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ASM INTERNATIONAL



INTERIM REPORT

FOR THE SIX MONTH PERIOD **ENDED JUNE 30, 2020**

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GENERAL

ASM International N.V. was incorporated on March 4, 1968, as a Dutch public limited liability company ("naamloze vennootschap") and was previously known as Advanced Semiconductor Materials International N.V.

Our principal executive office is located at Versterkerstraat 8, 1322 AP, Almere, the Netherlands. Our telephone number at that location is +31 88 100 8810, website http://www.asm.com.

The Company's first half of the financial year runs from January 1 to June 30.

SUPERVISORY BOARD

J.C. Lobbezoo, Chairman
M.C.J. van Pernis, Vice Chairman
M.J.C. de Jong
S. Kahle-Galonske
D.R. Lamouche
M. de Virgiliis

MANAGEMENT BOARD

G.L. Loh, Chairman of the Management Board, President and Chief Executive Officer
P.A.M. van Bommel, Member of the Management Board and Chief Financial Officer

PROFILE

ASM International N.V. (ASMI) is a leading supplier of semiconductor wafer processing equipment and process solutions. Our customers include all of the top semiconductor device manufacturers in the world. Semiconductor chips sit at the heart of almost every electronic device we use today.

WHAT WE DO

ASMI supplies wafer process equipment to the leading semiconductor manufacturers. The total market for wafer fab equipment (WFE) amounted to US$54 billion in 2019 (Gartner, December 2019). Within wafer processing equipment, the major segments include lithography, etch & clean, deposition, and process diagnostics. Our focus is on deposition equipment, which comprises about a quarter of WFE. We are a key player in the deposition equipment segments for atomic layer deposition (ALD) and epitaxy, and a focused niche player for PECVD and vertical furnaces.

At ASMI we design, manufacture, sell and service our deposition tools to supply our customers advanced technologies for the production of semiconductor devices, or integrated circuits (ICs). Semiconductor ICs, or chips, are a key technology that enables the advanced electronic products used by consumers and businesses everywhere. Our tools are used by semiconductor manufacturers in their wafer fabrication plants, or fabs. Furthermore, we provide maintenance service, spare parts and process support to our customers globally at their fabs, which typically operate on a 24 hour basis.

LOGIC, FOUNDRY AND MEMORY MARKETS

The semiconductor market can be split into three primary segments: logic, foundry and memory. ASMI supplies equipment to the leading semiconductor manufacturers in all of these segments:

- The logic market is made up of manufacturers who create chips, such as microprocessors, that are used to process data and are used in smartphones, laptops, and computers;
- The foundry market consists of businesses that operate semiconductor fabrication plants to manufacture the designs of other so-called fabless semiconductor companies; and
- The memory market covers manufacturers who make chips that store information either temporarily, such as Dynamic Random Access Memory (DRAM), or permanently, such as NAND non-volatile memory.

There are other smaller, yet still important market segments for which ASMI supplies equipment, such as analog and power. Analog and power semiconductors are devices for a wide range of electronic systems for mobile products, automobiles, telecommunications and other applications.

Our customers' goal is to build faster, cheaper, and increasingly powerful semiconductors for each new technology node. We work closely with them to make this a reality, forging mutually beneficial partnerships to help them develop their technology roadmap. Through our intensive R&D programs and customer co-development, we continuously improve our products and processes to meet these advanced technology roadmaps, increase productivity and lower operating costs per wafer. The result is value creation for our customers. While doing so, we work on the edge of what is technologically possible. This creates a very attractive professional and learning environment for our employees. We serve thereby society by helping our customers to produce the chips needed for advanced electronics that deliver a world of improvements and opportunities. The world around us shows an increasing need for the use of more applications and lower energy usage. The technological developments we are working on are supporting those requirements.

ASMI is a key player in the ALD and epitaxy segments, and a niche player in vertical furnace and PECVD.

BASICS OF SEMICONDUCTOR MANUFACTURING

The process of making semiconductor chips at our customers' fabs is both highly complex and very costly. Semiconductor fabs house a large set of wafer-processing equipment which perform a series of process steps on round silicon wafers, which are typically 300mm in diameter. The equipment is operated in cleanrooms, which filter the air to avoid contamination from small particles that could negatively affect the circuitry on the chips.

Many individual steps are performed using various types of wafer process equipment to create a semiconductor chip, including photolithographic patterning, depositing thin-film layers, etching to remove material, thermal treatments, and other steps. Our systems are designed for deposition processes when thin films, or layers, of various materials are grown or deposited onto the wafer. Many different thin-film layers are deposited to complete the full sequence of process steps necessary to manufacture a chip. After testing the individual circuits for correct performance, the chips on the wafer are separated and then packaged in a protective housing before ultimately becoming part of a set of semiconductor chips on circuit boards within an electronic product.

VALUE CREATION

We create value through our technologies by enabling leading semiconductor and technology industry partners to deliver the world of tomorrow through our innovative processing solutions and equipment. We partner with our customers and stakeholders to develop new materials, processes, and technologies that support their technology roadmaps. The process solutions delivered on our equipment enable more powerful microprocessors and higher density memory devices, all operating at lower power. Advancements that benefit society are increasingly dependent on capabilities derived from new semiconductor technologies.

GREATER PERFORMANCE, REDUCED ENERGY CONSUMPTION

Our advanced deposition technologies support cost-effective products enabling the electronic devices of the future. This leads to electronic devices that deliver ever-greater performance while reducing their energy consumption. Higher performance translates into more processing power, while a lower energy requirement means smaller, longer-lasting, more efficient products. This enables electronics' manufacturers to further integrate smart technology into a wider range of their products. For example, ASMI's ALD and epitaxy tools are critical technologies for creating high performance transistors that can operate using lower power levels, a key enabler for products such as smart watches and fitness monitors, which have substantial functionality in a small form factor with good battery life.

This value creation benefits all of our stakeholders. Our employees enjoy the challenge of developing cutting-edge technology solutions, and the opportunity for career advancement. Our suppliers, in addition to a higher activity level, also benefit from improved quality and efficiencies resulting from our supplier process control program. Consumers benefit from the value added and energy reduction possibilities provided by new electronic products that are enabled by advanced semiconductors.

OUR BUSINESS MODEL

We strive to create value for the company and all of our stakeholders. Our technology enables precision deposition of thin films in various steps in the fabrication of semiconductor chips, helping our customers build the most advanced chips used in the electronics systems throughout society. To achieve this, we are working with our customers to develop innovative solutions, while constantly looking at what is best for our investors, our employees, society, and other stakeholders.

Our products and process solutions benefit society by helping to enable a wide range of advanced integrated circuit logic and memory chips used in most of the world's electronic systems. Fundamental to our model is R&D investment, including basic chemical, materials, and feasibility research, followed by process and product developments. We aim to continuously recruit world-class technologists in the semiconductor process and equipment technology fields. We cooperate with research institutes and our customers to understand the technology roadmap challenges and to develop the appropriate process and equipment solutions required. Our manufacturing facilities allow us to deliver high-quality systems so that our customers can ramp their fabrication plants. We support our customers globally with process and equipment services and spare parts.

CUSTOMERS

ASMI's ALD, epitaxy, PECVD and vertical furnace systems are all used in the manufacturing process for the world's most advanced semiconductor chips. These chips are used in the latest smartphones, for servers in cloud computing, to enable artificial intelligence algorithms and for many other applications.

SMALLER DEVICES

The industry's relentless push to follow Moore's Law leads to the continuous demand for smaller, faster, and cheaper semiconductor components. The technologies required to achieve these advancements are heavily dependent on equipment such as ASMI's process tools.

Today, our customers manufacture semiconductor devices as small as 5 nanometers (one nanometer, or nm, is one billionth of a meter), sometimes in a vertical 3D transistor or FinFET architecture. Our customers are already qualifying and testing new critical processes to generate devices with line widths at 3nm. Simultaneously, in our customers' laboratories and several collaborative research environments, even more advanced design rule devices and related materials are being developed. These next-generation technology nodes are increasing the demand for new materials and more complex process integration methods, driving more ALD and epitaxy process steps at each new node.

DEVELOPING NEW MATERIALS

In order to meet our customers' technology needs, we are developing many new materials, along with the deposition equipment capable of achieving performance specifications in volume manufacturing. For example, ALD technology is used to create ultra-thin films of exceptional material quality, uniformity and conformality. ALD of high-k dielectrics and novel metal gate electrodes can improve the performance and reduce the power consumption of a device, thereby enhancing battery life. This same class of materials can also lead to larger charge storage in a smaller capacitor, critical for memories and RF circuits.

Also there is a great deal of focus on new technologies and materials for the metal gate electrode, the gate sidewall passivation, and many other applications. Plasma enhanced ALD (PEALD) is an important technology that enables precise deposition at very low temperatures. One application of PEALD is spacer defined multi-patterning, whereby the deposition of a highly conformal oxide spacer enables the extension of existing optical lithography technology beyond its basic resolution limits.

HIGH PRODUCTIVITY

In addition to addressing the technology needs of our customers, the relentless drive of the industry to reduce cost corresponds to significant spending on development programs that further increase throughput, equipment reliability, and yield in our customers' manufacturing line, and further lower the cost per wafer of the wafer processing systems. Without continuous productivity improvements, the price of chips would keep rising because the capital intensity of each new technology node keeps rising. The value to society is ever increasing performance of electronic systems with a reasonably stable end market price.

OUR PRODUCTS

Our products include wafer processing deposition systems for CVD, ALD, epitaxy, and diffusion/furnace. We make two types of process tools: single-wafer and batch. The majority of our business comes from single-wafer tools, which are designed to process an individual wafer in each processing chamber on the tool.

In contrast, a batch tool is designed such that a large number of wafers are processed simultaneously in a larger processing chamber. Batch tools typically achieve a higher throughput compared to single-wafer tools.

Single-wafer tools typically achieve a higher level of process performance and control, especially for complex, critical applications. We work closely with our customers to meet their demands, and in recent years we have developed single-wafer tools with multiple chambers configured together in a compact way on a single platform. This approach offers the best of both worlds, combining high productivity and a high level of performance.

BREAKTHROUGH TECHNOLOGIES

We're an innovation company. Innovation is our growth engine and our road to the future. We invest and deliver technology solutions that will drive a smart, connected future. Because of this innovative culture, we are a leading supplier of ALD equipment and process solutions for the semiconductor industry. Today, our ALD process technology delivers the highest performance available to support the next generation of semiconductor devices. Our epitaxy products have also demonstrated solutions for our customers to achieve transistor channel performance at the most advanced technology nodes. We are investing across our full product line spectrum to develop the breakthrough technologies that drive growth for the company.

EMPLOYEES

In all that we do, our people are key. Our focus on building a culture of learning and innovation, while emphasizing diversity and inclusion across the workplace, helps us develop momentum to achieve our goals. We had 2,459 employees as of June 30, 2020.

We want to be recognized as an employer of choice in the semiconductor equipment industry. To achieve this, we focus on four specific areas: being able to attract the right talented people; enable our people to perform to the best of their abilities; engage our people by fostering a collaborative and appealing culture; and supporting our people to excel in their continued professional development.

We are an equal opportunity employer, and we welcome and value diversity. We recognize and respect the differences between individuals, including gender, ethnicity, religious beliefs, sexual orientation, knowledge and experience, work background, age, skills, etc. Recruiting and developing a diverse workforce gives us a wide range of perspectives, allows us to explore and adopt new technological ideas and innovations, and enables us to continuously strive to deliver excellent products and service to our clients

As we are entering a new era of innovation, to embark on the next phase of growth, we need to continue to focus on developing our people and leaders, which requires new dimensions in leadership development. We strive to give our people the opportunity to develop their talents and gain the experiences necessary to support our growth ambition and strengthen their employability. We want to be recognized as an employer of choice in our industry. To realize this, we identify and support people with talent and leadership potential, ensuring we have the right people in the right job at the right time, to nurture future growth.

SHAREHOLDERS

Our strategy aims to create sustainable value for all our stakeholders. As part of this strategy, we are committed to creating long-term shareholder value. On the back of successful expansion in the ALD market, combined with healthy growth in the other product lines, ASMI outperformed the broader wafer fab equipment and realized significant sales growth in the last several years. The healthy financial performance contributed to a strong share price performance over time. In addition, we have returned significant amounts of cash to our shareholders over time, reflecting our policy to use excess cash for the benefit of our shareholders.

We maintain an open dialog with our shareholders and investors. We provide the financial markets with accurate and timely information through, among other things, press releases, our annual reports, quarterly earnings calls and webcasts and investor meetings. Investors can find up-to-date and comprehensive information about the company and our shares on our website.

SOCIETY

Understanding our impact, increasing our value. We are aware of the impact we have as a company, and how this effects our value and society. We focus on key areas, including reducing greenhouse gases and water consumption, improving our recycling and reuse of raw materials, and focusing on responsibly designed and operated facilities.

Climate change is a significant issue facing the world today, and impacts economies and operations. At ASMI, we are continually assessing the risks climate change poses and ways to mitigate the risks. We set targets and objectives to reduce our impact on the environment. We evaluate the associated risks and are developing mitigation steps and ways to positively contribute to global strategies to combat climate change. For example, we are evaluating our renewable energy portfolio, and developing steps that we can take to reduce our associated emissions. We are looking to the future for our next set of environmental targets and objectives, and working to strengthen their alignment with global initiatives such as the UN Sustainable Development Goals (SDGs). Our Environmental policy is a key element of our Corporate Responsibility

policy. It establishes our commitment to reduce our environmental impact by continuously improving our management systems and setting the right objectives. We continuously assess the range of aspects we need to identify, and set improvement targets on the most important impacts.

The company has adopted a Code of Ethics that sets out clear standards in different areas of business life. Its purpose is to promote a clear, strong, and consistent culture of ethics that applies to our Supervisory Board and Management Board, and to all our employees, consultants, contractors, temporary employees, and critical/strategic suppliers. The full Code of Ethics can be found on our website.

SUPPLIERS

ASMI is engaged in manufacturing products of increasing complexity in a challenging business environment, which requires quick responses to customized solutions. A robust supply chain management system, with a diverse scope and global footprint, is necessary to meet our business ambitions. This requires our global supply chain organization to continuously drive operational excellence by employing policies, initiatives, and tools to proactively engage our suppliers to ensure business compliance and continuity.

Our mission at ASMI is to build a world-class supply chain that provides our customers with the most technologically advanced products, services, and global support network, at a competitive cost of ownership. We partner with hundreds of suppliers who provide goods and services used to manufacture our products and serve our customers. They play a critical role in enabling us to achieve our mission, covering a broad spectrum of commodities across more than 20 countries and regions worldwide. The main categories include contract manufacturers, precision machining, gas systems, robotics, electronics, and high-tech chemistries. These suppliers manufacture advanced materials to stringent tolerances and performance attributes, as required to achieve our design specifications and requirements. This approach enables us to remain innovative and swiftly meet the challenging demands of our customers.

Our supply chain is a critical part of our end-to-end value chain, with our customers and other stakeholders increasingly expecting greater transparency along the entire supply. This includes how our products are manufactured, whether labor standards are upheld, assurance that workers are treated fairly, and reducing the impact our supply chain has on the environment among other requirements.

As part of our supplier management process, we have developed a critical and strategic supplier risk assessment process based upon a multitude of criteria, including the key aspects of Corporate Responsibility. We assess our supply chain annually, and identify our critical and strategic suppliers based on key elements such as, the amount we spend with them, how many similar or alternative suppliers exist, and the amount of time we would need to switch suppliers if we had to. These critical and strategic suppliers are proactively managed with a comprehensive initiatives program, aimed at driving business compliance, risk management, supply continuity, and performance among other requirements.

We believe that building a sustainable supply chain begins with solid business partnerships. Our goal is to find the most capable suppliers in the industry, treat each supplier with respect, and conduct business fairly across all facets of our operations. By adhering to these principles, we believe we can forge lasting partnerships that will provide long-term benefits to ASMI, our suppliers, our customers, and our stakeholders.

STRATEGY

We are an experienced innovation leader. This is the result of our focus on key issues and challenges within the semiconductor industry, enabling us to make a difference to our customers, employees, and other company stakeholders. While challenges and opportunities may change over time, we will continue to bring our breakthrough technologies into volume manufacturing, benefiting our customers.

MISSION

Our mission is to provide our customers with the most advanced, cost-effective, and reliable products, service, and global support network in the semiconductor industry and beyond. We advance the adoption of our deposition technology platforms by developing new materials and process applications that support our customers' long-term technology roadmaps.

VISION

We aim to delight our customers, employees, shareholders, and society by driving innovation with new technologies, and delivering excellence with dependable products. By doing this, we will create new possibilities for everyone to learn, create, and share more of what they are passionate about.

STRATEGY

Our strategic objective is to realize profitable, sustainable growth by capitalizing on our innovative strength in deposition technologies and our strong relationships with key customers. We act thereby as a responsible citizen.

The key elements of our strategy are:

› INNOVATIVE STRENGTH

We provide leading thin-film deposition technologies that support our customers in staying on the curve of Moore's Law. Our innovative strength is what differentiates us in the marketplace and creates growth opportunities for our company, thereby creating value for our stakeholders and for the society at large. This continues to be the cornerstone of our strategy.

Our R&D investments are targeted at developing new materials and process solutions that enable additional applications and meet next generation device scaling roadmaps.

New products deliver continuous improvements in performance, reliability and cost of ownership. Apart from our internal R&D efforts, we are continuously expanding and deepening our strategic cooperation with key customers, suppliers, chemical manufacturers, and research institutes. Our suppliers manufacture advanced components and assemblies to the tightest of tolerances and are required to adhere to our stringent design specifications, quality systems, and corporate responsibility requirements. This approach enables us to remain innovative and swiftly meet the changing demands of our customers.

› OPERATIONAL EXCELLENCE

While technology leadership remains crucial, flawless execution is essential to develop our future positions further. We continuously focus on further improving the effectiveness and efficiency of our organization. We aim to provide our customers with dependable, leading-edge products and services at a consistent performance level, while providing the best total cost of ownership. To help achieve this, we continue to optimize our manufacturing and global sourcing processes, including the migration to common product platforms. We are working with our suppliers to improve fundamental quality through statistical methods and process controls. Our employees are engaged in an improved product life cycle process for our products and our Product Safety Council is focused on further improving product safety through fundamental design.

In support of the company's growth plans, we broke ground in 2019 on a new manufacturing building near our production campus in Singapore, which is expected to be ready for production at the end of 2020.

In addition to addressing the technology needs of our customers, we also focus on further increasing equipment throughput and equipment reliability, thereby lowering the cost of ownership of our wafer processing systems. Combined with our commitment to quality, we continuously strive to achieve industry-leading productivity. In addition, to enable further efficiencies in our manufacturing process and the maintenance process of our customers, we put significant efforts into improving the level of standardization in our equipment portfolio by migrating to common platforms, sub assemblies and components. One example is our XP8 platform, which is used as a common platform architecture on our newest products for ALD, epitaxy and PECVD.

We strive to maintain a strong balance sheet that will allow us to continue investing in R&D. To this end our target is to keep €300 million in cash on our balance sheet. At the end of June 2020 we had €432 million. We intend to continue using excess cash flow for the benefit of our shareholders. By consistently following this policy we have returned more than €1 billion to our shareholders over the last four years.

OUR STRENGTHS

- We are a focused deposition equipment player in the semiconductor wafer fab equipment market. Particularly our technologies in ALD and Epi, in which we hold leading positions, play a critical role for our customers in enabling the transition to new device generations. Since 2010, ASMI has increased its sales with an annual average growth of 16%, ahead of the 6% compound annual growth rate shown by the broader wafer fab equipment (WFE) market over this period. Our target is to continue outgrowing the WFE market over time, by leveraging our strong position in the advanced nodes. By growing our sales we can further increase investments in R&D and create value for our stakeholders.
- We have helped shape the industry by driving innovation through our collaborative R&D models, successfully delivering to our customers advanced new materials, new products and new processes. With R&D centers in six countries throughout the world, we are close to our customers and we have access to the smartest professionals working in the semiconductor sector today. This R&D capability has resulted in a strong patent position, with over 1,950 patents in force at year end 2019.
- We have strong customer relationships with the leading semiconductor manufacturers. As we have expanded and deepened our R&D engagements with the chipmakers, we further improved our understanding of the important requirements of the next generation of device roadmaps, enabling us to develop value-added solutions to the industry's critical technology issues.

CHALLENGES

The rising costs of advanced chip technology

The continuation of Moore's law, indicating that the number of transistors on a chip doubles every two years, at the same manufacturing costs, is becoming increasingly difficult. Investments in new factories for the most advanced nodes amount now to more than US$10 billion. The equipment costs for those more advanced nodes are also increasing. This will put more pressure on equipment manufacturers to come with innovative solutions. Remaining at the forefront of technology developments is essential to remain successful.

Geopolitical risks

The success of the semiconductor industry in the past was strongly related to the success of all parties in the value chain. Innovative developments of equipment suppliers, supported innovative solutions of chip manufacturers and led to new opportunities for customers making use of those more advanced chips. Geopolitical developments, including trade restrictions put this model at risk. We continuously and carefully review the potential consequences of the geopolitical developments and measures and analyze the impact for ASMI. Also we will seek how we can make use of new opportunities that this might offer.

Strengthen our position in the memory market

While we have a strong position in the logic/foundry market, in those segments that we serve, our position in the memory market is weaker. We are working on solutions to serve a bigger part of this market.

The world around us is changing rapidly

While the average income in a lot of upcoming countries is increasing, leading to a higher demand for end products which are requiring semiconductor content, we also are aware that this will increase the demand of more scarce resources.

KEY FIGURES

(EUR million, except per share data and employees)	Six months ended June 30, 2019	2020
New orders	608.1	**631.6**
Backlog	299.6	**317.4**
Book-to-bill	1.0	**0.9**
Revenue	612.1	**667.0**
Gross profit	317.2	**309.9**
Gross profit margin %	51.8%	**46.5%**
Result from operations	197.2	**165.7**
Operating margin %	32.2%	**24.8%**
Share in income of investments in associates	(1.7)	**4.6**
Net earnings from operations, attributable to common shareholders	171.0	**148.2**
Non-current assets	1,197.0	**1,287.4**
Current assets	861.1	**936.0**
Total assets	2,058.2	**2,223.4**
Non-current liabilities	30.2	**36.2**
Current liabilities	250.6	**332.5**
Total equity	1,777.4	**1,854.6**
Net working capital [1]	245.3	**229.9**
Net debt [2]	(381.5)	**(431.5)**
Cash flows from operating activities	185.5	**117.0**
Cash flows from investing activities	(39.3)	**(67.8)**
Cash flows from financing activities	(53.1)	**(113.1)**
Number of employees	2,220	**2,459**
Per share data		
Basic net earnings per share	3.46	**3.03**
Diluted net earnings per share	3.41	**3.00**
Weighted average number of shares (thousand)		
Basic	49,430	**48,940**
Diluted	50,128	**49,459**

[1] See Notes to the Consolidated Condensed Interim Financial Statements, Note 6.
[2] Net debt is defined as debt minus cash and cash equivalents.

INTERIM MANAGEMENT BOARD REPORT[1]

ASMI CONSOLIDATED RESULTS FOR THE SIX MONTHS ENDED JUNE 30, 2020

The following table shows the operating performance for the six months ended June 30, 2020, compared to the same period of previous year:

	Six months ended June 30,		
(EUR million)	2019	2020	Change
New orders	608.1	**631.6**	4 %
Backlog	299.6	**317.4**	6 %
Book-to-bill	1.0	**0.9**	
Revenue	612.1	**667.0**	9%
Gross profit	317.2	**309.9**	(2)%
Gross profit margin %	51.8 %	**46.5 %**	
Selling, general and administrative expenses	(74.3)	**(76.8)**	3%
Research and development expenses	(45.7)	**(67.4)**	47%
Result from operations	197.2	**165.7**	(16)%
Operating margin %	32.2%	**24.8%**	
Financing income/(expenses)	(0.3)	**5.6**	5.9
Income tax	(24.2)	**(27.7)**	(3.5)
Share in income of investments in associates			
ASMI share in net earnings ASMPT	5.1	**11.4**	6.3
Amortization of fair value adjustments from PPA	(6.8)	**(6.8)**	–
Net earnings from operations, attributable to common shareholders	171.0	**148.2**	(22.8)

Backlog includes orders for which purchase orders or letters of intent have been accepted, typically for up to one year. Historically, orders have been subject to cancellation or rescheduling by customers. In addition, orders have been subject to price negotiations and changes in specifications as a result of changes in customers' requirements. Due to possible customer changes in delivery schedules and requirements and to cancellation of orders, our backlog at any particular date is not necessarily indicative of actual revenue for any succeeding period.

The following table shows the level of new orders for the six months ended June 30, 2020, and the backlog as per June 30, 2020, compared to the comparable period of 2019:

	Six months ended June 30,		
(EUR million)	2019	2020	% Change
Backlog at the beginning of the year	**301.5**	**351.2**	**16%**
New orders	608.1	**631.6**	4%
Revenue	(612.1)	**(667.0)**	9%
FX-effect	2.1	**1.5**	
Backlog as per reporting date	**299.6**	**317.4**	**6%**
Book-to-bill ratio (new orders divided by revenue)	**1.0**	**0.9**	

The backlog at the end of June 2020 increased with 6% to a level of €317.4 million, compared to the end of June last year. The bookings and revenue in 2019 include €103 million related to the patent litigation settlement. The book-to-bill ratio was 0.9.

[1] Amounts are rounded to the nearest tenth of million euro; therefore amounts may not equal (sub) totals due to rounding.

REVENUE

(EUR million)	Six months ended June 30, 2019	2020	% Change
Equipment revenue	404.5	**533.7**	32%
Spares & service revenue	104.5	**133.2**	27%
Patent litigation settlement	103.1	**–**	n/a
Total	**612.1**	**667.0**	**9%**

Total revenue for the six months ended June 30, 2020, amounted to €667.0 million, an increase of 9% compared to the same period last year. Excluding the patent litigation settlement, revenue increased 32% compared to the same period last year. Our ALD business continued to be the key revenue driver. The impact of currency changes on revenue was an increase of 2% year on year.

GROSS PROFIT

(EUR million)	Six months ended June 30, 2019	2020
Gross profit	317.2	**309.9**
Gross profit margin	51.8%	**46.5%**
Gross profit excluding patent litigation settlement	214.1	**309.9**
Gross profit margin excluding patent litigation settlement	42.1%	**46.5%**

Excluding the patent litigation settlement the gross profit margin for the six months ended June 30, 2020, increased to 46.5% compared to 42.1% in the same period last year. The gross profit margin in 2020 was positively impacted by sales mix. The impact of currency changes on gross profit was an increase of 3% year on year.

Selling, general and administrative expenses increased with 3% compared to the previous year. This increase was mainly due to the higher activity level, higher costs for the short-term incentive program and investments to strengthen the ASMI processes and organization. As a percentage of revenue SG&A expenses were 11% compared to 12% for the same period previous year. The impact of currency changes on SG&A expenses was an increase of 1% year on year.

RESEARCH AND DEVELOPMENT EXPENSES

(EUR million)	Six months ended June 30, 2019	2020	% Change
Research and development expenditure	(70.9)	**(83.1)**	17 %
Capitalized development expenditure	32.4	**31.4**	(3)%
Amortization capitalized development expenditure	(6.4)	**(10.9)**	70%
Impairment capitalized development expenditure	(0.8)	**(4.9)**	n/a
Total	**(45.7)**	**(67.4)**	**47%**

Research and development expenses for the six months ended June 30, 2020, increased with 47% compared to the comparable period previous year, mainly due to a higher activity level, increased amortization as projects were completed and ready for use and impairment of customer specific projects. As a percentage of revenue R&D expenses were 10%, compared to 7% for the previous year. The impact of currency changes on R&D expenses was an increase of 2%.

RESULT FROM OPERATIONS

	Six months ended June 30,	
(EUR million)	2019	2020
Operating result	197.2	**165.7**
Operating result margin	32.2%	**24.8%**
Operating result excluding patent litigation settlement	94.1	**165.7**
Operating result margin excluding patent litigation settlement	18.5%	**24.8%**

Result from operations increased to €165.7 million in the first six months of 2020 from €94.1 million for the same period previous year excluding the patent litigation settlement. Operating margin increased to 24.8% from 18.5%. The impact of currency changes on result from operations was an increase of 5%.

FINANCING INCOME/(EXPENSES)

	Six months ended June 30,		
(EUR million)	2019	2020	Change
Interest income	0.9	**0.1**	(0.8)
Interest expenses	(0.9)	**(0.9)**	–
Foreign currency exchange results	(0.3)	**6.4**	6.7
Total	**(0.3)**	**5.6**	**5.9**

Foreign currency exchange results reflect the revaluation of cash positions denominated in foreign currencies, mainly US$.

SHARE IN INCOME OF INVESTMENTS IN ASSOCIATES

Result from investments, which primarily reflects our approximate 25% shareholding in ASMPT, increased to €11 million from €5 million in the previous year. ASMPT's net earnings, on a 100% basis, increased with 127% to €46 million compared to €20 million in the previous year. For further information on the half year results of ASMPT, please visit ASMPT's website http://www.asmpacific.com.

For the six months ended June 30, 2020, the amortization of the recognized intangible assets and the depreciation of the fair value adjustment for property, plant & equipment negatively impacted net earnings with €6.8 million. For 2020, on a currency comparable basis, the annualized amount of this amortization is expected to amount to €13.4 million.

Reporting ASMI share in net earnings of ASMPT in the consolidated statement of profit or loss:

	Six months ended June 30,	
(EUR million)	2019	2020
ASMI share in net earnings ASMPT	5.1	**11.4**
Amortization of fair value adjustments from PPA	(6.8)	**(6.8)**
Total	**(1.7)**	**4.6**

INCOME TAX

Income tax in the first half year amounted to an expense of €27.8 million. Income tax in the previous year amounted to an expense of €24.2 million. The increase in tax expense is due to the complete utilization of the net operating losses in the Netherlands in 2019 as a consequence of the patent litigation settlement.

CASH FLOW, BALANCE SHEET, LIQUIDITY AND CAPITAL RESOURCES

CASH FLOW

The following table shows the cash flow statements for the six months ended June 30, 2020, compared to the same period of previous year:

	Six months ended June 30,	
(EUR million)	2019	2020
Net earnings from operations, attributable to common shareholders	**171.0**	**148.2**
Adjustments required to reconcile net earnings to net cash from operating activities:		
Depreciation, amortization and impairments	34.5	**43.3**
Share-based compensation	4.5	**6.5**
Income tax	24.2	**27.8**
Non-cash financing costs	3.3	**4.0**
Share in income of investments in associates	1.7	**(4.6)**
Changes in assets and liabilities:		
Accounts receivable	(84.6)	**(44.3)**
Inventories	2.9	**(6.1)**
Evaluation tools	–	**(26.3)**
Other assets	0.3	**(11.0)**
Accounts payable and accrued expenses	30.8	**(17.3)**
Income tax paid	(3.2)	**(3.2)**
Net cash from operating activities	**185.5**	**117.0**
Capital expenditures	(21.7)	**(42.8)**
Capitalized development expenditure	(32.4)	**(31.4)**
Purchase of intangible assets	(1.7)	**(1.9)**
Dividend received from associates	16.5	**8.4**
Net cash used in investing activities	**(39.3)**	**(67.8)**
Payment of lease liabilities	(3.6)	**(3.9)**
Purchase of treasury shares ASMI	–	**(10.8)**
Proceeds from issuance of treasury shares	1.0	**0.4**
Dividend paid to common shareholders ASMI	(49.4)	**(98.7)**
Capital repayment to common shareholders ASMI	(1.1)	**–**
Net cash used in financing activities	**(53.1)**	**(113.1)**

The cash flow from operating activities was negatively impacted by higher working capital needs, caused by supply chain issues due to COVID-19 in Q2 2020. As a consequence a relatively large part of sales took place in the later part of the second quarter leading to a high, and non-overdue, accounts receivable position and higher inventories. In addition, more evaluation tools were shipped to our customers in first half year of 2020 compared to same period in 2019. Cash used in investing activities during the period ended on June 30, 2020, was higher compared to same period last year mainly driven by capital expenditures for the construction of our new facility in Singapore. Cash used by financing activities in first half year of 2020 was higher especially due to the increased dividend paid.

BALANCE SHEET

Net working capital, consisting of inventories, accounts receivable, other current assets, accounts payable, provision for warranty and accrued expenses and other payables, decreased from €245 million as per June 30, 2019, to €230 million at June 30, 2020. The number of outstanding days of working capital, measured against quarterly revenue, is stable at 61 days at June 30, 2020 (June 30, 2019: 61 days).

SOURCES OF LIQUIDITY

As per June 30, 2020, the Company's principal sources of liquidity consisted of €432 million in cash and cash equivalents and €150 million in undrawn bank lines.

SHARE BUYBACK PROGRAM

The execution on the €100 million share buyback program, announced on February 25, 2020, has started on June 2, 2020, and will end as soon as the aggregate purchase price of the common shares acquired by ASMI has reached €100 million, but ultimately on November 17, 2021. On June 30, 2020, 6.9% of the program was completed at an average share price of €119.16.

The withdrawal of 1.5 million treasury shares, as earlier approved by the AGM 2020, has become effective as of July 21, 2020. As of that date, the number of issued shares is 49,797,394.

COVID-19

The top priority of ASMI is the health and safety of our employees and their families, and our customers and partners. Since the global outbreak of the COVID-19 pandemic we took all appropriate actions to protect our staff and to maintain business operations for customers in a safe manner.

As the COVD-19 outbreak started to expand over the world in the first quarter of 2020, various countries took drastic measures like lockdowns and closure of borders. ASMI's operations were affected by this. It caused disruptions to our supply chain as borders were closed and goods and people could not move. The lockdowns resulted in lower capacity at our suppliers but also at our own operations in Singapore. During the course of the second quarter, the situation started to improve as lockdown measures and transport restrictions were gradually lifted in especially Asia Pacific and Europe.

During the first six months of 2020, the performance of the company was not materially impacted by COVID-19. Total revenue was 9% above the level of last year. We were able to meet most of our customer demands. Even though parts of the broader semiconductor market were negatively affected by the COVID-19 outbreak in the first half of the year, our customers continued to invest in leading-edge development and manufacturing capacity, which is the main driver for our company.

SUBSEQUENT EVENTS

Subsequent events have been evaluated by the Company until August 31, 2020, the issuance date of this interim report 2020. There are no subsequent events to report.

REPORTING RESPONSIBILITIES AND RISKS

RELATED PARTY TRANSACTIONS

There have been no significant related party transactions or changes in related party transactions described in ASMI's 2019 Annual Report that could have a material effect on the financial position or performance of the Company in the first six months of the 2020 financial year.

AUDITORS' INVOLVEMENT

The contents of this Interim Financial Report have not been audited or reviewed by an external auditor.

RISKS AND UNCERTAINTIES

In conducting our business, we face a number of principal risks and uncertainties that each could materially affect our business, revenues, income, assets and liquidity and capital resources. For a detailed description of our assessment of the major risk factors, see Risk management in our 2019 Annual Report. Those risk factors are deemed incorporated and repeated in this report by reference. ASMI believes that these risks similarly apply for the second half of 2020.

We monitor our primary risks on a continuous basis and implement appropriate measures as promptly as practicable to address known and new risks as they emerge and change. Additional risks not known to us or now believed to be not material could later turn out to have material impact on us.

RESPONSIBILITY STATEMENT

The Management Board of the Company hereby declares that, to the best of its knowledge:

- the consolidated condensed interim financial statements of the first six months ended June 30, 2020, prepared in accordance with IAS 34, Interim Financial Reporting give a true and fair view of the assets, liabilities, financial position and results of the Company and the undertakings included in the consolidation taken as a whole; and
- the Interim report of the Management Board gives a fair review of the information required pursuant to section 5:25d(8)/(9) of the Dutch Financial Markets Supervision Act ("Wet op het Financieel Toezicht").

Almere, August 31, 2020

Management Board ASM International N.V.

G.L. Loh, Chairman of the Management Board, President and Chief Executive Officer
P.A.M. van Bommel, Member of the Management Board and Chief Financial Officer

CONSOLIDATED CONDENSED INTERIM FINANCIAL STATEMENTS

FOR THE SIX MONTHS ENDED JUNE 30, 2020

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CONSOLIDATED STATEMENTS OF PROFIT OR LOSS

(EUR thousand, except share data)	Notes	Six months ended June 30, 2019 (unaudited)	Six months ended June 30, 2020 (unaudited)
Revenue	7, 8	**612,091**	**666,950**
Cost of sales		(294,877)	**(357,030)**
Gross profit	7	**317,214**	**309,920**
Operating expenses:			
Selling, general and administrative		(74,303)	**(76,773)**
Research and development		(45,718)	**(67,429)**
Total operating expenses		**(120,021)**	**(144,202)**
Result from operations	7	**197,193**	**165,717**
Finance income		875	**125**
Finance expenses		(881)	**(865)**
Foreign currency exchange gain (loss), net		(256)	**6,441**
Share in income of investments in associates	4	(1,683)	**4,582**
Result before income taxes		**195,248**	**176,001**
Income taxes		(24,217)	**(27,767)**
Net earnings from operations, attributable to common shareholders		**171,031**	**148,233**
Per share data	10		
Basic net earnings per share		3.46	**3.03**
Diluted net earnings per share		3.41	**3.00**
Weighted average number of shares (thousand)			
Basic		49,430	**48,940**
Diluted		50,128	**49,459**

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(EUR thousand)	Six months ended June 30, 2019 (unaudited)	Six months ended June 30, 2020 (unaudited)
Net earnings from operations, attributable to common shareholders	**171,031**	**148,233**
Other comprehensive income, net of income tax		
Items that will not be reclassified subsequently to profit or loss:		
Share of other comprehensive income (loss) investments in associates	(280)	**(144)**
Items that may be subsequently reclassified to profit or loss:		
Foreign currency translation effect	9,959	**(9,705)**
Other comprehensive income, net of income tax	**9,679**	**(9,849)**
Total comprehensive income, attributable to common shareholders	**180,710**	**138,384**

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(EUR thousand)	Notes	June 30, 2019 *(unaudited)*	December 31, 2019	June 30, 2020 *(unaudited)*
Assets				
Right-of-use assets	2	29,607	27,547	**27,631**
Property, plant and equipment		148,884	164,863	**188,155**
Goodwill		11,270	11,270	**11,270**
Other intangible assets	3	174,783	189,224	**203,836**
Investments in associates	4	777,177	778,268	**776,128**
Deferred tax assets		4,359	3,064	**3,059**
Other non-current assets		9,972	7,780	**8,436**
Evaluation tools at customers	5	40,432	47,247	**68,054**
Employee benefits (pension assets)		550	579	**783**
Total non-current assets		**1,197,034**	**1,229,842**	**1,287,352**
Inventories	6	170,386	173,189	**175,854**
Accounts receivable	6	260,437	199,535	**243,874**
Income taxes receivable		2,339	1,220	**1,293**
Other current assets	6	46,419	73,479	**83,486**
Cash and cash equivalents		381,535	497,874	**431,534**
Total current assets		**861,116**	**945,297**	**936,040**
Total assets		**2,058,150**	**2,175,139**	**2,223,392**
Equity		**1,777,375**	**1,818,651**	**1,854,602**
Accrued expenses and other payables		17,937	15,774	**16,296**
Deferred tax liabilities		12,220	20,136	**19,949**
Total non-current liabilities		**30,157**	**35,910**	**36,245**
Accounts payable	6	93,488	119,712	**130,003**
Provision for warranty	6	12,999	16,424	**19,419**
Income taxes payable		18,672	34,599	**59,250**
Accrued expenses and other payables	6	125,459	149,843	**123,872**
Total current liabilities		**250,618**	**320,578**	**332,544**
Total liabilities		**280,775**	**356,488**	**368,789**
Total equity and liabilities		**2,058,150**	**2,175,139**	**2,223,392**

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(EUR thousand, except share data)	Number of common shares outstanding	Common shares	Capital in excess of par value	Treasury shares at cost	Retained earnings	Other reserves[1]	Total equity
Balance January 1, 2019	**49,318,898**	**2,252**	**50,902**	**(328,010)**	**1,816,941**	**99,607**	**1,641,692**
Net earnings	–	–	–	–	171,031	–	**171,031**
Other comprehensive income	–	–	–	–	–	9,679	**9,679**
Total comprehensive income	**–**	**–**	**–**	**–**	**171,031**	**9,679**	**180,710**
Dividend paid to common shareholders	–	–	–	–	(49,390)	–	**(49,390)**
Capital repayment	–	–	(1,144)	–	–	–	**(1,144)**
Compensation expense share based payments	–	–	4,541	–	–	–	**4,541**
Exercise stock options out of treasury shares	44,516	–	(1,083)	2,049	–	–	**966**
Vesting restricted shares out of treasury shares	168,763	–	(7,932)	7,932	–	–	**–**
Purchase of common shares	–	–	–	–	–	–	**–**
Other movements in investments and associates:							
Dilution	–	–	–	–	–	–	**–**
Balance June 30, 2019 *(unaudited)*	**49,532,177**	**2,252**	**45,284**	**(318,029)**	**1,938,582**	**109,286**	**1,777,375**
Net earnings	–	–	–	–	157,982	–	**157,982**
Other comprehensive income	–	–	–	–	–	17,654	**17,654**
Total comprehensive income	**–**	**–**	**–**	**–**	**157,982**	**17,654**	**175,636**
Dividend paid to common shareholders	–	–	–	–	(49,909)	–	**(49,909)**
Compensation expense share based payments	–	–	5,997	–	–	–	**5,997**
Exercise stock options out of treasury shares	271,512	–	(6,973)	12,774	–	–	**5,801**
Vesting restricted shares out of treasury shares	13,433	–	(632)	632	–	–	**–**
Purchase of common shares	(950,902)	–	–	(100,131)	–	–	**(100,131)**
Cancellation of common shares out of treasury shares	–	(200)	–	235,047	(234,847)	–	**–**
Other movements in investments and associates:							
Dilution	–	–	–	–	3,882	–	**3,882**
Balance December 31, 2019	**48,866,220**	**2,052**	**43,676**	**(169,707)**	**1,815,690**	**126,940**	**1,818,651**
Net earnings	–	–	–	–	148,233	–	**148,233**
Other comprehensive income	–	–	–	–	–	(9,849)	**(9,849)**
Total comprehensive income	**–**	**–**	**–**	**–**	**148,233**	**(9,849)**	**138,384**
Dividend paid to common shareholders	–	–	–	–	(98,688)	–	**(98,688)**
Compensation expense share based payments	–	–	6,501	–	–	–	**6,501**
Exercise stock options out of treasury shares	16,724	–	(778)	1,142	–	–	**364**
Vesting restricted shares out of treasury shares	216,221	–	(15,093)	15,093	–	–	**–**
Purchase of common shares	(91,077)	–	–	(10,610)	–	–	**(10,610)**
Other movements in investments and associates:							
Dilution	–	–	–	–	–	–	**–**
Balance June 30, 2020 *(unaudited)*	**49,008,088**	**2,052**	**34,306**	**(164,082)**	**1,865,235**	**117,091**	**1,854,602**

[1] Other reserves consist of the currency translation reserve, remeasurement on net defined benefit and the reserve for proportionate share in other comprehensive income investments in associates.

CONSOLIDATED STATEMENT OF CASH FLOWS

(EUR thousand)	Six months ended June 30, 2019 (unaudited)	Six months ended June 30, 2020 (unaudited)
Cash flows from operating activities		
Net earnings from operations	**171,031**	**148,233**
Adjustments to reconcile net earnings to net cash from operating activities		
Depreciation, amortization and impairments	34,517	**43,261**
Share-based compensation	4,541	**6,501**
Non-cash costs	3,155	**3,680**
Non-cash interest	159	**274**
Share in income of investments in associates	1,683	**(4,582)**
Income tax	24,217	**27,767**
Changes in assets and liabilities		
Accounts receivable	(84,636)	**(44,271)**
Inventories	2,898	**(6,111)**
Evaluation tools	(42)	**(26,260)**
Other assets	301	**(11,025)**
Accounts payable and accrued expenses	30,803	**(17,297)**
Income tax paid	(3,169)	**(3,194)**
Net cash from operating activities	**185,458**	**116,977**
Cash flows from investing activities		
Capital expenditures	(21,742)	**(42,839)**
Capitalized development expenditure	(32,405)	**(31,406)**
Purchase of intangible assets	(1,681)	**(1,914)**
Dividend received from associates	16,488	**8,350**
Net cash used in investing activities	**(39,340)**	**(67,809)**
Cash flows from financing activities		
Payment of lease liabilities	(3,559)	**(3,936)**
Purchase of treasury shares ASMI	–	**(10,812)**
Proceeds from issuance of treasury shares	966	**364**
Dividends to common shareholders of ASMI	(49,390)	**(98,688)**
Capital repayment	(1,144)	**–**
Net cash used in financing activities	**(53,127)**	**(113,072)**
Foreign currency translation effect on cash and cash equivalents	**2,638**	**(2,436)**
Net increase / (decrease) in cash and cash equivalents	**95,628**	**(66,340)**
Cash and cash equivalents at beginning of year	285,907	**497,874**
Cash and cash equivalents at balance sheet date	**381,535**	**431,534**

NOTES TO CONSOLIDATED CONDENSED INTERIM FINANCIAL STATEMENTS

NOTE 1. GENERAL INFORMATION / SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

GENERAL INFORMATION

ASM International N.V. (ASMI or the Company) is a Dutch public liability company domiciled in the Netherlands with its principal operations in Europe, the United States and Asia. The Company dedicates its resources to the research, development, manufacturing, marketing and servicing of equipment and materials used to produce mainly semiconductor devices. The Company is registered at Versterkerstraat 8, 1322 AP Almere, the Netherlands.

The Company's shares are listed for trading on the Euronext Amsterdam Stock Exchange (symbol ASM).

The accompanying consolidated condensed interim financial statements include the financial statements of ASM International N.V., headquartered in Almere, the Netherlands, and its consolidated subsidiaries (together referred to as ASMI or the Company).

The consolidated condensed interim financial statements for the six months ended June 30, 2020 were authorized for issue by the Management Board on August 31, 2020.

The consolidated condensed interim financial statements have not been audited or reviewed by an external auditor. In the consolidated condensed interim financial statements amounts are rounded to the nearest thousand euro; therefore amounts may not equal (sub) totals due to rounding.

ACCOUNTING POLICIES

These consolidated condensed interim financial statements have been prepared in accordance with IAS 34, Interim Financial Reporting. The consolidated condensed interim financial statements do not include all of the information required for full annual financial statements and should be read in conjunction with ASMI's 2019 Annual Report. In addition, the notes to these consolidated condensed interim financial statements are presented in a condensed format. The applied accounting principles are in line with those as described in ASMI's 2019 Annual Report and are based on IFRS as endorsed by the European Union.

Changes in accounting policies

The accounting policies applied in these interim financial statements are the same as those applied in the last annual financial statements, except for the IFRS standards and interpretations effective on January 1, 2020. These include amendments to IFRS 3 ''Definition of a Business", amendments to IFRS 9, IAS 39 and IFRS 7 "Interest Rate Benchmark Reform, amendments to IAS 1 and IAS 8 "Definition of Material" and ''Amendments to References to the Conceptual Framework in IFRS Standards". These changes have been assessed for their potential impact and do not have a material effect on ASMI's consolidated financial statements.

USE OF ESTIMATES AND JUDGMENTS

The preparation of the Company's consolidated condensed interim financial statements requires management to make judgments, estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ materially from those estimates. We evaluate our estimates and underlying assumptions on an ongoing basis. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

COVID-19

As the COVD-19 outbreak started to expand over the world in the first quarter of 2020, various countries took drastic measures like lockdowns and closure of borders. ASMI's operations were affected by this. It caused disruptions to our supply chain as borders were closed and goods and people could not move. The lockdowns resulted in lower capacity at our suppliers but also at our own operations in Singapore. During the course of the second quarter, the situation started to improve as lockdown measures and transport restrictions were gradually lifted in especially Asia Pacific and Europe.

During the first six months of 2020, the performance of the company was not materially impacted by COVID-19. Total revenue was 9% above the level of last year. We were able to meet most of our customer demands. Even though parts of the broader semiconductor market were negatively affected by the COVID-19 outbreak in the first half of the year, our customers continued to invest in leading-edge development and manufacturing capacity, which is the main driver for our company. Based upon the current market developments we expect the wafer fab equipment (WFE) market will grow with a mid- to high single digit percentage in 2020. For the second half of the year we do not expect a significant change in our operations. Based on the outlook statement provided with the Q2 results, total reported sales for 2020 are expected to be comparable to total sales 2019 which included the proceeds from the settlements with Kokusai. We therefore view the COVID-19 outbreak not as a triggering event for our accounting.

Nevertheless, we reviewed our impairments tests performed at year end 2019. We concluded that even with a significant negative scenario, the recoverable amounts for our non-current assets exceeded the carrying amounts.

NOTE 2. RIGHT-OF-USE ASSETS

The Company leases many assets, including land, buildings, houses, motor vehicles, machinery and equipment. Leases typically run up to a period of 5 years, some with an option to renew the lease after the end of the non-cancelable period. Lease payments are renegotiated on a periodic basis; timing is depending on the region and type of lease. The Company has not entered into any sub-lease arrangements.

(EUR thousand)	Land and buildings	Motor vehicles	Other machinery and equipment	Total
Balance January 1, 2019	**23,579**	**1,488**	**620**	**25,687**
Additions	5,943	969	–	**6,912**
Transfer from PP&E	459	–	–	**459**
Modifications and reassessments	–	–	(40)	**(40)**
Retirements	–	–	–	**–**
Depreciation for the period	(3,127)	(405)	(137)	**(3,669)**
Foreign currency translation effect	246	8	4	**258**
Balance June 30, 2019	**27,100**	**2,060**	**447**	**29,607**
Additions	532	619	16	**1,167**
Transfer from PP&E	–	–	–	**–**
Modifications and reassessments	75	31	16	**122**
Retirements	–	–	–	**–**
Depreciation for the period	(2,930)	(603)	(131)	**(3,664)**
Foreign currency translation effect	272	35	8	**315**
Balance December 31, 2019	**25,049**	**2,142**	**356**	**27,547**
Additions	368	858	–	**1,226**
Modifications and reassessments	2,918	(29)	(12)	**2,877**
Retirements	–	–	–	**–**
Depreciation for the period	(3,195)	(569)	(96)	**(3,860)**
Foreign currency translation effect	(136)	(18)	(5)	**(159)**
Balance June 30, 2020	**25,004**	**2,384**	**243**	**27,631**

NOTE 3. OTHER INTANGIBLE ASSETS

Other intangible assets include capitalized development expenditure, software developed or purchased (including licenses) for internal use and purchased technology from third parties. The changes in the amount of other intangible assets are as follows:

(EUR thousand)	Development costs	Software	Purchased technology and other intangible assets	Total
Balance January 1, 2019	**140,382**	**8,570**	**975**	**149,927**
Additions	32,405	1,681	–	**34,086**
Amortization for the period	(6,438)	(2,252)	(335)	**(9,025)**
Impairments	(826)	–	–	**(826)**
Foreign currency, translation effect	613	8	–	**621**
Balance June 30, 2019	**166,136**	**8,007**	**640**	**174,783**
Additions	27,797	639	–	**28,436**
Amortization for the period	(9,159)	(2,269)	(335)	**(11,763)**
Impairments	(3,929)	–	–	**(3,929)**
Foreign currency, translation effect	1,651	46	–	**1,697**
Balance December 31, 2019	**182,496**	**6,423**	**305**	**189,224**
Additions	31,406	1,914	–	**33,320**
Amortization for the period	(10,870)	(1,828)	(280)	**(12,978)**
Impairments	(4,860)	–	–	**(4,860)**
Foreign currency, translation effect	(737)	(133)	–	**(870)**
Balance June 30, 2020	**197,435**	**6,376**	**25**	**203,836**

Impairment charges on capitalized development costs are included in operating expenses under research and development. Impairment of capitalized development expenses primarily related to development of new hardware for which the customers demand has shifted out in time, and technology which became obsolete. The impairment charges for 2019 and 2020 related to customer specific projects.

Capitalized development costs are amortized over their estimated useful lives of five years, other intangible assets are amortized over their estimated useful lives of three to seven years.

NOTE 4. INVESTMENTS IN ASSOCIATES

The changes in the investments in associates are as follows:

	ASMPT			
(EUR thousand)	Net equity share	Other (in)tangible assets	Goodwill	Total ASMPT
Balance January 1, 2019	**343,655**	**58,061**	**387,872**	**789,588**
Share in net earnings of investments in associates	5,121	–	–	**5,121**
Other comprehensive income of investments in associates	(280)	–	–	**(280)**
Amortization recognized (in)tangible assets	–	(6,804)	–	**(6,804)**
Dividends	(16,488)	–	–	**(16,488)**
Foreign currency translation effect	1,936	556	3,548	**6,040**
Balance June 30, 2019	**333,944**	**51,813**	**391,420**	**777,177**
Share in net earnings of investments in associates	12,914	–	–	**12,914**
Other comprehensive income of investments in associates	(3,711)	–	–	**(3,711)**
Amortization recognized (in)tangible assets	–	(6,984)	–	**(6,984)**
Dividends	(15,472)	–	–	**(15,472)**
Dilution ASMPT share to 25.19%	3,882	–	–	**3,882**
Foreign currency translation effect	3,313	923	6,226	**10,462**
Balance December 31, 2019	**334,870**	**45,752**	**397,646**	**778,268**
Share in net earnings of investments in associates	11,366	–	–	**11,366**
Other comprehensive income of investments of associates	(144)	–	–	**(144)**
Amortization recognized (in)tangible assets	–	(6,784)	–	**(6,784)**
Dividends	(8,350)	–	–	**(8,350)**
Foreign currency translation effect	(1,786)	428	3,130	**1,772**
Balance June 30, 2020	**335,956**	**39,396**	**400,776**	**776,128**

On March 15, 2013, the Company divested a controlling stake in its subsidiary ASM Pacific Technology Ltd (ASMPT). After the initial accounting of the sale transaction and related gains future income from ASMPT was adjusted for the fair value adjustments arising from the basis differences as if a business combination had occurred under IFRS 3R, Business Combinations, i.e. a purchase price allocation (PPA).

The purchase of the associate has been recognized at fair value, being the value of the ASMPT shares on the day of closing of the purchase transaction. The composition of this fair value was determined through a PPA. The PPA resulted in the recognition of intangible assets for customer relationship, technology, trade name, product names and goodwill. For inventories and property, plant & equipment a fair value adjustment was recognized.

The ASMPT investment is accounted for under the equity method on a go forward basis. Equity method investments are tested for prolonged impairment. An investment is considered impaired if the fair value of the investment is less than its carrying value.

If the fair value of an investment is less than its carrying value at the balance sheet date, the Company determines whether the impairment is temporary or prolonged. The amount per share recognized as per June 30, 2020 under equity accounting amounts to HK$65.40 (December 31, 2019: HK$66.09) whereas the level 1 fair value per share (being the market price of a share on the Hong Kong Stock Exchange) was HK$81.35 as per June 30, 2020 (December 31, 2019: HK$108.10). Management concluded that based on quantitative analysis no impairment of its share in ASMPT existed as per June 30, 2020.

In December 2019, 2,224,200 common shares of ASMPT were issued, for cash at par value of HK$0.10 per share, pursuant to the Employee Share Incentive Scheme of ASMPT. The shares under the plan in 2019 have diluted ASMI's ownership in ASMPT to 25.19% as of December 31, 2019.

At June 30, 2020, the book value of our equity method investment in ASMPT was €776 million. The historical cost basis of our 25.19% share of net assets on the books of ASMPT was €336 million as of June 30, 2020 resulting in a basis difference of €440 million. €39 million of this basis difference has been allocated to property, plant and equipment and intangibles assets. The remaining amount was allocated to goodwill. Each individual, identifiable asset will periodically be reviewed for any indicators of potential impairment which, if required, would result in acceleration of basis difference amortization. We amortize the basis differences allocated to the assets on a straight-line basis, and include the impact within the results of our equity method investments. Amortization and depreciation are adjusted for related deferred tax impacts. Included in net income attributable to ASMI for the six months period ending June 30, 2020 was after-tax expense of €7 million, representing the depreciation and amortization of the basis differences.

Summarized 100% earnings information for ASMPT equity method investment excluding basis adjustments (foreign currency exchange rate average for 2020: 1 HK$: €0.11664 and for 2019: 1 HK$: €0.11256):

	Six months ended June 30,	
(HK$ million)	2019	2020
Revenue	7,274.8	**7,701.5**
Earnings before income tax	368.6	**512.2**
Net earnings	178.3	**390.8**

Summarized 100% statement of financial position information for ASMPT equity method investment excluding basis adjustments (foreign currency exchange rate as per June 30, 2020: 1 HK$: €0.11522, December 31, 2019: 1 HK$: €0.11432 and as per June 30, 2019: 1 HK$: €0.11253):

(HK$ million)	June 30, 2019	December 31, 2019	June 30, 2020
Current assets	14,190	13,381	**14,635**
Non-current assets	7,500	7,464	**7,216**
Current liabilities	5,079	4,432	**5,789**
Non-current liabilities	4,894	4,781	**4,483**
Equity	11,717	11,632	**11,579**

NOTE 5. EVALUATION TOOLS AT CUSTOMERS

The changes in the amount of evaluation tools are as follows:

(EUR thousand)	June 30, 2019	June 30, 2020
At cost		
Balance at beginning of year	**63,851**	**73,637**
Evaluation tools shipped	14,327	**34,251**
Evaluation tools sold and returns	(16,789)	**(10,176)**
Foreign currency translation effect	907	**(114)**
Balance at end of period	**62,296**	**97,598**
Accumulated depreciation		
Balance at beginning of year	**19,217**	**26,390**
Depreciation for the year	4,768	**5,201**
Evaluation tools sold and returns	(2,504)	**(2,185)**
Foreign currency translation effect	383	**138**
Balance at end of period	**21,864**	**29,544**
Carrying amount at beginning of year	**44,634**	**47,247**
Carrying amount at end of period	**40,432**	**68,054**

Useful lives in years:	5

NOTE 6. WORKING CAPITAL

Net working capital is composed as follows:

(EUR thousand)	June 30, 2019	December 31, 2019	June 30, 2020
Inventories	170,386	173,189	**175,854**
Accounts receivable	260,437	199,535	**243,874**
Other current assets	46,419	73,479	**83,486**
Accounts payable	(93,488)	(119,712)	**(130,003)**
Provision for warranty	(12,999)	(16,424)	**(19,419)**
Accrued expenses and other payables	(125,459)	(149,843)	**(123,872)**
Net working capital	**245,296**	**160,224**	**229,920**

NOTE 7. SEGMENT DISCLOSURE

The Company organizes its activities in two operating segments, Front-end and Back-end. Operating segments are reported in a manner consistent with the internal reporting provided to the Chief Executive Officer (CEO), which is the Chief Operating Decision Maker (CODM).

The Front-end segment manufactures and sells equipment used in wafer processing, encompassing the fabrication steps in which silicon wafers are layered with semiconductor devices. The segment is a product driven organizational unit comprised of manufacturing, service, and sales operations in Europe, the United States of America, Japan, South Korea and Southeast Asia.

The Back-end segment manufactures and sells equipment and materials used in assembly and packaging, encompassing the processes in which silicon wafers are separated into individual circuits and subsequently assembled, packaged and tested. The segment is organized in ASM Pacific Technology Ltd, in which the Company holds a substantial share of 25.19% interest, whilst the remaining shares are listed on the Stock Exchange of Hong Kong. The segment's main operations are located in Hong Kong, the People's Republic of China, Singapore, Malaysia and Germany.

The Back-end segment remains reported as a separate segment since the cease of control per March 15, 2013. Since that date the segment is reported as an equity method investment as the CEO reviews this information as part of his CODM package.

Accordingly, the asset and result information regarding the operations that comprise the segment are disclosed. The full financial results are reviewed by the CODM, the external reporting of the segment are on an equity method investment basis. The total of all segments' financial amounts are reconciled to the corresponding amounts reported in the consolidated financial statements, eliminations are reflected in the reconciling column for amounts reported in excess of those amounts reflected in the consolidated financial statements.

	Six months ended June 30, 2019			
(EUR thousand)	Front-end	Back-end 100%	Deconsolidated	Total
Revenue	612,091	818,850	(818,850)	**612,091**
Gross profit	317,214	285,013	(285,013)	**317,214**
Result from operations	197,193	60,471	(60,471)	**197,193**
Interest income (expenses)	(6)	(14,388)	14,388	**(6)**
Foreign currency exchange results	(256)	(4,592)	4,592	**(256)**
Result from investments in associates	–	–	(1,683)	**(1,683)**
Income taxes	(24,217)	(21,425)	21,425	**(24,217)**
Net earnings	172,714	20,066	(21,749)	**171,031**
Cash flows from operating activities	185,458	173,156	(173,156)	**185,458**
Cash flows from investing activities	(55,828)	(23,376)	39,864	**(39,340)**
Cash flows from financing activities	(53,127)	(103,140)	103,140	**(53,127)**
Cash and cash equivalents	381,535	281,282	(281,282)	**381,535**
Goodwill	11,270	118,547	(118,547)	**11,270**
Other intangible assets	174,783	139,964	(139,964)	**174,783**
Investments in associates	–	–	777,177	**777,177**
Other identifiable assets	713,385	1,900,941	(1,900,941)	**713,385**
Total assets	1,280,973	2,440,734	(1,663,557)	**2,058,150**
Total debt	–	399,495	(399,495)	**–**
Headcount [1]	2,220	13,700	(13,700)	**2,220**

[1] Headcount includes employees with a fixed contract, and excludes temporary workers.

	Six months ended June 30, 2020			
(EUR thousand)	Front-end	Back-end 100%	Deconsolidated	Total
Revenue	666,950	896,767	(896,767)	**666,950**
Gross profit	309,920	309,044	(309,044)	**309,920**
Result from operations	165,717	70,484	(70,484)	**165,717**
Interest income (expenses)	(740)	(8,030)	8,030	**(740)**
Foreign currency exchange results	6,441	(2,808)	2,808	**6,441**
Result from investments in associates	–	–	4,582	**4,582**
Income taxes	(27,767)	(14,143)	14,143	**(27,767)**
Net earnings	143,651	45,503	(40,921)	**148,233**
Cash flows from operating activities	116,977	155,649	(155,649)	**116,977**
Cash flows from investing activities	(76,159)	(19,553)	27,903	**(67,809)**
Cash flows from financing activities	(113,072)	22,158	(22,158)	**(113,072)**
Cash and cash equivalents	431,534	412,493	(412,493)	**431,534**
Goodwill	11,270	120,101	(120,101)	**11,270**
Other intangible assets	203,836	130,855	(130,855)	**203,836**
Investments in associates	–	–	776,128	**776,128**
Other identifiable assets	800,624	1,854,253	(1,854,253)	**800,624**
Total assets	1,447,264	2,517,702	(1,741,574)	**2,223,392**
Total debt	–	425,558	(425,558)	**–**
Headcount [1]	2,459	13,900	(13,900)	**2,459**

[1] Headcount includes employees with a fixed contract, and excludes temporary workers.

There are no inter-segment transactions, other than charges for management services, which are based on actual cost. The accounting policies used to measure the net earnings and total assets in each segment are consistent to those used in the consolidated financial statements. The measurement methods used to determine reported segment earnings are consistently applied for all periods presented. There were no asymmetrical allocations to segments.

Geographical information is summarized as follows:

	Six months ended June 30,			
	2019		2020	
(EUR thousand)	Revenue	Property, plant and equipment	Revenue	Property, plant and equipment
United States	166,498	47,678	**210,392**	**58,554**
Europe	69,126	9,619	**59,345**	**8,971**
Asia	376,467	91,587	**397,213**	**120,630**
Total	**612,091**	**148,884**	**666,950**	**188,155**

For geographical reporting, revenue are attributed to the geographic location in which the customer's facilities are located.

NOTE 8. REVENUE

Contract balances

(EUR thousand)	June 30, 2019	June 30, 2020
Accrued revenue	21,501	**30,301**
Deferred revenue	26,081	**35,634**

Revenue Streams

The Company generates revenue primarily from the sales of equipment and sales of spares & service.

	Six months ended June 30,	
(EUR thousand)	2019	2020
Equipment revenue	507,636	**533,745**
Spares & service revenue	104,455	**133,205**
Total	**612,091**	**666,950**

The proceeds resulting from the patent litigation settlements (€103 million) in 2019 are included in the equipment revenue stream.

NOTE 9. LITIGATION MATTERS

ASMI is and may become a party to various legal proceedings incidental to its business. As is the case with other companies in similar industries, the Company faces exposure from actual or potential claims and legal proceedings. Although the ultimate result of legal proceedings cannot be predicted with certainty and in many events cannot be reasonably estimated, it is the opinion of the Company's management that the outcome of any claim which is currently pending, either individually or on a combined basis, will not have a material effect on the financial position of the Company, its cash flows and result of operations.

NOTE 10. EARNINGS PER SHARE

Basic net earnings per common share is calculated by dividing net earnings attributable to common shareholders by the weighted average number of common shares outstanding for that period. The dilutive effect is calculated using the treasury stock method. The calculation of diluted net earnings per share assumes the exercise of options issued under our stock option plans (and the issuance of shares under our share plans) for periods in which exercised (or issuances) would have a dilutive effect.The calculation of diluted net earnings per share does not assume exercise of options (or issuance of shares) when such exercises (or issuances) would be anti-dilutive.

The calculation of basic and diluted net earnings per share attributable to common shareholders is based on the following data:

	Six months ended June 30,	
(EUR thousand, except share data)	2019	2020
Net earnings used for purposes of calculating net income per common share		
Net earnings from operations	**171,031**	**148,233**
Basic weighted average number of shares outstanding during the year (thousands)	49,430	**48,940**
Effect of dilutive potential common shares from stock options and restricted shares	698	**519**
Dilutive weighted average number of shares outstanding	**50,128**	**49,459**
Basic net earnings per share:		
from operations	3.46	**3.03**
Diluted net earnings per share:		
from operations	3.41	**3.00**

NOTE 11. RELATED PARTY TRANSACTIONS

The Company has a related party relationship with its subsidiaries, equity accounted investees and members of the Supervisory Board and the Management Board. Related party transactions are conducted on an at arm's length basis with terms comparable to transactions with third parties.

The Company has no other significant transactions or outstanding balances with its equity-accounted investees other than its equity-interest holdings.

There have been no significant related party transactions or changes in related party transactions described in ASMI's Annual Report 2019 that could have a material effect on the financial position or performance of the Company in the first six months of the 2020 financial year.

SAFE HARBOR STATEMENT

In addition to historical information, some of the information posted or referenced herein or on this website contains statements relating to our future business and/or results, including, among others, statements regarding future revenue, sales, income, expenditures, sufficiency of cash generated from operations, maintenance of interest in ASM Pacific Technology Ltd, business strategy, product development, product acceptance, market penetration, market demand, return on investment in new products, facility completion dates and product shipment dates, corporate transactions, restructurings, liquidity and financing matters, outlooks, and any other non-historical information. These statements include certain projections and business trends, which are 'forward-looking'. We caution readers that no forward-looking statement is a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking statements.

You can identify forward looking statements by the use of words like 'may', 'could', 'should', 'project', 'believe', 'anticipate', 'expect', 'plan', 'estimate', 'forecast', 'potential', 'intend', 'continue', and variations of these words or comparable words.

Forward-looking statements do not guarantee future performance and involve risks and uncertainties. You should be aware that our actual results may differ materially from those contained in the forward-looking statements as a result of certain risks and uncertainties. These risks and uncertainties include, but are not limited to, economic conditions and trends in the semiconductor industry and the duration of industry downturns, currency fluctuations, the timing of significant orders, market acceptance of new products, competitive factors, litigation involving intellectual property, shareholder or other issues, commercial and economic disruption due to natural disasters, terrorist activity, armed conflict, geopolitical tensions or political instability, changes in import/export regulations, epidemics and other risks indicated in our most recently filed Annual Report and other filings from time to time. The risks described are not the only ones. Some risks are not yet known and some that we do not currently believe to be material could later become material. Each of these risks could materially affect our business, revenues, income, assets, liquidity, and capital resources. All statements are made as of the date of posting unless otherwise noted, and we assume no obligation to update or revise any forward-looking statements to reflect future developments or circumstances.

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