligation	**210,188**	**191,097**

The defined benefit cost for the period is as follows:

January 1–December 31 In CHF thousand	2019	2018
Current service costs	8,673	6,550
Interest expense on defined benefit obligation	1,307	1,147
Interest income on plan assets	–1,075	–1,012
Plan amendment	0	–253
Administration expense	115	102
Total defined benefit cost/(income) recognized in income statement	**9,020**	**6,534**
Thereof:		
Employee benefit expenses	8,788	6,399
Finance expenses	232	135
Actuarial (gain)/loss arising from financial assumptions	10,734	5,226
Actuarial (gain)/loss arising from experience adjustment	801	–87
Return on plan assets (excl. amounts included in net interest)	–11,621	7,134
Total defined benefit cost/(income) recognized in OCI	**–86**	**12,273**

The major asset categories are as follows:

As of December 31 In CHF thousand	2019	2018
Equity instruments (quoted market prices)	52,889	45,056
Debt instruments (quoted market prices)	44,200	35,608
Real estate (quoted market prices)	32,462	28,899
Alternative investments (quoted market prices)	30,330	27,433
Cash	7,840	14,083
Others	455	484
Total	**168,176**	**151,563**

Equity instruments contain shares from VAT Group AG with a fair value in the amount of CHF 3.3 million (prior year: CHF 1.7 million). The significant actuarial assumptions were as follows:

As of December 31	2019	2018
Discount rate	0.25%	0.70%
Inflation	0.40%	1.00%
Salary growth rate	1.25%	1.25%
Pension growth rate	0.00%	0.00%

Assumptions regarding future mortality are set based on actuarial advice in accordance with published statistics and experience in Switzerland. These assumptions translate into an average life expectancy in years for a pensioner retiring at age 65:

As of December 31	2019	2018
Retiring at the end of the reporting period:		
Male	22.61	22.50
Female	24.65	24.54
Retiring 20 years after the end of the reporting period:		
Male	24.40	24.33
Female	26.44	26.37

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below:

	Impact on defined benefit obligation 2019		Impact on defined benefit obligation 2018	
	Increase in assumption	Decrease in assumption	Increase in assumption	Decrease in assumption
Discount rate (+/– 0.25%)	–8,970	9,648	–7,889	8,459
Salary growth rate (+/– 0.25%)	1,273	–1,251	1,050	–1,031

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the defined benefit liability recognized within the balance sheet.

Expected contributions to defined benefit plans for the year ending December 31, 2020, amount to CHF 6.9 million.

The weighted average duration of the defined benefit obligation is 17.3 years (prior year: 16.2 years).

Accounting policies
Short-term employee benefits are expensed as the related service is provided. A liability is recognized for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

Obligations for contributions to defined contribution plans are expensed as the related service is provided. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

Typically defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation. The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related pension obligation.

Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses and the return on plan assets (excluding interest) are charged or credited to equity in other comprehensive income in the period in which they arise.

The Group determines the net interest expense on the net defined benefit liability for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the period to the then net defined benefit liability, taking into account any changes in the net defined benefit liability during the period as a result of contributions and benefit payments. In the income statement, the net interest expense is recognized within "Finance costs." Other expenses related to defined benefit plans are recognized within "Employee benefit expenses."

Past-service costs are recognized immediately in the consolidated income statement.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid.

4.4 Related-party transactions

The following transactions were carried out with related parties:

January 1–December 31 In CHF thousand	2019	2018
Contribution to Swiss pension plan	6,456	6,510

Business transactions with related parties are based on arm's-length conditions.

Key management personnel includes members of the Group Executive Committee of VAT Group AG. The compensation paid or payable to key management personnel for employee services is shown below:

January 1–December 31 In CHF thousand	2019	2018
Short-term employee benefits	1,502	2,135
Post-employment benefits	182	179
Share-based payments	351	226
Total	**2,035**	**2,540**

Year-end balances arising from transactions with related parties include:

January 1–December 31 In CHF thousand	2019	2018
Other payables due to Swiss autonomous employee benefit plan	2,179	947
Other payables due to governing bodies	0	120
Accrued expenses and deferred income due to governing bodies	168	201
Post-employment benefit obligation (Swiss autonomous employee benefit plan)	42,012	39,534

Shares held by the Board of Directors and the Group Executive Committee are disclosed in note 4.3 of the statutory financial statements of VAT Group AG.

5. Capital and financial risk management

5.1 Finance income and costs

January 1–December 31 In CHF thousand	2019	2018
Interest income	101	122
Finance lease income	0	266
Other finance income	7	2
Finance income	**108**	**390**
Interest expenses	–4,707	–5,094
Net foreign exchange losses on financing activities	–2,317	–7,041
Other finance expenses	–1,817	–1,445
Finance costs	**–8,840**	**–13,580**
Total finance result	**–8,732**	**–13,190**

Accounting policies
Interest income or expense is recognized using the effective interest method. The "effective interest rate" is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to:
– the gross carrying amount of the financial asset; or
– the amortized cost of the financial liability.

5.2 Derivative financial instruments

The following table shows the carrying amounts of the derivatives.

As of December 31 In CHF thousand	Measurement principle	Contract Value		Fair Value	
		2019	2018	2019	2018
Derivatives held for hedging (USD)	Level 2[1]	109,485	30,939	2,240	208
Derivatives held for hedging (JPY)	Level 2[1]	33,590	11,891	910	94
Derivative assets		**143,075**	**42,831**	**3,150**	**303**
Thereof:					
Current derivative assets		143,075	40,910	3,150	280
Non-current derivative assets		0	1,921	0	23
Derivatives held for hedging (USD)	Level 2[1]	8,631	79,946	–45	–1,072
Derivatives held for hedging (JPY)	Level 2[1]	3,194	38,214	–8	–490
Derivative liabilities		**11,825**	**118,160**	**–53**	**–1,562**
Thereof:					
Current derivative liabilities		11,825	114,966	–53	–1,539
Non-current derivative liabilities		0	3,194	0	–23

1 The fair values of the derivatives held by VAT Group are based on market/broker quotes. Similar contracts are traded in an active market and quotes reflect the actual transactions in similar instruments. If all significant inputs required for the valuation of an instrument are observable, the instrument is included in Level 2.

Forward foreign exchange contracts

The hedged highly probable forecast transactions denominated in foreign currency are expected to occur at various dates during the next 12 months.

Hedge accounting

VAT Group applies hedge accounting for all foreign currency contracts in line with IFRS 9. The effective portion of the gain or loss on the hedging instrument is recognized in other comprehensive income in the hedging reserves, while any ineffective portion is recognized immediately in the income statement. The cumulated unrealized gain or loss that had been recorded in equity is subsequently reclassified into earnings in the same period during which the hedged item affects net profit or loss. When a hedging instrument expires or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss previously recognized in other comprehensive income is transferred to the income statement. VAT Group uses cash flow hedges to reduce and manage the economic impact of its main currency risks. As of December 31, 2019 and 2018, the Group held currency forwards as hedging instruments. The forward contracts were denominated in the same currency as the highly probable future transactions; therefore the hedge ratio on all hedges conducted by VAT Group was 1:1 as of December 31, 2019. The hedging reserves included net unrealized gains of CHF 2.7 million, net of tax, on derivatives designated as cash flow hedges (prior year: unrealized losses of CHF 1.1 million). Net losses of CHF 5.6 million (prior year: CHF 2.1 million) were reclassified to earnings in 2019. The maturity of derivatives classified as a cash flow hedge was up to 12 months.

Accounting policies
Derivatives are initially recorded at fair value and subsequently adjusted for fair value changes. The measurement of derivatives in the Group's balance sheet is based on internal valuations or on the valuation of the respective financial institution. VAT applies hedge accounting in accordance with IFRS 9 to hedge balance sheet items and future cash flows, thus reducing income statement volatility. Changes in the value of instruments designated as fair value hedges are recorded together with the change in fair value of the underlying item directly in the income statement, net. The effective portion of instruments designated as cash flow hedges is recognized in other comprehensive income. The ineffective portion of such instruments is recorded in financial result, net. Changes in value resulting from cash flow hedges recognized in equity through the consolidated statement of comprehensive income are reclassified in the income statement in the period in which the cash flow from the hedged transaction is recognized in the income statement.

Fair value estimation Financial instruments carried at fair value are analyzed by valuation method. The different levels have been defined as follows:
– quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1),
– observable prices for the asset or liability, either directly or indirectly (Level 2),
– inputs for the asset or liability are not based on observable market data (Level 3).

The carrying amounts of financial assets and liabilities not measured at fair value are a reasonable approximate of their fair values.

The Group recorded foreign exchange contracts (derivative financial assets/liabilities) at fair value, which are Level 2 financial instruments. The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques that maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. The fair values are based on market/broker quotes. Similar contracts are traded in an active market and the quotes reflect the actual transactions in similar instruments.

There were no transfers in either direction between Level 1 and Level 2 in 2019 and 2018. No financial instruments were measured at Level 3.

5.3 Loans and borrowings

The terms and conditions of outstanding loans are as follows:

As of December 31, 2019 In CHF thousand	Currency	Nominal interest rate	Year of maturity	Carrying amount
Revolving credit facility (RCF)	USD	USD LIBOR +1.15%	2023	23,414
Revolving credit facility (RCF)	CHF	CHF LIBOR +1.15%	2023	24,201
Fixed-rate bond	CHF	1.50%	2023	199,291
Finance lease liability				7,182
Total loans and borrowings				**254,088**
Thereof:				
Current				50,221
Non-current				203,867

As of December 31, 2018 In CHF thousand	Currency	Nominal interest rate	Year of maturity	Carrying amount
Revolving credit facility (RCF)	USD	USD LIBOR +0.95%	2023	22,945
Revolving credit facility (RCF)	CHF	CHF LIBOR +0.95%	2023	4,664
Fixed-rate bond	CHF	1.50%	2023	199,078
Total loans and borrowings				**226,686**
Thereof:				
Current				27,608
Non-current				199,078

VAT Group AG maintains a syndicated five-year revolving credit facility (RCF) of USD 300.0 million.

The RCF is subject to the financial covenant “net senior debt/EBITDA” ratio, with which the Group complied with for the financial year 2019.

On May 23, 2018, VAT Group issued a fixed-rate bond with a nominal value of CHF 200.0 million, which is listed on the SIX Swiss Exchange (ISIN: CH0417086052). The bond carries a coupon rate of 1.5% and has a term of five years with a final maturity on May 23, 2023. On December 31, 2019, the market value of the bond was CHF 205.2 million.

The carrying amounts as of December 31, 2019 include financing costs of CHF 2.3 million (prior year CHF 2.9 million), which will be recognized in profit and loss over the remaining duration of the credit facility.

Reconciliation of movements of liabilities to cash flows from financing activities

As of December 31 In CHF thousand	2019	Cash-effective adjustment		Non-cash-effective adjustment		2018
		Addition	Repayment	Addition	Foreign exchange	
Loans and borrowings	254,088	110,000	–92,692	10,638	–544	226,686
Total liabilities from financing activities	**254,088**	**110,000**	**–92,692**	**10,638**	**–544**	**226,686**

As of December 31 In CHF thousand	2018	Cash-effective adjustment		Non-cash-effective adjustment		2017
		Addition	Repayment	Addition	Foreign exchange	
Loans and borrowings	226,686	223,936	–214,678	–113	1,778	215,764
Total liabilities from financing activities	**226,686**	**223,936**	**–214,678**	**–113**	**1,778**	**215,764**

Accounting policies
Loans and borrowings are recognized initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the consolidated income statement over the period of the borrowings using the effective interest method.

The Group recognizes a lease liability at the lease commencement date. The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate. The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, if the Group changes its assessment of whether it will exercise a purchase, extension or termination option or if there is a revised in-substance fixed lease payment.

5.4 Equity

Share capital
As of December 31, 2019, the total authorized and issued number of ordinary shares comprises 30,000,000 shares with a nominal value of CHF 0.10 each. A conditional capital increase of up to 1,500,000 shares, which is included in the articles of association of VAT Group AG, was not drawn as of December 31, 2019.

Share premium
Shares were issued in exchange for investments in VAT Holding S.à r.l. and VAT Management S.à r.l. as well as a shareholder loan from VAT Holding S.à r.l. in the financial year 2016.

Treasury shares
VAT Group AG initially purchased own shares to be held as treasury shares at the offer price of CHF 45 pursuant to the share-based payment plans as shown in note 4.2. As of December 31, 2019, the Group held 12,683 own shares (prior year: 15,264).

Dividends
VAT declared and paid following dividend from the reserves from capital contributions:

In CHF thousand	2019	2018
Dividends paid	**119,941**	**119,932**

The Board of Directors proposed a dividend in the amount of CHF 4.00 per share for the financial year 2018 (prior year: CHF 4.00 per share). The dividend was approved and paid out in May 2019.

Earnings per share

In CHF thousand	2019	2018
Basic earnings per share (in CHF)	**2.50**	**4.53**
Net profit	74,825	135,687
Weighted average number of shares outstanding (in thousands of units)	29,986	29,984

Diluted earnings per share is calculated by dividing net income attributable to owners of the Company by the weighted average number of shares adjusted for all potentially dilutive shares. Dilutive shares arise from the share-based payments as shown in note 4.2.

In CHF thousand	2019	2018
Diluted earnings per share (in CHF)	**2.49**	**4.52**
Net profit	74,825	135,687
Weighted average number of shares outstanding (in thousands of units)	29,999	29,992

Accounting policies

Earnings per share
The number of ordinary shares for the calculation of the earnings per share is determined on the basis of the weighted average of the issued ordinary shares less the weighted average number of the treasury shares. For the calculation of diluted earnings per share, an adjusted number of shares is calculated as the sum of the total of the ordinary shares used to calculate the earnings per share and the potentially dilutive shares from share-based payment programs. The dilution from share-based payment programs is determined on the basis of the number of ordinary shares that are expected to be paid out to employees from currently held treasury shares. Earnings per share and diluted earnings per share are defined as the ratio of the attributable net income to the relevant number of ordinary shares.

5.5 Financial instruments

Categories of financial instruments

The following table discloses the carrying amounts of all financial instruments for each category:

As of December 31 In CHF thousand	2019	2018
Financial assets measured at amortized cost		
Cash and cash equivalents	109,822	79,063
Trade and other receivables	88,784	88,657
Accrued income	63	71
Long-term loans	831	0
Total financial assets recorded at amortized cost	**199,500**	**167,791**
Financial assets measured at fair value		
Equity shares	34	34
Forward exchange contracts	3,150	303
Total financial assets measured at fair value	**3,184**	**337**
Financial liabilities recorded at amortized cost		
Trade and other payables	51,003	32,226
Accrued expenses	10,037	10,434
Other non-current liabilities	195	199
Loans and borrowings	254,088	226,686
Total financial liabilities recorded at amortized cost	**315,323**	**269,545**
Financial liabilities measured at fair value		
Forward exchange contracts	53	1,562
Total financial liabilities measured at fair value	**53**	**1,562**

Accounting policies

Classification The Group classifies non-derivative financial assets in the following categories: financial assets at fair value through profit or loss (FVTPL) and financial assets measured at amortized cost. Financial assets are not reclassified subsequent to their initial recognition unless the Group changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

Financial assets at fair value through profit or loss are financial assets held for trading. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term. Derivatives are also categorized as held for trading unless they are designated as hedges. Assets in this category are classified as current assets if expected to be settled within 12 months, otherwise they are classified as non-current.

A financial asset measured at amortized cost is a non-derivative financial asset if both of the following conditions are met and if it is not designated as FVTPL: it is held within a business model whose objective is to hold assets to collect contractual cash flows and its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. They are included in current assets, except for maturities greater than 12 months after the end of the reporting period. These are classified as non-current assets. The category financial assets measured at amortized cost comprise “Cash and cash equivalents”, “Trade and other receivables”, “Accrued income” and “Long-term loans” on the balance sheet.

Recognition and measurement Trade receivables and debt securities issued are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Group becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

Financial assets carried at fair value through profit or loss are initially recognized at fair value, and transaction costs are expensed in the income statement. Financial assets are derecognized when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. Loss rates are based on actual credit loss experience over the past years and current conditions. Current conditions are reflected in the development of the country risk premium of the Group's sales region. The allowance matrix is reviewed periodically to determine an adequate impairment provision. Losses on trade and other receivables are not material. Individual impairment provisions are recorded for accounts where collection cannot be expected.

Financial assets at fair value through profit or loss are subsequently carried at fair value. Financial assets measured at amortized cost are subsequently carried at amortized cost using the effective interest method. Gains or losses arising from changes in the fair value of the "Financial assets at fair value through profit or loss" category are presented in the income statement in the period in which they arise.

5.6 Financial risk management

The Group's activities expose it to a variety of financial risks: market risk (including currency risk, fair value interest rate risk and cash flow interest rate risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance. The Group uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out by management under policies approved by the Board of Directors. Management identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The Board provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity.

Market risk

Foreign exchange risk The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the USD, EUR, JPY and KRW. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities and net investments in foreign operations.

Management has set up a policy to require Group companies to manage their foreign exchange risk against their functional currency. The Group hedges its foreign exchange risk exposure from future cash flows in USD and JPY. To manage its foreign exchange risk arising from future commercial transactions and recognized assets and liabilities, the Group uses forward contracts. Foreign exchange risk arises when future commercial transactions or recognized assets or liabilities are denominated in a currency that is not the entity's functional currency.

The Group has certain investments in foreign operations, whose net assets are exposed to foreign currency translation risk. The risk is monitored periodically. The foreign exchange exposure of these investments is actually not material for the Group and is not hedged.

The carrying amounts of the main Group's foreign currency denominated monetary assets and monetary liabilities at the reporting date are as follows:

As of December 31, 2019 In CHF thousand	Assets	Liabilities	Net exposure
USD/CHF	272,508	215,781	56,727
EUR/CHF	26,000	17,477	8,523
JPY/CHF	67,300	32,297	35,002
KRW/CHF	10,414	953	9,461

As of December 31, 2018 In CHF thousand	Assets	Liabilities	Net exposure
USD/CHF	193,049	159,521	33,528
EUR/CHF	58,156	46,836	11,320
JPY/CHF	51,687	22,992	28,695
KRW/CHF	7,654	455	7,199

The management's assessment for a reasonably possible change in the foreign exchange rates could be a 5% shift in the major currencies against the Swiss Franc with all the other variables held constant. In case of net financial assets/liabilities, as of December 31, 2019, the cumulated impact on net financial assets/liabilities would be as follows:

As of December 31 In CHF thousand	2019	2018
USD/CHF	2,387	1,676
EUR/CHF	359	566
JPY/CHF	1,473	1,435
KRW/CHF	398	360
Total	**4,617**	**3,677**

An increase in major currency rates would have a positive (prior year: positive) impact and a decrease would have an equal negative (prior year: negative) impact on profit or loss and equity.

Interest rate risk The interest rate risk includes an interest-related cash flow risk and an interest-related risk of a change in market value. The interest-bearing financial assets and liabilities held by the Group mainly relate to cash and cash equivalents and borrowings.

Cash flow sensitivity analysis for variable-rate instruments
As in prior year, a reasonably possible change of 50 basis points in interest rates at the reporting date would not have increased (decreased) profit or loss by a material amount. This analysis assumes that all other variables, in particular foreign currency exchange rates, remain constant.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Group's receivables from customers. The carrying amounts of financial assets presented in the table in the previous note represent their maximum credit exposure.

Credit risk is managed on Group level, except for credit risk relating to accounts receivable balances. Each local entity is responsible for managing and analyzing the credit risk for each of its new clients before standard payment and delivery terms and conditions are offered. Credit risk arises from cash and cash equivalents, derivative financial assets and deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables and committed transactions. For banks and financial institutions, only independently rated counterparties with a minimum rating of "A" are accepted. If customers are independently rated, these ratings are used. If there is no independent rating, risk control assesses the credit quality of the customer, taking into account its financial position, past experience and other factors. The expected loss rates are based on the payment profiles of sales over a period and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. No collateral is required.

Further information about trade receivables and the provision for impairment of trade receivables is provided in note 3.1.

With respect to trade receivables, the Group has two main customers representing 35% (prior year: 35%) of the Group's total revenues. This concentration of credit risk is considered low due to the strong market position of these two customers. Country risk is mitigated by the broad geographic spread of the Group's customer base.

Liquidity risk

Cash flow forecasting is performed by the operating entities of the Group and aggregated by Group treasury. Group treasury monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs.

Surplus cash held by the operating entities above the balance required for working capital management is transferred to Group treasury. Group treasury utilizes surplus cash for repayment of loans as per the above-mentioned forecasts.

The table below analyses the Group's non-derivative financial liabilities and derivative financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date. Derivative financial liabilities are included in the analysis if their contractual maturities are essential for an understanding of the timing of the cash flows. The amounts disclosed in the table are the contractual undiscounted cash flows.

At 31.12.2019 In CHF thousand		Contractual cash flows					
	Carrying amount	Total	Less than 3 months	Between 3 months and 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Trade and other payables	51,003	−51,003	−45,079	−5,924			
Accrued expenses	10,037	−10,037	−4,526	−5,511			
Other non-current liabilities	195	−195					−195
Loans and borrowings	246,906	−262,638	−50,196	−2,250	−3,000	−207,192	
Lease liabilities	7,183	−7,459	−694	−2,020	−2,180	−2,267	−298
Non-derivative financial liabilities	**315,323**	**−331,332**	**−100,495**	**−15,704**	**−5,180**	**−209,459**	**−493**
Forward exchange contracts used for hedging: – Outflow	53	−11,878	11,878				
– Inflow		11,825	11,825				
Derivative financial liabilities	**53**	**−53**	**−53**				

At 31.12.2018 In CHF thousand		Contractual cash flows					
	Carrying amount	Total	Less than 3 months	Between 3 months and 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Trade and other payables	32,226	−32,226	−27,850	−4,376			
Accrued expenses	10,434	−10,434	−9,342	−1,092			
Other non-current liabilities	199	−199					−199
Loans and borrowings	226,686	−240,371	−28,556	−2,248	−3,031	−206,536	
Non-derivative financial liabilities	**269,545**	**−283,230**	**−65,748**	**−7,716**	**−3,031**	**−206,536**	**−199**
Forward exchange contracts used for hedging: – Outflow	1,562	−119,723	−52,078	−64,428	−3,217		
– Inflow		118,160	51,099	63,867	3,194		
Derivative financial liabilities	**1,562**	**−1,562**	**−979**	**−561**	**−23**		

Capital risk management

The Group’s objectives when managing capital are to safeguard the Group’s ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

Capital is measured based on the Group’s consolidated financial statements and monitored closely on an ongoing basis. The target of the management for the period under review was to maintain a strong capital basis. This goal was achieved by the positive operating results of the Group.

The equity ratio was as follows:

As of December 31 In CHF thousand	2019	2018
Total equity	523,436	564,170
Total balance sheet	972,675	968,187
Equity ratio	**53.8%**	**58.3%**

6. Other disclosures

6.1 Income Tax

Income tax expenses

This note provides an analysis of the Group's income tax expenses, shows what amounts are recognized directly in equity and how the tax expense is affected by non-assessable and non-deductible items. It also explains significant estimates made in relation to the Group's tax position.

January 1–December 31 In CHF thousand	2019	2018
Current tax:		
Current tax on earnings for the period	20,890	30,012
Adjustments in respect of prior periods	580	219
Total current tax expense	**21,469**	**30,231**
Change in deferred tax	2,709	573
Total deferred tax expense	**2,709**	**573**
Income tax expense	**24,179**	**30,804**

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

January 1–December 31 In CHF thousand	2019	2018
Earnings before income taxes	99,004	166,491
Tax at the average group tax rate of 15.8% (previous year: 17.6%)[1]	**15,682**	**29,245**
Effect of tax rates in foreign jurisdictions[1]	487	–434
Effect in change of tax rate	5,873	–1,668
Expenses not deductible for tax purposes	1,690	2,519
Income not subject to tax	–526	–124
Used tax losses carried forward	–80	–841
Effect of current-year losses for which no deferred tax asset is recognized	20	1,186
Effect of (recognition)/derecognition of previous loss carry-forwards	–47	298
Withholding taxes included in the tax expenses	705	821
Other tax effects	373	–198
Total tax expenses recorded in consolidated income statement	**24,179**	**30,804**
Effective tax rate	**24.4%**	**18.5%**

1 The applicable tax is determined using the average statutory tax rate applicable to the Group, calculated on a weighted average basis ignoring algebraic signs. Therefore, the effect of tax rates in foreign jurisdictions is disclosed.

The higher effective tax rate in 2019 mainly results from a one-time effect due to the tax reform in Switzerland. The abolishment of the privileged tax regimes led to a substantially higher tax rate in the Swiss holding companies, whereas the tax rate for the Swiss operating companies decreased. Deferred tax liabilities relating to intangible assets (technology, brands and trademarks) within the holding company increased, whereas deferred tax liabilities in the operating companies decreased.

The following deferred taxes were (charged)/credited to other comprehensive income during the period:

January 1–December 31 In CHF thousand			2019			2018
	Before tax	Tax (expense)/ benefit	Net of tax	Before tax	Tax (expense)/ benefit	Net of tax
Remeasurements of defined benefit obligations	86	–12	74	–12,273	1,878	–10,395
Changes in the fair value of hedging reserves	4,356	–626	3,730	–283	43	–241

The following income taxes were (charged)/credited to equity during the period:

January 1–December 31 In CHF thousand			2019			2018
	Before tax	Tax (expense)/ benefit	Net of tax	Before tax	Tax (expense)/ benefit	Net of tax
Share-based payments	658	–59	598	602	–56	546

Deferred tax balances

The deferred tax assets and liabilities were as follows:

As of December 31 In CHF thousand			2019			2018
	Deferred tax assets	Deferred tax liabilities	Net closing balance	Deferred tax assets	Deferred tax liabilities	Net closing balance
Other current assets	2	–596	–594	102	–334	–232
Inventories	2,996	–2,571	426	3,562	–3,239	323
Property, plant and equipment	1,434	–5,097	–3,663	723	–5,763	–5,041
Investment properties		–50	–50		–54	–54
Intangible assets		–41,463	–41,463		–36,547	–36,547
Other non-current assets		–90	–90			
Other current liabilities	624	–128	496	540	–376	164
Provisions		–1,552	–1,552		–1,982	–1,982
Other non-current liabilities	37		37			0
Defined benefit obligations	6,047		6,047	6,121		6,121
Tax losses carried forward	2,058		2,058	2,091		2,091
Non-refundable withholding taxes on future distributions		–694	–694		–927	–927
Total deferred tax assets/(liabilities) before setoff	**13,200**	**–52,241**	**–39,041**	**13,139**	**–49,223**	**–36,084**
Setoff of balances within the same tax jurisdiction	–6,307	6,307	0	–6,393	6,393	0
Net deferred tax assets/(liabilities)	**6,893**	**–45,934**	**–39,041**	**6,746**	**–42,829**	**–36,084**

The movement in deferred tax balances is as follows:

In CHF thousand	2019	2018
Net tax liabilities as of January 1	**–36,084**	**–37,434**
Recognized in income statement	–2,709	–573
Recognized in OCI	–638	1,921
Exchange differences	390	2
Net tax liabilities as of December 31	**–39,041**	**–36,084**

For some Group companies, dividend payments are subject to a withholding tax which cannot be fully recovered in Switzerland. Deferred tax liabilities in the amount of the non-recoverable withholding tax credits are recorded in profit and loss. The balance of these deferred tax liabilities was CHF 0.7 million (prior year: CHF 0.9 million).

Tax losses

Deferred tax assets are recognized for tax loss carry-forwards to the extent that the realization of the related tax benefit through the future taxable profits is probable. The details of the tax losses carried forward for which no deferred tax assets were recognized are as follows:

As of December 31 In CHF thousand	2019	2018
Opening balance	**4,953**	**67,017**
Tax losses for which no deferred tax assets were recognized	87	4,943
Recognition of previous tax loss carry-forward	–196	0
Used tax losses carried forwards	0	–8,506
Adjustment prior year	940	0
Expired [1]	0	–58,496
Exchange differences	–49	–5
Closing balance	**5,735**	**4,953**

1 Prior year: Expired due to reorganization of legal structure in Luxembourg

The total tax losses for which no deferred tax assets were recognized will expire as follows:

As of December 31 In CHF thousand	2019	2018
Expiry in 2–3 years	309	0
Expiry after 3 years	5,426	4,953
Total	**5,735**	**4,953**

Further, there are temporary differences with respect to investments in subsidiaries of CHF 2.8 million (prior year: CHF 2.8 million), for which no deferred tax liabilities were recognized. The Group is able to control the timing of the reversal and it is not intended to reverse the temporary difference in the foreseeable future.

Accouting policies

Current and deferred income tax Income tax expense comprises current and deferred tax. It is recognized in the consolidated income statement, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

Current income tax comprises the expected tax payable or receivable on the taxable income or loss for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of current income tax payable or receivable is the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any. It is measured using tax rates enacted or substantively enacted at the reporting date. Current income tax also includes any tax arising from dividends.

Deferred income tax is recognized in respect of temporary differences between the carrying amount of assets and liabilities for financial purposes and the amounts used for taxation purposes.

Deferred tax assets are recognized for unused tax losses and deductible temporary differences to the extent that it is probable that future taxable profit will be available against which they can be used. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized; such reductions are reversed when the probability of future taxable profits improves. Unrecognized deferred tax assets are reassessed at each reporting date and recognized to the extent that it has become probable that future taxable profits will be available against which they can be used.

Deferred tax liabilities are provided on taxable temporary differences arising from investments in subsidiaries, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets are recognized on deductible temporary differences arising from investments in subsidiaries, only to the extent that it is probable that the temporary difference will reverse in the future and there is sufficient taxable profit available against which the temporary difference can be utilized.

Current and deferred tax assets and liabilities are netted whenever they relate to the same taxing authority and taxable entity.

6.2 Foreign currency translation

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ("the functional currency"). Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuations where items are remeasured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the income statement, except when deferred in other comprehensive income as qualifying hedges.

For consolidation purposes, the results and financial position of all Group entities that have a functional currency different from the presentation currency are translated into the presentation currency. Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet. Income and expenses for each income statement are translated at yearly average exchange rates which are reasonable approximation of the spot rates. All resulting exchange differences are recognized in other comprehensive income.

Foreign exchange gains and losses that relate to borrowings, cash and cash equivalents are presented in the income statement within "Finance income/(expenses)." All other foreign exchange gains and losses are presented in the income statement within "Other income/(expenses)."

The following table summarizes the principal exchange rates used for translation purposes:

	Average exchange rates in CHF		Closing exchange rates in CHF	
	01.01.–31.12.2019	01.01.–31.12.2018	31.12.2019	31.12.2018
1 Euro	1.11	1.15	1.09	1.13
100 Japanese Yen	0.91	0.89	0.89	0.89
100 Korean Won	0.09	0.09	0.08	0.09
1 Malaysian Ringgit	0.24	0.24	0.24	0.24
1 US Dollar	0.99	0.98	0.97	0.98

6.3 Contingencies and commitments

As at the date of the financial statements, the Group had no contingent assets or liabilities. As of December 31, 2019 and 2018, no assets were pledged.

6.4 List of subsidiaries

The subsidiaries of the Company as of December 31, 2019 are the following:

Country	Company	Function	Currency	Capital in thousands	Share
China	VAT Vacuum Valves Shanghai Company Ltd., Shanghai	D	CNY	1,618	100%
France	VAT SARL, Grenoble	D	EUR	50	100%
Germany	VAT Deutschland GmbH, Dresden	D	EUR	26	100%
Japan	VAT Ltd., Yokohama	D	JPY	96,470	100%
Korea	VAT Korea Ltd., Pyeongtaek City	D	KRW	300,000	100%
Luxembourg	VAT Management S.à r.l., Luxembourg	H	CHF	30	100%
Malaysia	VAT Manufacturing Malaysia Sdn. Bhd., Penang	P	MYR	1,000	100%
Netherlands	VAT Netherlands B.V., Utrecht	D	EUR	0	100%
Romania	VAT Romania S.R.L., Arad	D/P	RON	7,787	100%
Singapore	VAT Singapore Pte. Ltd., Singapore	D	SGD	500	100%
Switzerland	VAT Vakuumventile AG, Sennwald	D/P	CHF	100	100%
	Comvat AG, Sennwald	D/P	CHF	275	100%
	VAT Holding AG, Sennwald	H	CHF	300	100%
Taiwan	VAT Taiwan Co. Ltd., Hsin-Chu City	D	TWD	12,000	100%
United Kingdom	VAT Vacuum Products Ltd, Warwickshire	D	GBP	1	100%
USA	VAT Inc., Delaware	D	USD	1	100%

D: Distribution, H: Holding, P: Production

Accounting policies
Subsidiaries are entities controlled by the Group. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Transactions eliminated on consolidation The Group eliminates all intra-group transactions as part of the Group's consolidation process. Any unrealized gains and losses arising from intra-group transactions are eliminated. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

6.5 Subsequent events

The Company has evaluated subsequent events through March 2, 2020, which represents the date when the consolidated financial statements were approved.

6.6 Standards issued but not yet effective

A number of new standards and amendments to standards are effective for annual periods beginning after January 1, 2019, and earlier application is permitted; however, the Group has not early applied the new or amended standards in preparing these consolidated financial statements.

Improvements and other amendments to IFRS

A number of standards have been modified on miscellaneous points. None of these amendments are expected to have a material effect on the Group's consolidated financial statements.

Statutory Auditor's Report

To the General Meeting of VAT Group AG, Sennwald

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of VAT Group AG and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2019 and the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion the consolidated financial statements (pages 70 to 111) give a true and fair view of the consolidated financial position of the Group as at 31 December 2019, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for Opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the IESBA Code of Ethics for Professional Accountants, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Revenue Recognition

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Revenue Recognition

Key Audit Matter

Revenues are an important metric considered by external and internal stakeholders. Revenues recognized for the year ended 31 December 2019 amounted to CHF 570m (2018: CHF 698m) and are primarily related to the sale of vacuum valves, bellows and service support.

Revenue is a key performance indicator and therefore in the focus of internal and external stakeholders. VAT Group recognises revenues related to the sale of goods when risks, rewards and control are transferred to the counterparty. In general, contractual agreements with customers define when risks and rewards are transferred, as specific terms and conditions are mentioned in the contracts or order confirmations. There is a risk that revenues may be recognised in the wrong accounting period.

There is an additional risk that revenues may be deliberately over- or understated as a result of management override resulting from the pressure management may feel to achieve planned results. This could for example occur by manipulating inputs in the Group's accounting system.

Our response

When performing the audit, we had a focus on the appropriate recognition of revenue transactions, in accordance with the Group's accounting policies.

We performed testing of the key controls around revenue recognition, which included performing walkthroughs and testing the operating effectiveness of internal controls.

Furthermore, our procedures included detailed cut-off testing of revenue transactions with reference to shipping documentation to either side of the balance sheet date with focus on revenues recognized in December 2019. Moreover, we obtained trade debtors confirmations and if required performed alternative procedures, such as subsequent cash-receipts or traced our samples taken to invoices and delivery notes.

In addition to the procedures described above, we considered the risk of management override by testing the monthly key control of matching sales subledger to the general ledger. Together with this control we checked whether any other persons than accounting staff have performed journal entries in the revenue accounts and if user access rights in the general ledger are appropriately allocated.

Moreover we assessed the Group's disclosures relating to revenue recognition.

For further information on revenue recognition refer to the following: Note 2.2 "Summary of significant accounting policies"

Other Information in the Annual Report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements, the stand-alone financial statements of the company, the remuneration report and our auditor's reports thereon.

Our opinion on the consolidated financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibility of the Board of Directors for the Consolidated Financial Statements
The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements
Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Swiss law, ISAs and Swiss Auditing Standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

KPMG AG

Toni Wattenhofer	Jan Bellinger
Licensed Audit Expert	Licensed Audit Expert
Auditor in Charge	

St. Gallen, 2 March 2020

Statutory financial statements VAT Group AG for the financial year from January 1 to December 31, 2019

Income statement

January 1–December 31 In CHF thousand	Note	2019	2018
Dividend income		179,800	64,891
Interest income		2,299	2,527
Other financial income	3.1	573	993
Total income		**182,672**	**68,411**
Interest expenses		–4,355	–5,065
Other financial expenses		–1,456	–1,167
Personnel expenses		–995	–1,010
Other operating expenses	3.2	–1,454	–1,712
Total expenses		**–8,259**	**–8,954**
Direct tax		–140	0
Gain for the period		**174,274**	**59,457**

Balance sheet

As of December 31 In CHF thousand	Note	2019	2018
Assets			
Cash and cash equivalents		306	439
Other receivables due from third parties		81	55
Prepayments and accrued income		687	707
Current assets		**1,074**	**1,201**
Financial assets	3.4	1,650	2,282
Loans granted to companies in which the entity holds an investment		115,153	39,950
Investments in subsidiaries	3.3	502,850	502,850
Non-current assets		**619,653**	**545,082**
Total assets		**620,727**	**546,284**
Liabilities			
Short-term interest-bearing liabilities due to third parties	3.4	49,188	29,600
Other payables	3.5	616	477
Short-term provisions		140	0
Accrued expenses and deferred income	3.6	2,980	2,852
Current liabilities		**52,923**	**32,929**
Long-term interest-bearing liabilities	3.4	200,000	200,000
Non-current liabilities		**200,000**	**200,000**
Total liabilities		**252,923**	**232,929**
Equity	3.7		
Share capital		3,000	3,000
Legal capital reserves:			
– Reserves from capital contributions		135,313	255,254
– Other capital reserves		3,682	3,682
Accumulated gains:			
– Profit/loss brought forward		52,105	–7,351
– Gain for the period		174,274	59,457
Treasury shares	3.8	–571	–687
Total equity attributable to owners of the Company		**367,804**	**313,355**
Total liabilities and equity		**620,727**	**546,284**

Notes to the financial statements VAT Group AG

1. General information

VAT Group AG ("the Company") is the parent company of the VAT Group. VAT Group AG was incorporated in Switzerland on February 25, 2016. The registered office of the Company is Seelistrasse 1, CH-9469 Haag, Switzerland. VAT Group AG is listed on the SIX Swiss Exchange since April 14, 2016.

2. Basis of preparation

2.1 General

These financial statements were prepared according to the provisions of the Swiss Law on Accounting and Financial Reporting (32nd title of the Swiss Code of Obligations). Where not prescribed by law, the significant accounting and valuation principles applied are described below.

2.2 Investments in subsidiaries

Investments are valued and accounted for separately at the respective acquisition costs. If there are concrete indications that an investment is overvalued, an impairment loss is recognized.

3. Information on income statement and balance sheet items

3.1 Other financial income

Other financial income for the year 2019 consists of gains from the disposal of treasury shares and amounts to CHF 0.2 million (prior year: CHF 0.2 million). The remaining CHF 0.4 million result from net foreign exchange gains on financing activities.

3.2 Other operating expenses

As of December 31 **In CHF thousand**	**2019**	**2018**
Insurance, duties and other charges	89	105
Rental expenses	5	5
Travel expenses	16	41
Consulting and audit fees	397	532
Administration expenses	947	1,029
Total other operating expenses	**1,454**	**1,712**

3.3 Significant investments in subsidiaries

VAT Group AG holds the following investment as of December 31:

Country	Company	Currency	Capital in thousands		Share in capital and voting rights	
			2019	2018	2019	2018
Luxembourg	VAT Management S.à r.l.	CHF	30	30	100%	100%

The indirect investments are shown in note 6.4 of the consolidated financial statements of VAT Group.

3.4 Interest-bearing liabilities

As of December 31 In CHF thousand	2019	2018
Short-term interest-bearing liabilities due to third parties	49,188	29,600
Total short-term interest-bearing liabilities	**49,188**	**29,600**
Long-term interest-bearing liabilities due to third parties	200,000	200,000
Total long-term interest-bearing liabilities	**200,000**	**200,000**

The terms and conditions of outstanding loans due to third parties are as follows:

As of December 31, 2019 In CHF thousand	Currency	Nominal interest rate	Year of maturity	Carrying amount
Revolving credit facility (RCF)	USD	USD LIBOR 1m + 1.15%	2023	24,188
Revolving credit facility (RCF)	CHF	CHF LIBOR 1m + 1.15%	2023	25,000
Fixed-rate bond	CHF	1.50%	2023	200,000
Total loans and borrowings at 31.12.2019				**249,188**
Thereof:				
Current				49,188
Non-current				200,000

As of December 31, 2018 In CHF thousand	Currency	Nominal interest rate	Year of maturity	Carrying amount
Revolving credit facility (RCF)	USD	USD LIBOR 1m + 0.95%	2023	24,600
Revolving credit facility (RCF)	CHF	CHF LIBOR 1m + 0.95%	2023	5,000
Fixed-rate bond	CHF	1.50%	2023	200,000
Total loans and borrowings at 31.12.2018				**229,600**
Thereof:				
Current				29,600
Non-current				200,000

The carrying amount of the financing expenses in connection with the revolving credit facility (RCF) amounts to CHF 1.6 million as at December 31, 2019. These expenses were capitalized and will be recognized in profit and loss over the remaining duration of the credit facility. As at December 31, 2019, CHF 0.4 million (prior year: CHF 0.4 million) are recognized within “Prepayments and accrued income.” CHF 1.2 million (prior year: CHF 1.6 million) are disclosed as “Financial assets.”

On May 23, 2018, VAT Group issued a fixed-rate bond with a nominal value of CHF 200.0 million, which is listed on the SIX Swiss Exchange (ISIN: CH0417086052). In connection with the bond, financing expenses in the amount of CHF 0.2 million are recognized within “Prepayments and accrued income.” CHF 0.5 million are disclosed as “Financial assets.” On December 31, 2019, the market value of the bond was CHF 205,2 million.

3.5 Other payables

As of December 31 In CHF thousand	2019	2018
Other payables due to third parties	278	20
Other payables due to companies in which the entity holds an investment	338	338
Other payables due to governing bodies	0	119
Total other payables	**616**	**477**

3.6 Accrued expenses and deferred income

As of December 31 In CHF thousand	2019	2018
Accrued expenses and deferred income due to third parties	2,628	2,467
Accrued expenses and deferred income due to governing bodies	352	385
Total accrued expenses	**2,980**	**2,852**

3.7 Equity

As of December 31, 2019, the share capital amounts to CHF 3.0 million and consists of 30,000,000 registered shares at par value of CHF 0.10 each.

The reserves from capital contributions consist of the premium from contribution in kind less issue stamp duty. From a fiscal point of view, any distributions made from reserves from capital contributions are treated the same as a repayment of share capital.

On March 29, 2016, a conditional capital increase of up to 1,500,000 shares was included in the articles of association of VAT Group AG which was not drawn as of December 31, 2019.

3.8 Treasury shares

	01.01.–31.12.2019		01.01.–31.12.2018	
	Number of shares	Average price	Number of shares	Average price
Treasury shares as at January 1	**15,264**	**CHF 45.00**	**17,547**	**CHF 45.00**
Share-based payments	–2,581	CHF 108.63	–2,283	CHF 148.12
Treasury shares as at December 31	**12,683**	**CHF 45.00**	**15,264**	**CHF 45.00**

On December 31, 2019, VAT Group held 12,683 treasury shares with an acquisition price of CHF 0.6 million.

4. Other information

4.1 Full-time equivalents

VAT Group AG does not have any employees.

4.2 Significant shareholders

The following shareholders owned more than 5% of voting rights as of December 31:

Shareholder	Voting rights as of December 31, 2019	Voting rights as of December 31, 2018
Rudolf Maag	3,000,570	3,100,570
Invesco Ltd.	1,988,203	below 5%
George Loening	below 5%	2,752,291
Massachusetts Mutual Life Insurance Company	below 5%	2,467,789

4.3 Shares held by the Board of Directors and the Group Executive Committee

As of December 31, the members of the Board of Directors and the Group Executive Committee held the shares listed in the following table:

As of December 31	2019	2018
Board of Directors		
Martin Komischke, Chairman	1,109	492
Hermann Gerlinger	916	657
Heinz Kundert	34,327	34,117
Urs Leinhäuser	4,247	3,963
Karl Schlegel	37,225	35,253
Libo Zhang	210	0
Group Executive Committee		
Michael Allison, CEO	508	508
Andreas Leutenegger, CFO (until December 31, 2018)	n/a	34,117
Stephan Bergamin, CFO (since January 01, 2019)	0	n/a
Jürgen Krebs, COO	0	0

As of December 31, 2019 and 2018, none of the members of the Board of Directors or the Group Executive Board held conversion rights or options, and no loans or credits were outstanding between the parties and the Company.

4.4 Shares granted to the Board of Directors

Members of the Board of Directors receive 30% of the total compensation in restricted shares. VAT Group granted 1,852 shares with a fair value of CHF 108.15 per share for the period 2018/19 (prior period: 1,478 shares, amounting to CHF 0.2 million). As of December 31, 2019, VAT Group AG allocated 1,125 shares (prior year: 2,132 shares) amounting to CHF 0.2 million (prior year: CHF 0.2 million) to its Board of Directors, which will be transferred in financial year 2020.

4.5 Significant events after the balance sheet date

There are no significant events after the balance sheet date which could impact the book value of the assets or liabilities or which should be disclosed here.

Proposed appropriation of available earnings

Proposal for the appropriation of available earnings by the Board of Directors to the General Meeting:

Appropriation of available earnings as proposed by the Board of Directors

In CHF thousand	2019
Balance brought forward	**52,105**
Gain for the period	174,274
Total accumulated gains	**226,379**

The Board of Directors proposes to the General Meeting the following appropriation of available earnings:

In CHF thousand	2019
Dividend payment	–60,000
Total accumulated gains to be carried forward	**166,379**

Appropriation of reserves from capital contributions

In CHF thousand	2019
Reserves from capital contributions as of 31.12.2019	**135,254**
Dividend payment out of reserves from capital contributions	–60,000
Reserves from capital contributions carried forward	**75,254**

The Board of Directors proposes to the General Meeting to pay a dividend of CHF 120 million, half from accumulated gains and half from the reserves from capital contributions.

The number of shares with dividend rights will change if the number of own shares held by VAT Group AG changes. The Board of Directors may therefore adapt the total amount of the proposed dividend to the number of shares with dividend rights at the General Meeting.

Statutory Auditor's Report

To the General Meeting of VAT Group AG, Sennwald

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of VAT Group AG, which comprise the balance sheet as at 31 December 2019, and the income statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion the financial statements (pages 116 to 123) for the year ended 31 December 2019 comply with Swiss law and the company's articles of incorporation.

Basis for Opinion

We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Report on Key Audit Matters based on the circular 1/2015 of the Federal Audit Oversight Authority

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. We have determined that there are no key audit matters to communicate in our report.

Responsibility of the Board of Directors for the Financial Statements
The Board of Directors is responsible for the preparation of the financial statements in accordance with the provisions of Swiss law and the company's articles of incorporation, and for such internal control as the Board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Swiss law and Swiss Auditing Standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

KPMG AG

Toni Wattenhofer Licensed Audit Expert Auditor in Charge	Jan Bellinger Licensed Audit Expert

St. Gallen, 2 March 2020

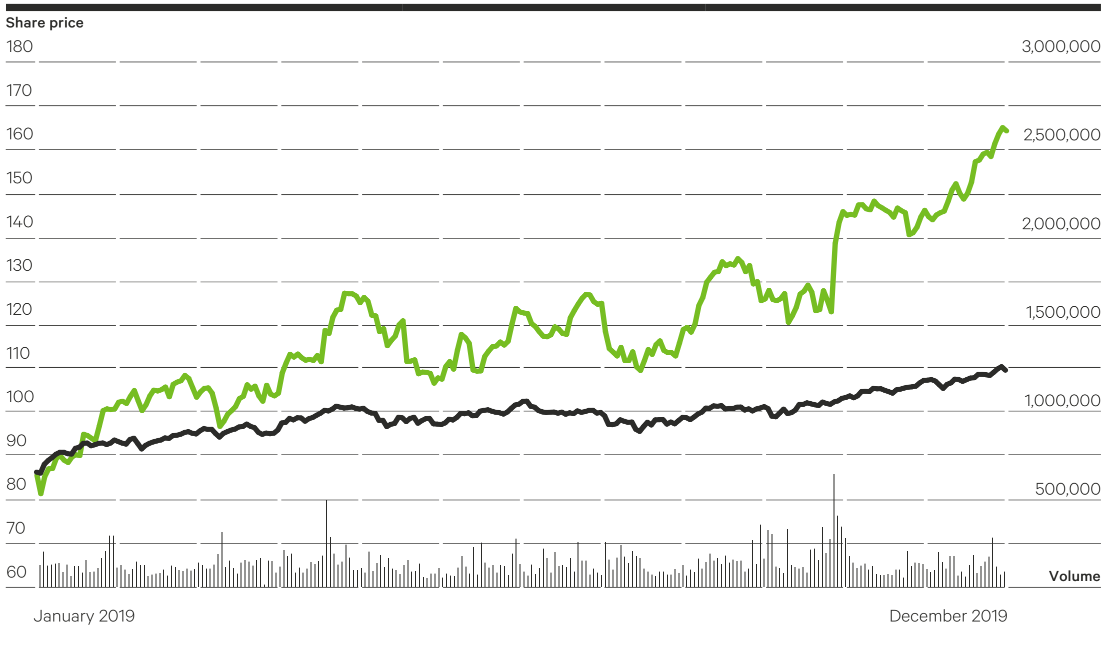
Shareholder Information

Over the course of 2019, VAT's share price developed in line with the steadily improving business climate in the semiconductor sector, which is our largest market. This was also reflected by the sequential quarterly improvement in net sales during the year, which confirmed that the bottom of the cyclical downturn that began in 2018 was reached in the first half of 2019. As a result, VAT's share price almost doubled from the lows reached at the end of 2018. VAT's long-term growth drivers, such as Big Data, device interconnectivity, the Internet of Things and artificial intelligence remain unchallenged, and the company continued to expand its clear No. 1 market position in 2019. Although full-year profitability, as measured by EBITDA, was lower than in 2018, ongoing measures to improve operational efficiency and flexibility across the company's growing global footprint resulted in an EBITDA margin about 200 basis points higher than the average levels in previous down-cycles. Strong cash flow generation allowed VAT to again offer an attractive dividend of CHF 4.00 per share.

Stable shareholder base

VAT's core shareholder base remained largely unchanged compared to 2018, with the exception of George Loening, a US institutional investment firm, who reduced their position from around 8% at the end of 2018 to just below 3% at the end of 2019. As of the publication of this annual report, there are four shareholders who each own more than 3% of VAT's outstanding shares and whose cumulative shareholding amounts to about 24% of VAT's shares. The free float of VAT shares, as defined by the SIX Swiss Exchange, was approximately 89% at the end of 2019. The number of registered shareholders decreased from about 15,500 at the end of 2018 to about 11,500 at the end of 2019.

Share price development



In 2019, the price of VAT shares increased by about 90% from CHF 86.30 to CHF 163.55. During the same period, the Swiss stock market as measured by the SPI ex SLI® TR Index increased by 26%. On May 24, 2019, shareholders received for the second time a dividend of CHF 4.00 per share, paid from capital contribution reserves.

Stock exchange listing

Ticker symbol	VACN (SIX); VACN.S (Reuters); VACN SW (Bloomberg)	**Legal Entity Identifier (LEI)**	529900MVFK7NVALR7Y83
Valor number	31 186 490	**Nominal value**	CHF 0.10 per share
ISIN	CH0311864901	**Free Float**	Approximately 89%
Market capitalization as of December 31, 2019	CHF 4.9 bn	**Number of shares outstanding**	30,000,000
Exchange	SIX Swiss Exchange (International Reporting Standard)	**Segment**	Mid & Small Cap Swiss shares

Distribution of shareholders by domicile and breakdown of registered shareholders by numbers of shares held

Number of shares held	
Switzerland	37%
Other countries	25%
Shares in transit	38%

The vast majority of registered shares not held in Switzerland are held in the rest of Europe (mainly the UK) and the US.

Number of shares held	
1–100 shares	4,651
101–1,000 shares	6,008
1,001–10,000 shares	709
10,001–100,000 shares	110
100,001–1,000,000	17
More than 1,000,000 shares	3
Total number of shareholders	**11,498**

Market Capitalization
in CHF bn as of December 31, 2019

4.9

Disclosure of shareholdings

With effect from January 1, 2016, under Art. 110 of the Federal Act on Financial Market Infrastructure (Financial Market Infrastructure Act, FinMIA), anyone who acquires or sells equity securities on their own account and thereby attains, falls below or exceeds the threshold of 3, 5, 10, 15, 20, 25, 33⅓, 50 or 66⅔% of the voting rights in a company (whether or not such rights may be exercised), is subject to a reporting obligation. This obligation applies to anyone who directly, indirectly or in concert with third parties acquires or disposes of shares in a company incorporated in Switzerland whose equity securities are listed in whole or in part in Switzerland. It also applies to anyone who can exercise the voting rights attached to such equity securities at their own discretion. Disclosure must be made to the company and stock exchanges on which the equity securities in question are listed.

Significant shareholders

Information on significant shareholders is disclosed on page 39 of this report.

Dividend policy

VAT Group AG is committed to an attractive dividend policy that reflects the company's strong free cash flow generation and solid balance sheet. In line with this policy, VAT Group intends to distribute to its shareholders up to 100% of free cash flow to equity (FCFE) so long as the Group's net debt does not significantly exceed 1x EBITDA.

For the fiscal year 2019, VAT's Board of Directors is proposing to pay out a dividend of CHF 4.00 per registered share out of reserves from capital contributions.

Disclosure policy

VAT Group AG is committed to open and transparent communication with shareholders, financial analysts, customers, suppliers and all other stakeholders. VAT aims to communicate material developments in its businesses in a timely manner and in compliance with the rules of the SIX Swiss Exchange.

Dividend Payout Ratio
in % of Free Cash Flow to Equity

88.6

Investor Relations

VAT's Investor Relations team manages the company's interaction with the financial community, including attendance at key investor conferences and providing institutional investors and analysts with various opportunities to learn more about VAT Group's strategy, business operations and governance. Investor Relations is based at the Group's headquarters in Haag, Switzerland.

More information is available on the VAT Group website: http://www.vatvalve.com/InvestorRelations/investor-relations.

Key data on VAT registered shares

		2019	2018
Share capital	CHF	3,000,000	3,000,000
Number of shares on December 31		30,000,000	30,000,000
Nominal value per share	CHF	0.10	0.10
Shares outstanding		30,000,000	30,000,000
EBITDA per share	CHF	5.13	7.17
Free cash flow per share	CHF	4.66	4.13
Book value per share	CHF	17.45	18.79
Dividend per share[1]	CHF	4.00	4.00
Share price high	CHF	164.30	170.30
Share price low	CHF	82.15	82.70
Closing share price on December 31	CHF	163.55	86.30
Average daily trading volume	Shares	159,603	193,873

1 Proposed by the Board of Directors

Financial Calendar

Date	Event
2020	
Thursday, April 16, 2020	Q1 2020 trading update
Tuesday, April 28, 2020	VAT Capital Markets Day
Thursday, May 14, 2020	Annual General Meeting 2020
Thursday, August 6, 2020	Half-year results 2020
Friday, October 16, 2020	Q3 2020 trading update

5-year key figures

In CHF million	2019	2018	2017	2016	2015	CAGR 2015–2019
Order intake	585.0	648.0	736.2	561.9	427.8	8.1%
Order backlog as of December 31	114.5	113.6	165.6	122.1	71.9	12.3%
Net sales	570.4	698.1	692.4	507.9	411.0	8.5%
Gross profit	345.4	419.5	431.9	318.0	261.0	7.3%
Gross profit margin	60.6%	60.1%	62.4%	62.6%	63.5%	–
EBITDA adjusted[1]	–	–	215.1	158.1	126.8	–
EBITDA margin adjusted[1]	–	–	31.1%	31.1%	30.9%	–
EBITDA	154.0	215.2	212.2	149.6	119.6	6.5%
EBITDA margin	27.0%	30.8%	30.6%	29.5%	29.1%	–
EBIT	107.7	179.7	178.7	118.3	89.4	4.8%
EBIT margin	18.9%	25.7%	25.8%	23.3%	21.8%	–
Net income[2]	74.8	135.7	115.7	67.2	7.1	80.2%
Net income margin	13.1%	19.4%	16.7%	13.2%	1.7%	–
Basic earnings per share (in CHF)	2.50	4.53	3.86	2.43	0.34	64.5%
Diluted earnings per share (in CHF)	2.49	4.52	3.86	2.42	0.34	64.5%
Cash flow from operating activities	157.7	171.7	155.6	146.4	117.5	7.6%
Capex[3]	18.0	48.0	47.6	19.2	12.9	8.7%
Capex margin	3.2%	6.9%	6.9%	3.8%	3.1%	–
Free cash flow[4]	139.9	123.9	108.5	128.1	105.6	7.3%
Free cash flow margin	24.5%	17.7%	15.7%	25.2%	25.7%	–
Free cash flow conversion rate[5]	90.8%	57.5%	51.1%	85.6%	88.3%	–
Free cash flow to equity[6]	135.4	119.6	104.4	117.5	71.5	17.3%

As of December 31 In CHF million	2019	2018	2017	2016	2015	CAGR 2015–2019
Total assets	972.7	968.2	991.1	883.4	893.5	2.1%
Total liabilities	449.2	404.0	433.1	972.8	844.3	–14.6%
Equity	523.4	564.2	558.0	510.6	454.3	3.6%
Net debt	144.3	147.6	143.7	133.9	223.5	–10.4%
Net debt/EBITDA	0.9	0.7	0.7	0.9	1.9	–15.9%
Invested capital[7]	356.1	358.3	327.0	246.1	279.3	6.3%
NOPAT[8]	101.7	155.2	159.6	110.1	77.9	6.9%
Return on invested capital (ROIC)	28.6%	43.3%	48.8%	44.7%	27.9%	–
Dividend per share[9]	4.0	4.0	4.0	4.0	–	–
Payout ratio[10]	88.6%	100.4%	115.0%	102.1%	–	–
Number of employees[11]	1,810	1,712	1,946	1,439	1,189	11.1%

1 Adjusted EBITDA in 2015, 2016 and 2017 excludes one-off items related to the IPO in April 2016.
2 2015 includes interest cost on shareholder loan.
3 Capex comprises purchases of property, plant and equipment, and intangible assets and proceeds from sale of property, plant and equipment.
4 Free cash flow is calculated as cash flow from operating activities minus cash flow from investing activities.
5 The free cash flow conversion rate is calculated as free cash flow as a percentage of EBITDA.
6 Free cash flow to equity is calculated as cash flow from operating activities less cash flow from investing activities less interest paid and the current portion of loan and borrowings due at the end of the period.
7 Invested capital is defined as total assets (excluding current income tax receivables, goodwill, acquired technology & customer relationships, brands & trademarks and deferred income taxes) current income tax liabilities) less non-current liabilities (excluding loans & borrowings and deferred income tax liabilities). less current liabilities (excluding loans & borrowings and and deferred income tax liabilities).
8 Net operating profit less adjusted taxes (NOPAT) is calculated as EBITDA minus depreciation and amortization (excluding amortization of acquired technology and customer relationships) plus finance income (including net foreign exchange gains/losses from financing activity and excluding other finance income) less taxes at the average Group rate of 15.8% (previous year 17.6%).
9 2019 dividend proposal of the VAT Board of Directors to its shareholders at the AGM on May 14, 2020
10 Percentage of free cash flow to equity proposed to be paid out as dividend
11 Number of employees expressed as full time equivalents (FTE)

Technical Glossary

AI (artificial Intelligence) The simulation of human intelligence in machines that are programmed to think like humans and mimic their actions.

Control Valve A valve that controls pressures or gas flows in different steps of semiconductor manufacturing.

Deposition The transfer of material onto a semiconductor wafer, including physical vapor deposition (PVD), chemical vapor deposition (CVD), and molecular beam epitaxy (MBE).

Etching A process for removing material in a specified area through a chemical reaction or physical bombardment.

EUV (extreme ultraviolet) lithography Uses light with a wavelength of 13.5-nm to manufacture transistors and interconnect wiring of a semiconductor chip.

Fab Common name for a semiconductor fabrication plant, a factory used to manufacture integrated circuits.

Gallium nitride A wide bandgap semiconductor that enables energy-efficient white light-emitting diodes and more energy-efficient power electronic devices.

Gate Valve A valve that regulates the flow of gases, fluids or materials by opening, closing or obstructing a port or passageway.

Integrated Circuit (IC) A semiconductor product of electrically connected components (such as transistors and capacitors) fabricated on the same substrate.

Internet of Things (IoT) The interconnection via the Internet of computing devices embedded in everyday objects, enabling them to send and receive data.

Isolation Valve Used to seal high-vacuum process chambers from neighboring processes that are at different pressure levels.

Liquid-Crystal Display (LCD) A type of flat-panel display that uses an array of backlit thin-film transistors to control each pixel.

Load Lock A chamber used to transfer a wafer from an environment at atmospheric pressure into and out of the vacuum environment used for processing.

Mechatronics Multidisciplinary branch of engineering that focuses on electrical and mechanical systems, and includes robotics, electronics, telecommunications, control and product engineering.

Millibar (mbar) A unit of pressure used to measure the level of vacuum (see "Vacuum").

NAND A type of flash memory often used in memory cards, USB drives, and solid-state drives.

Nanometer (nm) A unit of length; one billionth of a meter, commonly used in the semiconductor industry to describe device dimensions.

Packaging The protective container or housing for an electronic component or die, with external terminals to provide electrical access to the components inside.

Organic Light-Emitting Diode (OLED) A flat light-emitting technology made by placing a series of organic thin-films between two conductors. OLEDs can be used to make displays and lighting.

Process Chamber An enclosed area in which a single process is performed in the manufacture of an integrated circuit or other device.

Photovoltaic (PV) The generation of electricity from solar radiation.

Semiconductor A material whose electrical conductivity is between that of metals (conductors) and insulators (non-conductors) and can be modified physically or chemically to increase or decrease its conductivity.

Subfab The area underneath a semiconductor fabrication plant that contains support equipment (pumps, etc.) for processing tools.

Substrate The starting material for the semiconductor manufacturing process, typically silicon; also referred to as a wafer.

Thin-Film A layer of material ranging from fractions of a nanometer to several micrometers thick.

Transfer Valve Used to move substrates such as wafers, glass panels and other materials into and out of manufacturing process chambers.

Vacuum A pressure below the ambient atmosphere
- Typical atmospheric pressure at sea level: 1,000 millibars (mbar)
- Pressure at typical cruising altitude for commercial aircraft: 100 mbar
- High vacuum used in coating processes: 10^{-8} mbar (1 one-hundred-millionth of a millibar)
- Ultra-high vacuum used in deposition processes: 10^{-10} mbar (1 ten-billionth of a millibar)

Wafer The thin, circular or nearly square slices of mono- or multicrystalline silicon on which semiconductors and PV cells are built.

Zettabyte A measure of data equal to 1 trillion gigabytes, also expressed as 10^{21} bytes.

Contact

This complete report is only available in English.

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Forward-looking Statement
Forward-looking statements contained herein are qualified in their entirety as there are certain factors that could cause results to differ materially from those anticipated. Any statements contained herein that are not statements of historical fact (including statements containing the words “believes,” “plans,” “anticipates,” “expects,” “estimates” and similar expressions) should be considered to be forward-looking statements. Forward-looking statements involve inherent known and unknown risks, uncertainties and contingencies because they relate to events and depend on circumstances that may or may not occur in the future and may cause the actual results, performance or achievements of the company to be materially different from those expressed or implied by such forward-looking statements. Many of these risks and uncertainties relate to factors that are beyond the company’s ability to control or estimate precisely, such as future market conditions, currency fluctuations, the behavior of other market participants, the performance, security and reliability of the company’s information technology systems, political, economic and regulatory changes in the countries in which the company operates or in economic or technological trends or conditions. As a result, investors are cautioned not to place undue reliance on such forward-looking statements.

Except as otherwise required by law, VAT disclaims any intention or obligation to update any forward-looking statements as a result of developments occurring after the date of this report.

OUTLOOK 2020:

VAT's mid-term growth drivers – such as the Internet of Things, cloud computing and artificial intelligence – remain firmly in place. For 2020, VAT expects a return to growth, although market visibility remains limited.

The company expects 2020 net sales at constant foreign exchange rates and EBITDA margin to be higher than in 2019.

VAT maintains its mid-term EBITDA margin target of 33%, but now expects to reach this at a lower sales level than originally anticipated.

PASSION. PRECISION. PURITY.