

# INTERIM REPORT

FOR THE SIX MONTH PERIOD ENDED JUNE 30, 2018



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# GENERAL

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

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, fax is +31 88 100 8830, 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

S. Kahle-Galonske

M.C.J. van Pernis

U.H.R. Schumacher

M.J.C. de Jong from May 28, 2018

H.W. Kreutzer until May 28, 2018

## **MANAGEMENT BOARD**

C.D. del Prado, 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 NV (ASMI) is a leading supplier of semiconductor wafer processing equipment and process solutions. Our customers include the world's top semiconductor device manufacturers. We help them create faster, cheaper and more powerful semiconductors that bring greater opportunities for people to understand, create and share more.

## OUR ROLE

We design, manufacture and sell equipment and services to our customers for the production of semiconductor devices, or integrated circuits (ICs). Semiconductor ICs, often called chips, are a key technology that enable the advanced electronic products used by consumers and businesses everywhere. Our innovative technologies are used by the most advanced semiconductor manufacturers, primarily for the deposition of thin films.

Our customers' goal is to build faster, cheaper, and more powerful semiconductors. We work closely with them to make this a reality, forging mutually beneficial partnerships that enable us to help them develop their technology roadmap. At the same time, our customers become expert users of our equipment, and their insights help us to continuously improve our systems, resulting in greater productivity and lower operating costs per wafer, benefiting us, them and the end consumer. The result is value creation not only for our customers, but for all our stakeholders.

Collaboration is a vital part of our success, which is why we developed close ties with many of our stakeholders. For example, we maintain partnerships with technical institutions and universities to carry out leading-edge research and development. At the same time, working closely with our suppliers helps us manufacture, service, and sustain our products efficiently.

## COMPLEX PROCESSES

The process of making semiconductor ICs is highly complex and very costly. Semiconductor fabrication plants, called fabs, house a large set of wafer processing equipment which performs 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. The dimensions of the features within each chip continue to get smaller, as the demand for performance continues to expand.

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.

# LONG-TERM 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 that shape the world of the Internet of Things, smart cars, artificial intelligence, and cloud computing.

In the chip-making process, we are now creating transistors that are only a small number of nanometers in width. Connecting billions of nanoscopic transistors on a single chip requires an astonishing degree of precision and control. As a leading supplier of equipment and process solutions to the semiconductor industry, our technology makes this possible.

## GREATER PERFORMANCE, REDUCED ENERGY CONSUMPTION

Delivering excellence through advanced deposition technologies on dependable, cost-effective products enables us to realize the technology roadmaps we co-create with our customers. This leads to electronic devices that deliver ever-greater performance while reducing their energy consumption. Higher performance translates into more processing power, while lower energy requirements means smaller, longer-lasting, more efficient products. This enables our customers to further integrate smart technology into a wider range of their products.

The result is value creation not only for our customers, but for all of our stakeholders. For example, our employees enjoy the challenge of developing cutting-edge technology solutions, and have the opportunity for advancement. Our suppliers benefit from improved quality based on the use of statistical methods employed in our supplier process control program.

## 10 NANOMETER DEVICES

The industry's relentless push to follow Moore's Law leads to the continuous demand for smaller, faster, and cheaper semiconductor components. Thus, the minimum size of a single transistor in an integrated circuit is an important parameter. As the transistors in an integrated circuit become smaller, the cost-per-component decreases. At the same time, the operating speed of the transistor increases.

Today, our customers manufacture semiconductor devices as small as 10 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 or below 7nm. Simultaneously, in our customers' laboratories and several collaborative research environments, advanced 5nm 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.

In developing faster and smaller devices, our customers' major technology requirements are:

- › introduction of new thin-film materials and device designs needed for continued scaling;
- › reliable manufacturing of taller and narrower 3D structures in devices;
- › lithography of ever-smaller feature sizes, now much smaller than the wavelength of visible light; and
- › new manufacturing processes that reduce device variability and increase yield.

## DEVELOPING NEW MATERIALS

In order to meet our customers' needs, we are developing many new materials. For example, ALD technology is used to create ultra-thin films of exceptional quality and flatness. 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.

In addition to the development of the high-k dielectric, there is also 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. Another example of new materials is from epitaxy deposition.

## EPITAXY

Epitaxy is a process for depositing highly controlled silicon-based crystalline films. Many epitaxy steps are used to create the transistor channel and for channel engineering to improve transistor performance. Our silicon-epitaxial materials can increase the switching speed of the transistors and the circuit in which they are embedded by so-called strain engineering. Strained silicon is a layer in which the atoms are stretched beyond their normal interatomic distance, allowing higher electron mobility. This results in faster transistor switching at lower power. In 2017, we introduced a new epitaxy tool, the Intrepid ES, for advanced-node CMOS logic and memory applications, which offers an innovative closed-loop reactor temperature control system enabling precise process control, high productivity, and low cost per wafer.

## LOW-K MATERIAL SUITE

For interconnect processes, a continued demand to improve the speed at which signals travel through thin copper wires has led to the development of a full suite of low-k materials. These low-k materials can decrease the amount of delay in signal propagation, resulting in, for example, faster microprocessors. Simultaneously, these low-k materials can reduce the amount of power loss in the interconnections. We have been one of the leaders in successfully introducing these low-k materials in the market, and we are continuing to develop improvements to this low-k technology to enable faster interconnect circuits.

## 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' line, and further lower the cost per wafer of the wafer processing systems.

An excellent example of high productivity is our XP8 platform, on which we offer PEALD and PECVD processes. The XP8 incorporates eight process chambers in a compact configuration around one central handling platform. Two wafers are moved simultaneously into dual chamber modules (DCM), which generally doubles the throughput compared to single wafer movements. Eagle XP8 PEALD tools and Dragon XP8 PECVD tools are in volume manufacturing at logic and memory fabs worldwide, and demonstrate reliable advanced performance with high productivity.

## ALD AT ASMI

ALD is one of the newest technologies to deposit ultra-thin films of exceptional flatness and uniformity. This technology was brought into ASMI in 1999 with the acquisition of Microchemistry, who first developed thermal ALD technology. Plasma Enhanced ALD (PEALD) is an extension of this original ALD technology that uses plasma, which was brought into ASMI in 2001 through a partnership with Genitech, and a subsequent acquisition in 2004 and formation of ASM Korea.

The use of plasma enables us to deposit high-quality films at very low temperatures. ALD is a very versatile technology that can be used to deposit high-k insulating materials, conductors, silicon oxide, silicon nitride, and other materials. We expect the trends of continued scaling, and evolution towards 3D device structures for both logic and memory devices, to play into the strength of our ALD position. We offer ALD/PEALD processes on several of our product platforms, including single-wafer and batch systems, and for multiple wafer sizes.

## OUR BUSINESS MODEL

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.

Our business model enables us to create value for the company and all of our stakeholders. We achieve this by working with our customers to develop innovative solutions, while constantly looking at what is best for our investors, our employees, society, and other stakeholders. Fundamental to our model is R&D investment, including basic chemical, materials, and feasibility research, followed by process and product developments. We endeavor to continuously employ experts 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 on schedule so that our customers can ramp their fabrication plants. We support our customers globally with process and equipment service, and spare parts.

# MISSION, STRATEGY AND FOCUS AREAS

Our track record as an experienced innovation leader is the result of focusing on key issues and challenges within the semiconductor industry, enabling us to make the greatest difference to our customers, employees, and company stakeholders. While issues may change over time: we will continue to transform the results of 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 and shareholders 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 love.

## 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 are recognized for our technology leadership. We provide leading 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, creates growth opportunities for our employees, and continues to be the cornerstone of our strategy. 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 such as imec. 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.

### › LEADERSHIP IN DEPOSITION

We create value through our advanced thin film deposition technologies, which help leading semiconductor and technology industry partners to deliver the world of tomorrow through advanced chips. One of these technologies is ALD which is established as a mainstream technology in high-volume manufacturing, supporting virtually all of the leading customers in the semiconductor industry. As a leader in this space, ALD has turned into a key growth driver for our business. We expect that the trends of continued scaling and evolution towards 3D device structures will further expand the number of applications for ALD. We aim to maintain our leading position in ALD by leveraging on our strong expertise and established customer relationships, and by developing new applications in deposition technologies to support our customers with increasingly complex device node transitions. We are also expanding the applications that we address in epitaxy, by focusin on advanced-node applications in logic/foundry and memory.

## › OPERATIONAL EXCELLENCE

While technology leadership remains crucial, we have a responsibility to our stakeholders to continue to focus on further improving the effectiveness of our organization and the efficiency of processes. We aim to provide our customers with dependable leading-edge products and services at a consistent quality level, providing the best 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 and our Product Safety Council is focused on further improving product safety through fundamental design.

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 per wafer 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, we exert significant effort on improving the level of standardization in our equipment portfolio by migrating to common platforms, sub-assemblies and components.

## FOCUS AREAS

Within wafer processing, we focus primarily on equipment and process solutions for the deposition of thin films. Our core strengths are in ALD, epitaxy, Plasma Enhanced Chemical Vapor Deposition (PECVD), low pressure chemical vapor deposition (LPCVD) and oxidation/diffusion. With this broad portfolio of technologies, we are addressing many of the key areas on the semiconductor industry roadmap, including:

- › high-k metal gate;
- › advanced FinFET transistors;
- › dielectric spacers for multiple patterning;
- › advanced 3D memories;
- › liners, etch stops, and spacers;
- › low-k dielectrics for interconnect;
- › strained silicon for transistor channel engineering; and
- › surface pre-clean for interface control.

Our breakthrough technologies enable the industry to move to smaller line widths and better transistors that use new materials. We focus on serving the top companies that produce logic chips and memory devices, which includes addressing the needs of leading foundries. By serving the leading chipmakers, we maintain an understanding of the important requirements of the next generation of device roadmaps, enabling us to develop value-added solutions to the industry's critical issues. In some cases, new films developed for one device type can be utilized for other device types with relatively limited additional development.

# KEY FIGURES

(EUR million, except per share data and employees)	SIX MONTHS ENDED JUNE 30,	
	2017	2018
New orders	410.1	382.4
Backlog	173.2	189.1
Book-to-bill	1.1	1.0
Net sales	371.3	367.7
Gross profit	160.6	148.0
Gross profit margin %	43.3%	40.3%
Result from operations	62.1	50.0
Operating margin %	16.7%	13.6%
Share in income of investments in associates	53.5	31.1
Result from sale of ASMPT shares	101.0	–
Net earnings from operations, attributable to common shareholders	194.9	74.4
Non-current assets	1,292.6	1,100.7
Current assets	848.4	1,013.0
Total assets	2,141.1	2,113.8
Non-current liabilities	12.9	14.5
Current liabilities	143.2	156.1
Total equity	1,985.0	1,943.2
Net working capital <sup>1)</sup>	185.7	212.7
Net debt <sup>2)</sup>	(522.8)	(651.2)
Cash flows from operating activities	42.2	28.3
Cash flows from investing activities	223.3	(36.1)
Cash flows from financing activities	(101.9)	(177.5)
Number of employees	1,771	2,025
<b>Per share data</b>		
Basic net earnings per share	3.29	1.36
Diluted net earnings per share	3.25	1.34
<b>Weighted average number of shares (thousand)</b>		
Basic	59,192	54,554
Diluted	59,937	55,304

<sup>1)</sup> See Notes to the Consolidated Condensed Interim Financial Statements, Note 4.

<sup>2)</sup> Net debt is defined as debt minus cash and cash equivalents.

# INTERIM MANAGEMENT BOARD REPORT

## ASMI CONSOLIDATED RESULTS FOR THE SIX MONTHS ENDED JUNE 30, 2018

The following table shows the operating performance for the six months ended June 30, 2018, compared to the same period of previous year:

(EUR million)	SIX MONTHS ENDED JUNE 30,		
	2017	2018	CHANGE
New orders	410.1	<b>382.4</b>	(7%)
Backlog	173.2	<b>189.1</b>	9%
Book-to-bill	1.1	<b>1.0</b>	
Net sales	371.3	<b>367.7</b>	(1%)
Gross profit	160.6	<b>148.0</b>	(8%)
Gross profit margin %	43.3%	<b>40.3%</b>	
Selling, general and administrative expenses	(48.2)	<b>(56.9)</b>	18%
Research and development expenses	(49.6)	<b>(40.9)</b>	(18%)
Restructuring expenses	(0.7)	<b>(0.1)</b>	n/a
Result from operations	62.1	<b>50.0</b>	(19%)
Operating margin %	16.7%	<b>13.6%</b>	
Financing income/(expenses)	(17.9)	<b>(0.7)</b>	17.2
Income tax	(3.7)	<b>(6.1)</b>	(2.4)
Share in income of investments in associates			
ASMI share in net earnings ASMPT	66.4	<b>37.9</b>	(28.5)
Amortization of fair value adjustments from PPA	(12.9)	<b>(6.8)</b>	6.1
Result from sale of ASMPT shares	101.0	<b>-</b>	(101.0)
Net earnings from operations, attributable to common shareholders	194.9	<b>74.4</b>	(120.5)

The backlog at the end of June 2018 increased with 9% to a level of €189.1 million, compared to the end of June last year. The book-to-bill ratio was 1.0.

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 sales for any succeeding period.

The following table shows the level of new orders for the six months ended June 30, 2018 and the backlog as per June 30, 2018 compared to the comparable period of 2017:

(EUR million)	SIX MONTHS ENDED JUNE 30,		
	2017	2018	% CHANGE
<b>BACKLOG AT THE BEGINNING OF THE YEAR</b>	<b>145.1</b>	<b>171.2</b>	<b>18%</b>
New orders	410.1	382.4	(7%)
Net sales	(371.3)	(367.7)	(1%)
FX-effect	(10.7)	3.2	
<b>BACKLOG AS PER REPORTING DATE</b>	<b>173.2</b>	<b>189.1</b>	<b>9%</b>
<b>BOOK-TO-BILL RATIO (NEW ORDERS DIVIDED BY NET SALES)</b>	<b>1.1</b>	<b>1.0</b>	

## Net sales

(EUR million)	SIX MONTHS ENDED JUNE 30,		
	2017	2018	% CHANGE
Equipment sales	291.9	281.1	(4%)
Spares & service sales	79.4	86.6	9%
<b>TOTAL</b>	<b>371.3</b>	<b>367.7</b>	<b>(1%)</b>

**Total net sales** for the six months ended June 30, 2018 amounted to €367.7 million, a slight decrease of 1% compared to the same period last year. Our ALD business continued to be the key revenue driver. The impact of currency changes was a decrease of 6% year on year.

**The gross profit margin** for the six months ended June 30, 2018 decreased to 40.3% compared to 43.3% in the same period last year. The gross profit margin was impacted by new product introductions and related initial costs, and costs associated with preparation for anticipated higher activity levels. The impact of currency changes was a decrease of 6% year on year.

**Selling, general and administrative expenses** increased with 18% compared to the previous year. As a percentage of sales SG&A expenses were 15% compared to 13% for the same period previous year. The impact of currency changes was a decrease of 5% year on year.

## Research and development expenses

(EUR million)	SIX MONTHS ENDED JUNE 30,		
	2017	2018	% CHANGE
Research and development expenditure	(56.7)	(58.2)	3%
Capitalized development expenditure	15.5	22.8	47%
Amortization capitalized development expenditure	(7.1)	(5.6)	(21%)
Impairment capitalized development expenditure	(1.4)	-	n/a
<b>TOTAL</b>	<b>(49.6)</b>	<b>(40.9)</b>	<b>(18%)</b>

Total research and development expenses for the six months ended June 30, 2018 decreased with 18% compared to the comparable period previous year, mainly due to higher capitalization. As a percentage of sales R&D expenses were 11%, compared to 13% for the previous year. The impact of currency changes was a decrease of 7%.

**Result from operations** decreased to €50.0 million in the first six months of 2018 from €62.1 million for the same period previous year. Operating margin decreased to 13.6% from 16.7%. The impact of currency changes was a decrease of 6%.

### Financing income/(expenses)

(EUR million)	SIX MONTHS ENDED JUNE 30,		
	2017	2018	CHANGE
Interest income	0.7	0.8	0.1
Interest expenses	(0.7)	(1.7)	(1.0)
Foreign currency exchange results	(18.0)	0.2	18.2
<b>TOTAL</b>	<b>(17.9)</b>	<b>(0.7)</b>	<b>17.2</b>

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 includes our approximately 25% share in net earnings of ASMPT. In 2017 our share was 39% till April 24, 2017 and 34% till June 30, 2017. In the six month ended June 30, 2018 ASMPT showed a sales increase of 17% compared to the first six months of last year, from HK\$8,185 million to HK\$9,616 million. Sales were 3% above the level of the last six months of 2017 of HK\$9,337 million. ASMPT's net earnings on a 100% basis were HK\$1,397 million in the six months ended June 30, 2018. The comparable period last year, also on a 100% basis, showed net earnings of HK\$1,278 million, excluding a one-off non-cash gain of HK\$202 million related to the revaluation of the convertible bond. 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, 2018 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 2018, on a currency comparable basis, the annualized amount of this amortization is expected to amount to €13 million.

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

(EUR million)	SIX MONTHS ENDED JUNE 30,	
	2017	2018
ASMI share in net earnings ASMPT	66.4	37.9
Amortization of fair value adjustments from PPA	(12.9)	(6.8)
<b>TOTAL</b>	<b>53.5</b>	<b>31.1</b>

### Result from sale of ASMPT shares

On April 24, 2017, the Company announced the divestment of approximately 5% stake in ASM Pacific Technology Ltd (ASMPT). The transaction was settled on April 27, 2017.

The company sold 20,000,000 ordinary shares of ASMPT at a price of HK\$105.00 per share to institutional or other professional investors through a partial secondary share placement, representing a 4.90% stake in ASMPT. This share placement was executed at April 25, 2017 and settled on April 27, 2017. The placement generated gross cash proceeds for the Company of HK\$2,100,00,000 (approximately €248 million). The result of the sale was converted into euro using the transaction rate. The transaction rate is the actual rate for which the net proceeds were received. This rate was 0.11826. The Company reduced its share in ASMPT from approximately 39% to approximately 34%.

Result from sale of ASMPT shares in the consolidated statement of profit or loss:

(Amounts in thousands)	HKD	EUR
Net proceeds	2,076,464	245,565
Equity value	(493,063)	(58,310)
PPA	(793,867)	(93,884)
Realization CTA due to sale		7,637
<b>TOTAL</b>	<b>789,534</b>	<b>101,008</b>

## 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, 2018 compared to the same period of previous year:

(EUR million)	SIX MONTHS ENDED JUNE 30,	
	2017	2018
<b>NET EARNINGS FROM OPERATIONS, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>	<b>194.9</b>	<b>74.4</b>
<b>Adjustments required to reconcile net earnings to net cash from operating activities:</b>		
Depreciation, amortization and impairments	25.5	24.6
Share-based compensation	3.6	3.7
Income taxes	3.7	6.1
Non-cash financing costs	7.5	(0.7)
Investments and associates	(154.5)	(31.1)
<b>Changes in other assets and liabilities:</b>		
Accounts receivable	(17.6)	(5.8)
Inventories	(51.5)	(40.7)
Other current assets	(4.8)	(6.4)
Accounts payable and accrued expenses	36.3	8.7
Income tax paid	(1.1)	(4.4)
<b>NET CASH PROVIDED BY OPERATING ACTIVITIES</b>	<b>42.2</b>	<b>28.3</b>
Capital expenditures	(23.3)	(27.3)
Capitalized development expenditure	(15.5)	(22.8)
Purchase of intangible assets	(1.5)	(0.5)
Dividend received from associates	18.1	14.6
Proceeds from sale of ASMPT shares	245.6	-
<b>NET CASH (USED) PROVIDED IN INVESTING ACTIVITIES</b>	<b>223.3</b>	<b>(36.1)</b>
Purchase of treasury shares	(70.4)	(141.8)
Proceeds from issuance of shares and exercise of stock options	10.2	1.4
Dividend paid to common shareholders ASMI	(41.5)	(37.1)
Debt issuance fees paid	(0.1)	-
<b>NET CASH USED IN FINANCING ACTIVITIES</b>	<b>(101.9)</b>	<b>(177.5)</b>

### BALANCE SHEET

Net working capital, consisting of inventories, accounts receivable, other current assets, accounts payable, provision for warranty and accrued expenses and other payables, increased from €180 million as per December 31, 2017 to €213 million at June 30, 2018. The number of outstanding days of working capital, measured against quarterly sales, increased from 89 days at December 31, 2017 to 92 days at June 30, 2018.

### SOURCES OF LIQUIDITY

On June 30, 2018, the Company's principal sources of liquidity consisted of €651 million in cash and cash equivalents and €150 million in undrawn bank lines.

## SHARE BUYBACK PROGRAMS AND CAPITAL REPAYMENT

On June 5, 2018, ASMI announced the start of a share buyback program of ASMI's common shares up to €250 million. This program follows on ASMI's announcement on February 28, 2018, that it intended to use €250 million of the proceeds of the partial sale of a stake of approximately 9% in ASMPT for a new share buyback program. The repurchase program is part of ASMI's commitment to use excess cash for the benefit of its shareholders. On June 30, 2018, 16.6% of the program was completed at an average share price of €51.20.

On May 28, 2018, the 2018 Annual General Meeting of Shareholders (AGM), approved the proposal to distribute €4.00 per common share through a tax efficient repayment of capital. This capital repayment was paid on August 10, 2018.

The 2018 AGM also approved the proposed withdrawal of 6 million treasury shares which became effective and administered on August 1, 2018.

## SUBSEQUENT EVENTS

Subsequent events have been evaluated by the Company until August 31, 2018, the issuance date of this interim report 2018. 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 2017 Annual Report that could have a material effect on the financial position or performance of the Company in the first six months of the 2018 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 2017 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 2018.

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.

## OUTLOOK

For Q3, on a currency comparable level, we expect sales of €180-200 million and an order intake of € 200-230 million. Q3 reflects still some uncertainty around the exact timing of individual tools.

For 2018, general expectations for growth of the wafer fab equipment market are currently mid to high single digits. Based upon the current market developments we expect our sales in the second half to be stronger than in the first half. We expect to outgrow the wafer fab equipment market in 2018.

## 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, 2018 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, 2018

Management Board ASM International NV

C.D. del Prado, 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 MONTH PERIOD ENDED JUNE 30, 2018

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# CONSOLIDATED STATEMENTS OF PROFIT OR LOSS

(EUR thousand, except share data)	NOTES	SIX MONTHS ENDED JUNE 30,	
		2017 (UNAUDITED)	2018 (UNAUDITED)
<b>Net sales</b>	5	371,302	367,651
Cost of sales		(210,701)	(219,645)
<b>GROSS PROFIT</b>	5	160,602	148,006
<b>Operating expenses:</b>			
Selling, general and administrative		(48,203)	(56,905)
Research and development		(49,620)	(40,911)
Restructuring expenses		(691)	(149)
<b>TOTAL OPERATING EXPENSES</b>		<b>(98,514)</b>	<b>(97,965)</b>
<b>RESULT FROM OPERATIONS</b>	5	62,088	50,041
Finance income		691	802
Finance expenses		(660)	(1,683)
Foreign currency exchange gain (loss), net		(17,957)	198
Result from investments	3	154,501	31,071
<b>RESULT BEFORE INCOME TAXES</b>		<b>198,663</b>	<b>80,429</b>
Income taxes		(3,719)	(6,067)
<b>NET EARNINGS FROM OPERATIONS, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>		<b>194,945</b>	<b>74,362</b>
<b>Per share data</b>	7		
<b>Net earnings per share</b>			
- Basic		3.29	1.36
- Diluted		3.25	1.34
<b>Weighted average number of shares (in thousand)</b>			
- Basic		59,192	54,554
- Diluted		59,937	55,304



# CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(EUR thousand)	SIX MONTHS ENDED JUNE 30,	
	2017 (UNAUDITED)	2018 (UNAUDITED)
<b>NET EARNINGS FROM OPERATIONS, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>	<b>194,945</b>	<b>74,362</b>
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	2,781	784
Items that may be subsequently reclassified to profit or loss:		
Foreign currency translation effect	(113,754)	25,214
<b>OTHER COMPREHENSIVE INCOME, NET OF INCOME TAX</b>	<b>(110,973)</b>	<b>25,998</b>
<b>TOTAL COMPREHENSIVE INCOME, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>	<b>83,972</b>	<b>100,360</b>

# CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(EUR thousand)	NOTES	JUNE 30, 2017 (UNAUDITED)	DECEMBER 31, 2017 (AUDITED)	JUNE 30, 2018 (UNAUDITED)
<b>Assets</b>				
Property, plant and equipment		101,730	106,632	123,652
Goodwill		11,270	11,270	11,270
Other intangible assets	2	103,384	113,295	131,629
Investments in associates	3	1,022,451	730,552	763,549
Deferred tax assets		11,372	18,116	18,526
Other non-current assets		4,825	4,845	5,736
Evaluation tools at customers		37,587	29,710	46,355
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,292,619</b>	<b>1,014,420</b>	<b>1,100,716</b>
Inventories	4	150,160	142,849	166,622
Accounts receivable	4	148,200	163,135	169,566
Income taxes receivable		262	1,272	1,223
Other current assets	4	27,029	19,065	24,455
Cash and cash equivalents		522,782	836,461	651,173
<b>TOTAL CURRENT ASSETS</b>		<b>848,433</b>	<b>1,162,782</b>	<b>1,013,039</b>
<b>TOTAL ASSETS</b>		<b>2,141,052</b>	<b>2,177,202</b>	<b>2,113,755</b>
<b>EQUITY</b>				
Pension liabilities		1,200	386	231
Deferred tax liabilities		11,730	13,864	14,239
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>12,930</b>	<b>14,250</b>	<b>14,470</b>
Accounts payable	4	84,730	79,349	99,402
Provision for warranty	4	5,838	6,562	6,785
Income taxes payable		3,482	6,575	8,147
Accrued expenses and other payables	4	49,116	58,954	41,734
<b>TOTAL CURRENT LIABILITIES</b>		<b>143,166</b>	<b>151,440</b>	<b>156,068</b>
<b>TOTAL LIABILITIES</b>		<b>156,096</b>	<b>165,690</b>	<b>170,538</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>2,141,052</b>	<b>2,177,202</b>	<b>2,113,755</b>

# CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(EUR thousand, except share data)	NUMBER OF COMMON SHARES	COMMON SHARES	CAPITAL IN EXCESS OF PAR VALUE	TREASURY SHARES AT COST	RETAINED EARNINGS	OTHER RESERVES <sup>1)</sup>	TOTAL EQUITY
<b>BALANCE JANUARY 1, 2017</b>	<b>59,815,843</b>	<b>2,552</b>	<b>225,837</b>	<b>(151,477)</b>	<b>1,691,742</b>	<b>229,488</b>	<b>1,998,142</b>
Net earnings	-	-	-	-	194,945	-	194,945
Other comprehensive income	-	-	-	-	-	(110,973)	(110,973)
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>194,945</b>	<b>(110,973)</b>	<b>83,972</b>
Dividend paid to common shareholders	-	-	-	-	(41,470)	-	(41,470)
Compensation expense share based payments	-	-	3,626	-	-	-	3,626
Exercise stock options out of treasury shares	448,190	-	(1,692)	17,956	(6,083)	-	10,181
Vesting restricted shares out of treasury shares	105,470	-	(4,013)	4,013	-	-	-
Purchase of common shares	(1,391,032)	-	-	(69,495)	-	-	(69,495)
<b>BALANCE JUNE 30, 2017 (UNAUDITED)</b>	<b>58,978,471</b>	<b>2,552</b>	<b>223,758</b>	<b>(199,003)</b>	<b>1,839,134</b>	<b>118,515</b>	<b>1,984,956</b>
Net earnings	-	-	-	-	257,457	-	257,457
Other comprehensive income	-	-	-	-	-	(64,761)	(64,761)
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>257,457</b>	<b>(64,761)</b>	<b>192,696</b>
Dividend paid to common shareholders	-	-	-	-	-	-	-
Compensation expense share based payments	-	-	4,175	-	-	-	4,175
Exercise stock options out of treasury shares	178,749	-	(8,920)	5,948	6,083	-	3,111
Vesting restricted shares out of treasury shares	12,847	-	(488)	488	-	-	-
Purchase of common shares	(3,029,914)	-	-	(174,032)	-	-	(174,032)
Cancellation of common shares out of treasury shares	-	(60)	-	61,945	(61,885)	-	-
<b>Other movements in investments and associates:</b>							
Dilution	-	-	-	-	606	-	606
<b>BALANCE JANUARY 1, 2018</b>	<b>56,140,153</b>	<b>2,492</b>	<b>218,525</b>	<b>(304,654)</b>	<b>2,041,395</b>	<b>53,754</b>	<b>2,011,512</b>
Net earnings	-	-	-	-	74,362	-	74,362
Other comprehensive income	-	-	-	-	-	25,998	25,998
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>74,362</b>	<b>25,998</b>	<b>100,360</b>
Dividend paid to common shareholders	-	-	-	-	(37,108)	-	(37,108)
Compensation expense share based payments	-	-	3,673	-	-	-	3,673
Exercise stock options out of treasury shares	64,013	-	(1,767)	3,202	-	-	1,435
Vesting restricted shares out of treasury shares	152,861	-	(7,564)	7,564	-	-	-
Purchase of common shares	(2,511,144)	-	-	(136,924)	-	-	(136,924)
<b>Other movements in investments and associates:</b>							
Dilution	-	-	-	-	269	-	269
<b>BALANCE JUNE 30, 2018 (UNAUDITED)</b>	<b>53,845,883</b>	<b>2,492</b>	<b>212,867</b>	<b>(430,812)</b>	<b>2,078,918</b>	<b>79,752</b>	<b>1,943,217</b>

<sup>1</sup> 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,	
	2017 (UNAUDITED)	2018 (UNAUDITED)
<b>Cash flows from operating activities</b>		
<b>NET EARNINGS FROM OPERATIONS, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>	<b>194,945</b>	<b>74,362</b>
Adjustments required to reconcile net earnings to net cash from operating activities:		
Depreciation, amortization and impairments	25,527	24,574
Share-based compensation	3,626	3,673
Non-cash financing costs	7,488	(716)
Share in income of investments in associates	(53,493)	(31,071)
Gain on sale of ASMPT shares	(101,008)	–
Income tax	3,719	6,067
<b>Changes in assets and liabilities:</b>		
Accounts receivable	(17,600)	(5,781)
Inventories	(51,475)	(40,721)
Other current assets	(4,817)	(6,398)
Accounts payable and accrued expenses	36,328	8,701
Income tax paid	(1,087)	(4,428)
<b>NET CASH PROVIDED BY OPERATING ACTIVITIES</b>	<b>42,153</b>	<b>28,262</b>
<b>Cash flows from investing activities:</b>		
Capital expenditures, net	(23,344)	(27,303)
Capitalized development expenditure	(15,536)	(22,845)
Purchase of intangible assets	(1,503)	(532)
Dividend received from associates	18,117	14,583
Proceeds from sale of ASMPT shares	245,565	–
<b>NET CASH (USED) PROVIDED IN INVESTING ACTIVITIES</b>	<b>223,298</b>	<b>(36,097)</b>
<b>Cash flows from financing activities:</b>		
Purchase of treasury shares ASMI	(70,443)	(141,845)
Proceeds from issuance of treasury shares	10,181	1,435
Dividends paid to common shareholders of ASMI	(41,470)	(37,108)
Debt issuance fees paid	(133)	–
<b>NET CASH USED IN FINANCING ACTIVITIES</b>	<b>(101,865)</b>	<b>(177,517)</b>
Foreign currency translation effect on cash and cash equivalents	<b>(18,961)</b>	<b>64</b>
<b>NET INCREASE / (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	<b>144,625</b>	<b>(185,288)</b>
Cash and cash equivalents at beginning of year	378,157	836,461
<b>CASH AND CASH EQUIVALENTS AT BALANCE SHEET DATE</b>	<b>522,782</b>	<b>651,173</b>

# NOTES TO CONSOLIDATED CONDENSED INTERIM FINANCIAL STATEMENTS

## **NOTE 1. GENERAL INFORMATION / SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### **GENERAL INFORMATION**

ASM International NV (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 NV, 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, 2018 were authorized for issue by the Management Board on August 31, 2018.

The consolidated condensed interim financial statements have not been audited or reviewed by an external auditor.

### **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 2017 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 2017 Annual Report and are based on IFRS as endorsed by the European Union.

#### **Change in accounting policies**

IFRS 9 Financial instruments and IFRS 15 Revenue from Contracts with Customers are effective for interim and annual periods beginning after January 1, 2018. We concluded that the timing of recognition for installation, conditional equipment sales and fixed fee royalties are impacted. ASMI selected full retrospective adoption and will publish restated financial statements in this Interim Report and the Annual Report 2018.

No further new standards and interpretations became effective as of January 1, 2018 which impact the consolidated condensed interim financial statements.

#### **New and amended standards adopted by the Company**

The Company applies, for the first time, IFRS 9 Financial instruments and IFRS 15 Revenue from Contracts with Customers. The impact of the adoption of these new standards and the new accounting policies are disclosed below. Other amendments and interpretations apply for the first time in 2018, but do not have a material impact on the consolidated condensed interim financial statements of the Company.

#### **Financial instruments**

The Company assessed the impact of adopting IFRS 9 on the consolidated condensed interim financial Statements.

IFRS 9 largely retains the existing requirements in IAS 39 for the reclassification and measurement of financial liabilities. However, it eliminates the previous IAS 39 categories for financial assets of held to maturity, loans and receivables and available for sale. The adoption of IFRS 9 has not had a significant effect on the Group's accounting policies related to financial assets, financial liabilities and derivative financial instruments.

IFRS 9 replaces the 'incurred loss' model in IAS 39 with an 'expected credit loss' (ECL) model. The new impairment model applies to financial assets measured at amortized cost and contract assets. Under IFRS 9, credit losses are recognized earlier than under IAS 39. We have applied the expected credit loss model and we did not identify additional loss as a result of the adoption.

### **Revenue from Contracts with Customers**

The Company assessed the impact of adopting IFRS 15 on the consolidated condensed interim financial statements by assessing major contracts that have an impact on net equipment sales and net spares & service sales over 2017. We have finalized our assessment on our major contracts based on which we have adopted IFRS 15 "Revenue from Contracts with Customers" with a date of the initial application of January 1, 2018. We have selected full retrospective adoption and therefore restated 2017 figures presented in our consolidated financial statements in this consolidated condensed interim financial statements.

The accounting policy for revenue recognition has been changed as detailed below.

IFRS 15 has been applied for the year ended December 31, 2017 retrospectively using the practical expedients in paragraph IFRS 15.C5, under which the Company:

- › Does not restate contracts that begin and are completed in the same annual or semi-annual reporting period (completed contracts);
- › Used the transaction price at the date the contract was completed rather than estimating variable consideration amounts in the comparative reporting periods;
- › Reflects the aggregate effect of all modifications that occurred before January 1, 2017 when identifying the performance obligations, determining the transaction price and allocating the transaction price to the satisfied and unsatisfied performance obligations; and
- › Does not disclose the amount of the transaction price allocated to the remaining performance obligations or an explanation of when we expect to recognize that amount as revenue.

Applying these practical expedients is not expected to have a significant impact on the adjusted semi-annual financial results.

### **Equipment sales, spares & services sales**

Revenue from equipment, spares & service is recognized at a point in time when the performance obligation is satisfied, when the control transfers, and is based on the amount of the transaction price that is allocated to the performance obligation.

We changed from allocating the transaction price of a contract to the elements of the contract using the relative selling price of these elements in accordance with IAS 18 to allocating the transfer price of a contract based on stand-alone selling prices determined using the adjusted market assessment approach in accordance with IFRS 15. As a result, the customer discounts and credits, within volume purchase agreements, are considered as a reduction of the transaction price. Consequently, these customer discounts and credits are allocated to the performance obligations based on the stand-alone selling price, under IAS 18 we used the relative selling price to allocate these elements.

### Revenue from installation

Installation revenue was previously recognized upon completion of installation at the customer site. At point of shipment, we deferred the portion of the sales price related to the installation.

It has been determined, in accordance with IFRS 15.35, that the customer simultaneously consumes and receives the benefits provided by the performance of the installation. As such, transfer of control takes place over the period of installation from delivery through customer acceptance, measured on a straight-line basis, as our performance is satisfied evenly over this period of time.

The details of the significant changes and quantitative impact of the changes are disclosed below:

Impact on the interim consolidated statement of financial position

(EUR thousand)	JUNE 30, 2017 AS PREVIOUSLY REPORTED	IFRS	JUNE 30, 2017 AS ADJUSTED
<b>Assets</b>			
Non-current assets	1,292,619	-	1,292,619
Current assets	848,433	-	848,433
<b>TOTAL ASSETS</b>	<b>2,141,052</b>	<b>-</b>	<b>2,141,052</b>
<b>Equity and liabilities</b>			
<b>EQUITY</b>			
	<b>1,975,427</b>	<b>9,529</b>	<b>1,984,956</b>
Non-current liabilities	12,930	-	12,930
Current liabilities	152,695	(9,529)	143,166
<b>TOTAL LIABILITIES</b>	<b>165,625</b>	<b>(9,529)</b>	<b>156,096</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>2,141,052</b>	<b>-</b>	<b>2,141,052</b>

Impact on the interim consolidated statement of profit or loss

(EUR thousand)	SIX MONTHS ENDED JUNE 30, 2017		
	AS PREVIOUSLY REPORTED	IFRS	AS ADJUSTED
<b>Net sales</b>	<b>346,513</b>	<b>24,789</b>	<b>371,302</b>
Cost of sales	(195,439)	(15,260)	(210,701)
<b>GROSS PROFIT</b>	<b>151,074</b>	<b>9,529</b>	<b>160,602</b>

### Impact of standards issued but not yet applied by the Company

IFRS 16 Leases was issued in January 2016 and was endorsed by the EU. IFRS 16 will supersede the current IAS 17 Leases and the related interpretations when it becomes effective. IFRS 16 will result in leases being recognized on the balance sheet, as the distinction between operating and finance leases is removed for lessees.

The Company is in the process of implementing IFRS 16. The complete overview of existing operating lease contracts has been determined (mainly real estate and car leases) and we are implementing a new system to support the accounting process.

The new standard was discussed with management and internal stakeholders such as finance, procurement, legal, human resources to identify potential adjustments for the processes, if needed. We are analyzing the preliminary quantitative impact of IFRS 16.

We are assessing possible adjustments, such as following the change in the definition of the lease term, including extension and termination options and the possible use of the practical expedients which may be used under IFRS 16. It is therefore, at this moment, not possible to estimate the amount of right-of use assets and lease liabilities that will have to be recognized on adoption of the new standard and how this may affect the Company's financial statements.

The standard is mandatory for financial years commencing on or after January 1, 2019. We decided not to adopt the standard before its effective date. The Company intends to apply the modified retrospective approach. Comparative information will not be restated but the cumulative effect of adopting IFRS 16 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019.

## USE OF ESTIMATES AND JUDGMENTS

The preparation of the Company's Consolidated 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.

## NOTE 2. 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
<b>BALANCE JANUARY 1, 2017</b>	<b>85,926</b>	<b>11,989</b>	<b>2,264</b>	<b>100,179</b>
Additions	15,536	1,445	58	17,039
Amortization for the period	(7,096)	(367)	(341)	(7,804)
Impairments	(1,351)	–	–	(1,351)
Foreign currency, translation effect	(4,653)	(26)	–	(4,679)
<b>BALANCE JUNE 30, 2017 (UNAUDITED)</b>	<b>88,362</b>	<b>13,041</b>	<b>1,981</b>	<b>103,384</b>
Additions	23,079	890	–	23,969
Amortization for the period	(6,192)	(1,126)	(337)	(7,655)
Reclassification	–	(66)	–	(66)
Impairments	(2,986)	–	–	(2,986)
Foreign currency, translation effect	(3,342)	(10)	1	(3,351)
<b>BALANCE JANUARY 1, 2018</b>	<b>98,921</b>	<b>12,729</b>	<b>1,645</b>	<b>113,295</b>
Additions	22,845	532	–	23,377
Amortization for the period	(5,577)	(1,834)	(335)	(7,746)
Impairments	–	–	–	–
Foreign currency, translation effect	2,700	3	–	2,703
<b>BALANCE JUNE 30, 2018 (UNAUDITED)</b>	<b>118,889</b>	<b>11,430</b>	<b>1,310</b>	<b>131,629</b>

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 2017 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 3. INVESTMENTS IN ASSOCIATES

The changes in the investments in associates are as follows:

(EUR thousand)	ASMPT					TOTAL
	LEVITECH	NET EQUITY SHARE	OTHER (IN)TANGIBLE ASSETS AND FAIR VALUE CHANGES	GOODWILL	TOTAL ASMPT	
<b>BALANCE JANUARY 1, 2017</b>	-	<b>432,532</b>	<b>123,211</b>	<b>662,281</b>	<b>1,218,024</b>	<b>1,218,024</b>
Share in net earnings of investments in associates	-	66,377	-	-	66,377	66,377
Other comprehensive income of investments in associates	-	2,781	-	-	2,781	2,781
Carrying amount of the divestment	-	(58,310)	(13,848)	(80,036)	(152,194)	(152,194)
Amortization recognized (in)tangible assets	-	-	(12,884)	-	(12,884)	(12,884)
Dividends	-	(18,117)	-	-	(18,117)	(18,117)
Foreign currency translation effect	-	(22,828)	(8,347)	(50,361)	(81,536)	(81,536)
<b>BALANCE JUNE 30, 2017 (UNAUDITED)</b>	-	<b>402,435</b>	<b>88,132</b>	<b>531,884</b>	<b>1,022,451</b>	<b>1,022,451</b>
Share in net earnings of investments in associates	-	46,047	-	-	46,047	46,047
Other comprehensive income of investments in associates	-	(5,361)	-	-	(5,361)	(5,361)
Carrying amount of the divestment	-	(111,365)	(20,709)	(137,285)	(269,359)	(269,359)
Amortization recognized (in)tangible assets	-	-	(9,927)	-	(9,927)	(9,927)
Dividends	-	(18,341)	-	-	(18,341)	(18,341)
Dilution ASMPT share to 25.18%	-	1,491	(112)	(773)	606	606
Foreign currency translation effect	-	(9,235)	(3,644)	(22,685)	(35,564)	(35,564)
<b>BALANCE JANUARY 1, 2018</b>	-	<b>305,671</b>	<b>53,740</b>	<b>371,141</b>	<b>730,552</b>	<b>730,552</b>
Share in net earnings of investments in associates	-	37,913	-	-	37,913	37,913
Other comprehensive income of investments of associates	-	784	-	-	784	784
Amortization recognized (in)tangible assets	-	-	(6,842)	-	(6,842)	(6,842)
Carrying amount of the divestment	-	-	-	-	-	-
Dividends	-	(14,583)	-	-	(14,583)	(14,583)
Dilution ASMPT share to 25.47%	-	(4,549)	558	4,260	269	269
Foreign currency translation effect	-	5,031	1,158	9,267	15,456	15,456
<b>BALANCE JUNE 30, 2018 (UNAUDITED)</b>	-	<b>330,267</b>	<b>48,614</b>	<b>384,668</b>	<b>763,549</b>	<b>763,549</b>

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 December 31, 2017 under equity accounting amounts to HK\$66.47 whereas the level 1 fair value per share (being the market price of a share on the Hong Kong Stock Exchange) was HK\$108.90 as per December 31, 2017. Management concluded that based on quantitative analysis no impairment of its share in ASMPT existed as per December 31, 2017.

In April 2017, the Company divested a 4.9% stake in ASMPT for the proceeds of €246 million. In November 2017, the Company divested a 9.1% stake for the proceeds of €445 million. The Company has accounted for the remaining stake as an associate because the Company continues to have significant influence in ASMPT. The Company was considered to have significant influence over this entity due to the fact that it had board representation.

In December 2017, 2,238,100 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 issued under the plan in 2017 have diluted ASMI's ownership in ASMPT further to 25.18% as of December 31, 2017.

During the first six months of 2018, ASMPT canceled 4,657,500 shares, increasing our ownership to 25.47%.

At June 30, 2018, the book value of our equity method investment in ASMPT was €764 million. The historical cost basis of our 25.47% share of net assets on the books of ASMPT was €330 million as of June 30, 2018, resulting in a basis difference of €433 million. €49 million of this basis difference has been allocated to property, plant and equipment and intangibles assets. The remaining amount was allocated to equity method 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, 2018 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 2018: 1 HK\$: €0.10587 and for 2017: 1 HK\$: €0.11835):

(HK\$ million)	SIX MONTHS ENDED JUNE 30,	
	2017	2018
Net sales	8,185.4	<b>9,616.4</b>
Earnings before income tax	1,683.3	<b>1,834.8</b>
Net earnings	1,480.0	<b>1,397.4</b>

Summarized 100% statement of financial position information for ASMPT equity method investment excluding basis adjustments (foreign currency exchange rate as per June 30, 2018: 1 HK\$: €0.10933, December 31, 2017: 1 HK\$: €0.10670 and as per June 30, 2017: 1 HK\$: €0.11227):

(HK\$ million)	JUNE 30, 2017	DECEMBER 31, 2017	JUNE 30, 2018
Current assets	13,687	14,572	<b>16,759</b>
Non-current assets	3,810	4,029	<b>4,759</b>
Current liabilities	4,645	4,784	<b>9,201</b>
Non-current liabilities	2,392	2,439	<b>461</b>
Equity	10,460	11,377	<b>11,861</b>

#### NOTE 4. WORKING CAPITAL

Net working capital is composed as follows:

(EUR thousand)	JUNE 30, 2017	DECEMBER 31, 2017	JUNE 30, 2018
Inventories	150,160	142,849	<b>166,622</b>
Accounts receivable	148,200	163,135	<b>169,566</b>
Other current assets	27,029	19,065	<b>24,455</b>
Accounts payable	(84,730)	(79,349)	<b>(99,402)</b>
Provision for warranty	(5,838)	(6,562)	<b>(6,785)</b>
Accrued expenses and other payables	(49,116)	(58,954)	<b>(41,734)</b>
<b>NET WORKING CAPITAL</b>	<b>185,705</b>	<b>180,184</b>	<b>212,722</b>

#### NOTE 5. 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 25.47% 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.

Geographical information is summarized as follows:

(EUR thousand)	SIX MONTHS ENDED JUNE 30, 2017			
	FRONT-END	BACK-END 100%	DECONSOLIDATED	TOTAL
Net sales	371,302	968,742	(968,742)	371,302
Gross profit	160,602	392,427	(392,427)	160,602
Result from operations	62,088	209,125	(209,125)	62,088
Interest income (expenses)	31	(9,906)	9,906	31
Foreign currency exchange results	(17,957)	-	-	(17,957)
Result from investments in associates	-	-	154,501	154,501
Income taxes	(3,719)	(24,064)	24,064	(3,719)
Net earnings	40,443	175,155	(20,654)	194,945
Cash flows from operating activities	42,153	37,037	(37,037)	42,153
Cash flows from investing activities	205,181	57,298	(39,181)	223,298
Cash flows from financing activities	(101,865)	(55,667)	55,667	(101,865)
Cash and cash equivalents	522,782	269,229	(269,229)	522,782
Goodwill	11,270	48,362	(48,362)	11,270
Other intangible assets	103,384	63,424	(63,424)	103,384
Investments in associates	-	-	1,022,451	1,022,451
Other identifiable assets	481,165	1,583,342	(1,583,342)	481,165
Total assets	1,118,601	1,964,357	(941,906)	2,141,052
Total debt	-	274,438	(274,438)	-
Headcount <sup>1)</sup>	1,771	14,640	(14,640)	1,771

<sup>1)</sup> Headcount includes employees with a fixed contract, and excludes temporary workers.

(EUR thousand)	SIX MONTHS ENDED JUNE 30, 2018			
	FRONT-END	BACK-END 100%	DECONSOLIDATED	TOTAL
Net sales	367,651	1,018,086	(1,018,086)	367,651
Gross profit	148,006	414,176	(414,176)	148,006
Result from operations	50,041	202,824	(202,824)	50,041
Interest income (expenses)	(881)	(8,576)	8,576	(881)
Foreign currency exchange results	198	-	-	198
Result from investments in associates	-	-	31,071	31,071
Income taxes	(6,067)	(46,301)	46,301	(6,067)
Net earnings	43,291	147,947	(116,876)	74,362
Cash flows from operating activities	28,262	96,479	(96,479)	28,262
Cash flows from investing activities	(50,680)	(49,896)	64,479	(36,097)
Cash flows from financing activities	(177,517)	(14,740)	14,740	(177,517)
Cash and cash equivalents	651,173	270,069	(270,069)	651,173
Goodwill	11,270	69,567	(69,567)	11,270
Other intangible assets	131,629	84,616	(84,616)	131,629
Investments in associates	-	-	763,549	763,549
Other identifiable assets	556,134	1,928,345	(1,928,345)	556,134
Total assets	1,350,206	2,352,597	(1,589,048)	2,113,755
Total debt	-	357,078	(357,078)	-
Headcount <sup>1)</sup>	2,025	14,724	(14,724)	2,025

<sup>1)</sup> 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:

(EUR thousand)	SIX MONTHS ENDED JUNE 30,			
	2017		2018	
	NET SALES	PROPERTY, PLANT AND EQUIPMENT	NET SALES	PROPERTY, PLANT AND EQUIPMENT
United States	€116,283	€44,758	€71,409	€49,058
Europe	37,969	7,953	74,182	6,632
Asia	217,050	49,019	222,060	67,962
<b>TOTAL</b>	<b>€371,302</b>	<b>€101,730</b>	<b>€367,651</b>	<b>€123,652</b>

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

## NOTE 6. LITIGATION AND ENVIRONMENTAL MATTERS

We are party from time to time to various legal proceedings and claims generally incidental to our business, including without limitation to, intellectual property and product liability claims. For each of these proceedings and claims, our management evaluates, based on the relevant facts and legal principles, the likelihood of an unfavorable outcome and whether the amount of the loss can be reasonably estimated, in connection with our determination of whether or not to record a charge to earnings.

As to the current litigation with Hitachi Kokusai the following is an update of the information provided earlier. In 2007, ASMI licensed Hitachi Kokusai under certain of its patents in the field of Atomic Layer Deposition. The license agreement was renewed in 2012. On August 30, 2017, ASMI initiated an arbitration with the American Arbitration Association against Hitachi Kokusai for breach of the license agreement between the parties. A hearing on liability is set for January 14, 2019. At this point of time it is difficult to determine when the arbitration will be completed. Following the expiration of the parties' patent license agreement, ASMI filed, on December 1, 2017, a suit for patent infringement against Hitachi Kokusai and its US subsidiary in the US District Court for the Northern District of California. ASMI has asserted infringement of three of its patents and is seeking both an injunction and monetary damages. This action is presently stayed pending the outcome of the arbitration. Hitachi Kokusai subsequently filed suit on December 1, 2017 for alleged patent infringement against ASMI in the US District Court for the Northern District of California. Hitachi Kokusai has asserted seven patents and also seeks an injunction and monetary damages. No specific monetary amount has been requested to date. Thereafter, on February 20, 2018, Hitachi Kokusai initiated litigation in the District of Oregon asserting four patents against ASMI. ASMI has asked the court to have that action dismissed, stayed, or transferred to the Northern District of California. No specific monetary damages has been requested to date. ASMI will vigorously defend its position in each suit asserted by or against Hitachi Kokusai.

Litigation concerning intellectual property rights is complex and usually takes a protracted period of time. Therefore in connection with these lawsuits ASMI may incur substantial legal fees and costs, and it is not certain that ASMI will prevail in the suits. At this stage it is not possible to know the outcome of the above mentioned suits, or whether other suits will be started by Hitachi Kokusai. The final outcome could potentially have a material effect. Related to the risks reference is further made to the Risk Management paragraph in the latest Annual Report.

## NOTE 7. 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,	
	2017	2018
Net earnings used for purposes of calculating net income per common share		
<b>NET EARNINGS FROM OPERATIONS</b>	<b>194,945</b>	<b>74,362</b>
Basic weighted average number of shares outstanding during the year (thousands)	59,192	54,554
Effect of dilutive potential common shares from stock options and restricted shares	745	750
<b>DILUTIVE WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING</b>	<b>59,937</b>	<b>55,304</b>
<b>Basic net earnings per share:</b>		
from operations	3.29	1.36
<b>Diluted net earnings per share:</b>		
from operations	3.25	1.34

## NOTE 8. 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 Group 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 2017 that could have a material effect on the financial position or performance of the Company in the first six months of the 2018 financial year.

## SAFE HARBOR STATEMENT

In addition to historical information, some of the information posted or referenced 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 or political instability, 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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