

# CONNECTING THE DOTS



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## ABOUT

### OUR COMPANY

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### CONNECTING THE DOTS



# OUR FOUNDER'S LEGACY



**ARTHUR DEL PRADO**  
 Founder of ASMI and former CEO  
 1931 - 2016

Arthur del Prado, ASMI's founder and former CEO, played a fundamental and founding role in the semiconductor industry. He is globally viewed as a legend within our industry and his legacy extends from Silicon Valley to Tokyo. He excelled in innovation. Combined with strategic vision and a steadfast focus on the long-term, it proved the touchstone of his success and laid the foundation for the growth of ASMI and the semiconductor equipment manufacturing sector. He founded ASM in 1964, and was its Chief Executive Officer until 2008. In 1975, he established ASM Pacific Technology (ASMPT), and was Chairman until May 9, 2016. His entrepreneurship and drive led to the creation, in 1984, of ASML, a joint venture between Philips and ASMI.

Arthur del Prado was born in Batavia, Indonesia, in 1931. In 1945 his family moved to the Netherlands, where he studied Chemistry in Enschede and Economics in Amsterdam, after which he spent some time at Harvard Business School in Boston. In 1964, he started Advanced Semiconductor Materials (ASM) in Bilthoven, the Netherlands. His charisma, energy, and optimism won him the confidence and support of many. Arthur thought only in opportunities and rarely saw obstacles. He had the ability to identify and develop promising technologies at an early stage. And his vision extended far beyond the Netherlands.

In 1971 ASMI launched production of the first vapor deposition furnaces. The company grew from sales to innovation, developing and manufacturing its own technologies. In 1974 del Prado acquired a controlling stake in Fico Toolings, later ASM Fico, a manufacturer of materials for use in the semiconductor packaging industry. From the 1960s, this part of the industry was mostly located in Southeast Asia. Seeing the trend, in 1975 del Prado opened ASM Asia in Hong Kong. In 1988 these activities would be publicly listed as ASM Pacific Technology, which would grow to become the world's largest supplier of semiconductor assembly and packaging technologies.

In 1976 del Prado established ASM America, the company's first US operation, in Phoenix, Arizona, nearby Motorola Semiconductors, then the largest semiconductor manufacturer. ASM America was the company through which del Prado brought the plasma enhanced CVD process to the market, marking the breakthrough of ASMI as an original equipment supplier. In 1982 ASMI became the first Dutch company to establish a wholly-owned subsidiary in Japan.

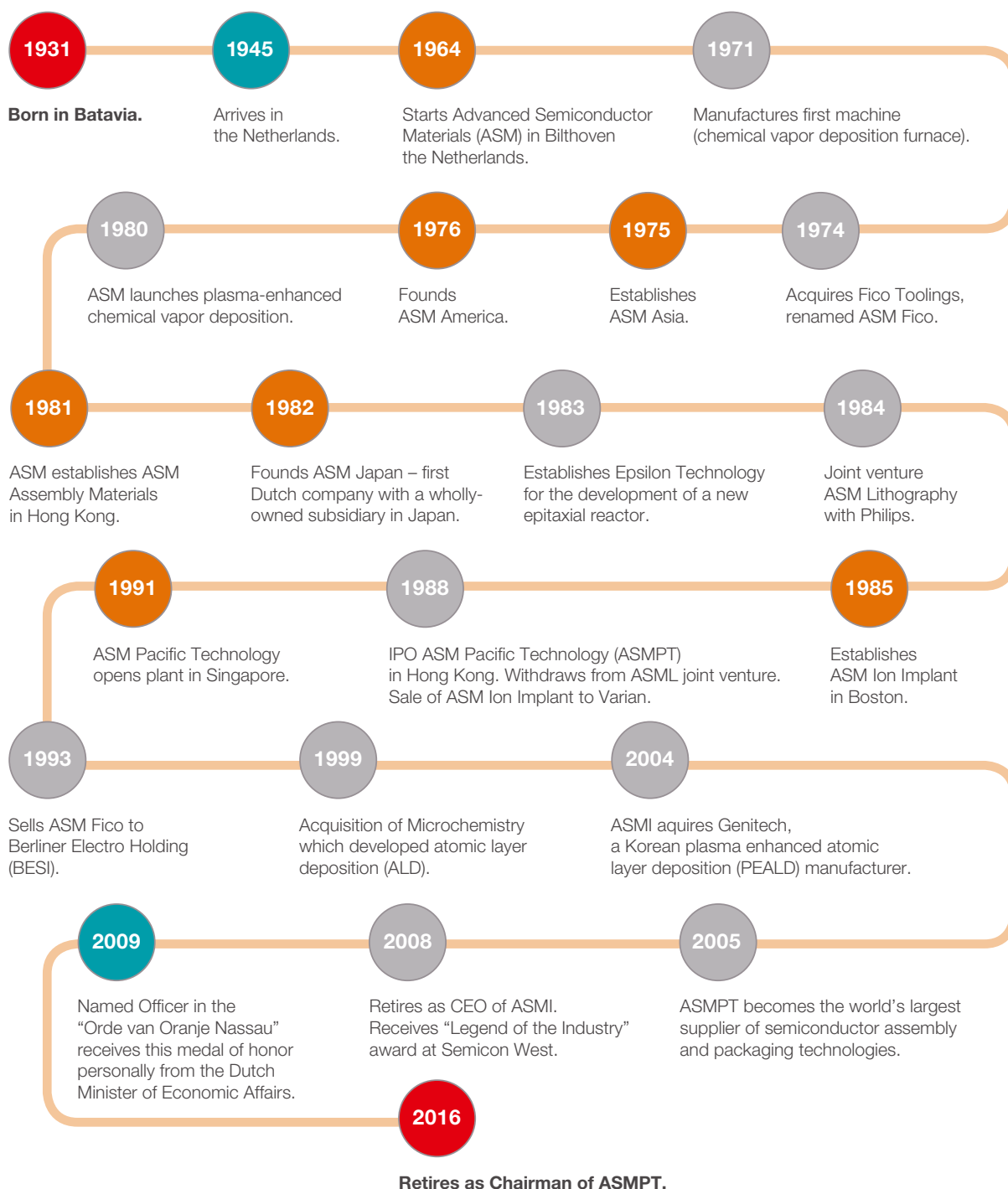
In 1984 ASMI launched a joint venture with Philips to develop and market Philips' lithography technology. The company was called ASM Lithography, now known as ASML. By the mid-eighties, ASMI's product portfolio included nearly all major semiconductor production technologies: deposition furnaces, lithography, ion implantation, die and wire bonders, and various packaging technologies.

In 1999 ASMI acquired Finnish company Microchemistry and in 2004 ASMI acquired the Korean company Genitech, cementing its position as a pioneer in atomic layer deposition (ALD).

In 2008 Arthur was awarded the prestigious 'Legend of the Industry' award at Semicon West, which is presented annually to an individual who has made extraordinary contributions to the semiconductor industry over an extended period of time. That same year, Arthur retired as CEO, and shareholders approved the appointment of his eldest son, Chuck, as his successor. Arthur remained Chairman of ASMPT until his retirement in May 2016.

Arthur died peacefully at his home on September 9, 2016. He is rightfully recognized as the father of the European semiconductor industry. Indeed it is impossible to imagine today's industry without him. From its onset, more than five decades ago, to the present day, his imprint and influence on the industry has been clear and unmistakable.

### TIMELINE ARTHUR DEL PRADO



# THE WORLD IN WHICH WE OPERATE

We live in a society that is increasingly connected. From the way we interact and travel, to the cities we inhabit, we rely on electronic devices to help us communicate, navigate, learn and play. Today, we are used to being able to work anywhere, anytime. Smart homes are helping us lower our energy requirements, saving costs and helping cut emissions. At the same time, greater connectivity in the health sector is advancing care in the community, helping people enjoy a better quality of life.

The next phase in this journey is the move towards the Internet of Things, where electronic devices connect to one another. This connected world is creating the demand for massive amounts of data, requiring ever-greater computer processing power and storage, capable of analyzing and acting on the data quickly and effectively. Achieving this requires the processing power of semiconductor chips. And ASMI's technology is one of the steps toward making it all possible.

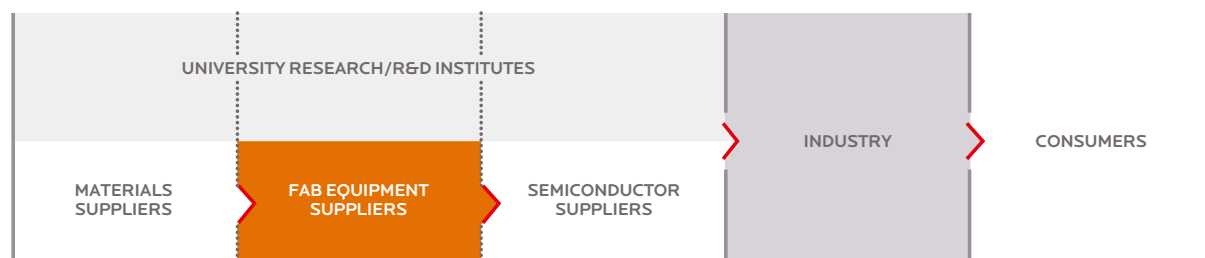
## OUR ROLE

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.

Because collaboration is such a vital part of our success, we also develop close ties with many of our other 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.

## THE VALUE CHAIN IN OUR INDUSTRY



## COMPLEX PROCESSES

The process of making semiconductor chips is both 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.

Most of our systems are designed for deposition processes when thin films, or layers, of various materials are grown or deposited onto the wafer. 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.

## THE DRIVING FORCE

Our people are the driving force and the differentiating factor behind these innovations, which is why we focus on attracting and retaining talented individuals from across the globe. We know that it takes the right mix of people, working together, to solve big challenges. Investing in our people enables us to deliver the advanced nanotechnologies that enable better products to connect lives.



# AT A GLANCE

ASM International NV (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. We help them create faster, cheaper and more powerful semiconductors that bring greater opportunities for people to understand, create and share more.

## ORGANIZATION STRUCTURE

ASMI organizes its activities in two operating segments, Front-end (wafer processing) and Back-end (assembly and packaging).



## HIGHLIGHTS \*\*

**BOOKINGS**  
EUR million

**622**

**NET SALES**  
EUR million

**598**

**OPERATING RESULT**  
(EBIT) EUR million

**82**

**NET EARNINGS\***  
EUR million

**163**

**RESULT ON INVESTMENT\***  
EUR million

**67.7**

**EARNINGS PER SHARE\***  
(Diluted) EUR

**2.66**

**OPERATING CASH FLOW**  
EUR million

**91**

**CASH**  
EUR million

**378**

**STAFF**  
Employees

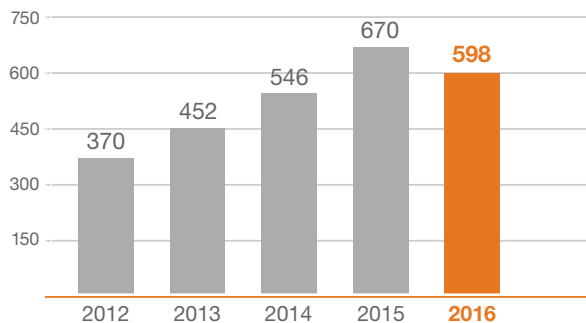
**1,670**

\* Excluding effects sale ASMPT shares.

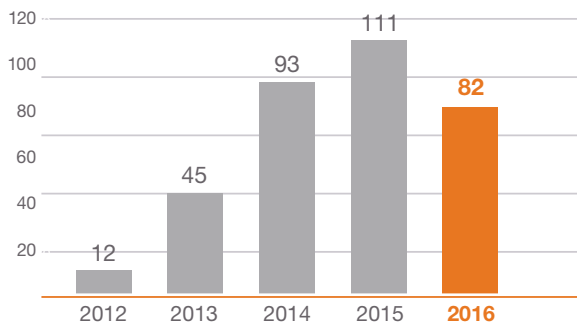
\*\* Front-end segment.



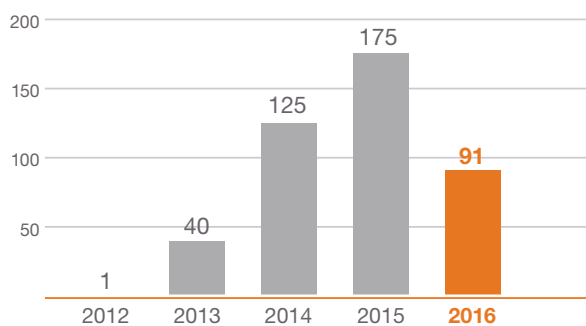
**NET SALES** EUR million



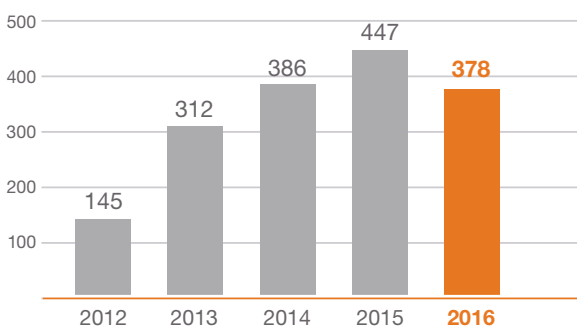
**OPERATING RESULT** EUR million



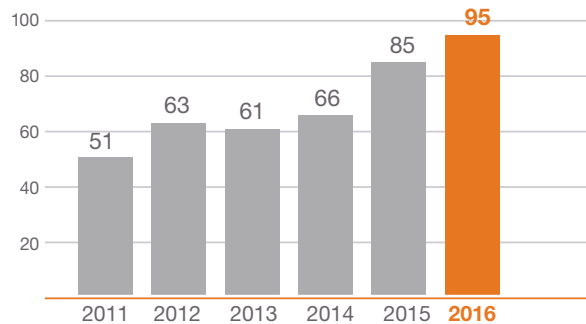
**OPERATING CASH FLOW** EUR million



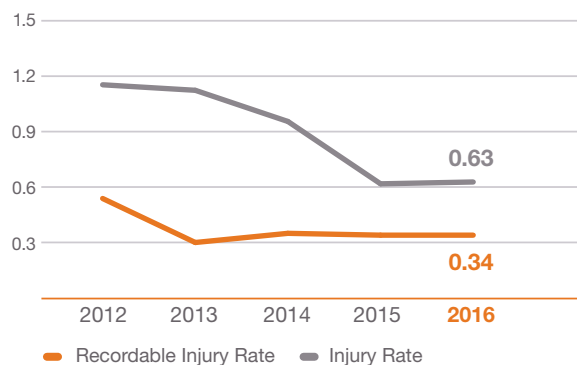
**CASH** EUR million



**INITIAL PATENT FILINGS**

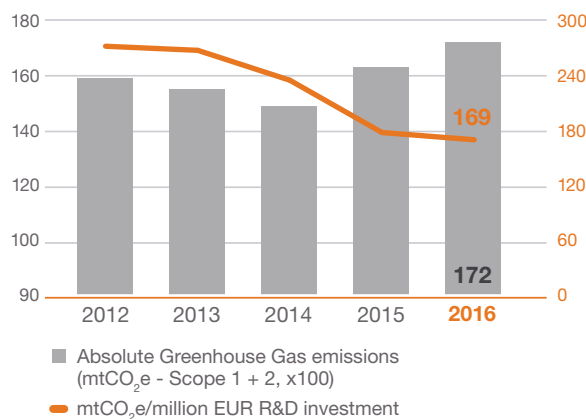


**GLOBAL INJURY AND RECORDABLE RATES**



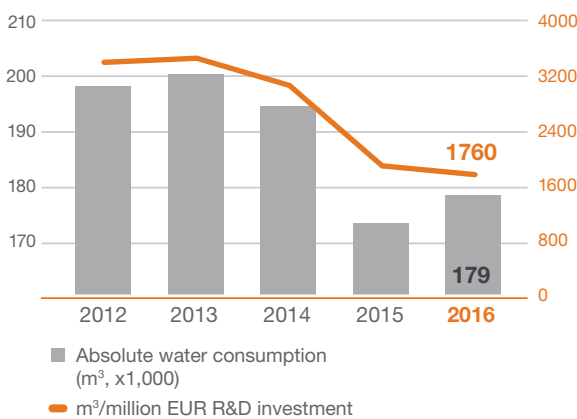
**GREENHOUSE GAS (GHG) EMISSIONS**

(Absolute and normalized per R&D investment)



**WATER CONSUMPTION**

(Absolute and normalized per R&D investment)



## KEY FIGURES

EUR MILLION (millions, except per share data and employees)	2012	2013 <sup>3)</sup>	2014	2015	2016
<b>Operations:</b>					
<b>Net sales</b>					
Front-end	370	452	546	670	598
Back-end	1,048	160	-	-	-
<b>Result from operations:</b>					
Front-end	12	45	93	111	82
Back-end	87	(4)	-	-	-
Net earnings (loss) from continuing operations	40	(343)	138	157	135
Net earnings (loss) from discontinued operations		1,405	3	-	-
<b>NET EARNINGS (LOSS) FROM OPERATIONS</b>	<b>40</b>	<b>1,062</b>	<b>141</b>	<b>157</b>	<b>135</b>
<b>Balance sheet:</b>					
Net working capital <sup>1)</sup>	477	109	108	114	157
Total assets	1,500	1,608	1,889	2,076	2,148
Net cash <sup>2)</sup>	230	312	386	447	378
<b>Backlog:</b>					
Front-end	92	115	176	128	157
Back-end	198	-	-	-	-
<b>Number of staff:</b>					
<b>Employees</b>					
Front-end	1,636	1,502	1,635	1,597	1,670
Back-end	15,768	-	-	-	-
<b>Per share data:</b>					
<b>Net earnings (loss) on operations per share</b>					
Basic net earnings (loss)	0.28	16.81	2.23	2.53	2.23
Diluted net earnings (loss)	0.28	16.55	2.20	2.50	2.21
<b>Weighted average number of shares used in computing per share amounts (in thousands):</b>					
Basic	56,108	63,202	63,558	62,114	60,616
Diluted	56,767	64,196	64,707	62,928	61,253

<sup>1)</sup> Net working capital includes accounts receivable, inventories, other current assets, accounts payable, provision for warranty and accrued expenses and other.

<sup>2)</sup> Net cash includes cash and cash equivalents less long-term debt and notes payable to banks.

<sup>3)</sup> ASMP (Back-end) was deconsolidated as from March 15, 2013.

# LETTER TO SHAREHOLDERS



WE FURTHER EXPANDED  
OUR R&D ENGAGEMENTS  
WITH **KEY CUSTOMERS**

**CHARLES D. (CHUCK) DEL PRADO**

Chairman of the Management Board,  
President and Chief Executive Officer



2016 was a mixed year in terms of our company’s performance. Despite strong gains in the logic and foundry segment, weaker demand from memory customers led to a double digit drop in the single wafer ALD market. This caused our revenue to decrease by 11% in 2016. Against that backdrop we were able to keep gross margins stable. We announced another share buyback program next to a stabilization in the proposed dividend. During 2016 we also further expanded R&D engagements with key customers, which positions ASMI well for healthy growth in the coming years.

**INCREASED REVENUE IN THE LOGIC/FOUNDRY SEGMENT**

During the year we substantially increased our revenue in the logic/foundry segment as these customers started investments in the 10nm technology node. Single wafer ALD is an enabling technology for logic and foundry customers to make this transition. Next to our existing high-k metal gate applications, the precision and film conformality of ALD is required for several new critical process steps to build these advanced devices. In addition, ALD demand for multiple patterning – an area where we already built a position in the memory market – is also increasingly needed in logic/foundry at the 10nm node. Compared to the previous 14nm/16nm node the number of single wafer ALD layers has increased significantly.

In the memory market, the single wafer ALD market saw declines in both the DRAM and the NAND flash segment. In 2015, memory, and DRAM in particular, was still a very important driver for growth in the ALD market. In 2016, overall spending dropped substantially in the DRAM segment. In the course of the year it became clear that investments in new ALD tools for the transition to the 1x node had been pushed out, resulting in a weaker development of the single wafer ALD market than initially expected. Our ALD equipment has already enabled the ramp of several generations of DRAM devices. We believe ASMI remains well positioned to support key customers in their transition to the next nodes.

“DESPITE A DECREASED REVENUE  
WE KEPT OUR GROSS MARGIN STABLE AT 44%”

**44%**

GROSS MARGIN

## “OUR REVENUE IN THE FOUNDRY SEGMENT GREW SIGNIFICANTLY IN 2016”

As far as the NAND flash segment is concerned, 2016 was, as expected, a transition year for the ALD market. The mix of spending shifted almost completely from planar NAND to 3D NAND in the course of the year. In planar NAND we had a strong position with ALD for multiple patterning, which is, however, not an important requirement in 3D NAND. This meant that ALD demand for this application, which was still a healthy driver for our business in 2015, largely disappeared in 2016. At the same time, the need for new, non-patterning, single wafer ALD applications has so far been limited in this phase of the 3D NAND transition. As customers transition to more complex ‘higher stack’ devices we believe that single wafer ALD demand is increasing step by step. In the course of 2016 we booked our first orders for high volume manufacturing from a number of 3D NAND customers. As these customers ramp production we expect a growing contribution from 3D NAND, starting in 2017.

### ALD MARKET BELIEVED TO RECOVER IN 2017

The weaker development of the ALD market in 2016 follows on three consecutive years in which we grew revenue by more than 20% annually, as ALD moved into the mainstream of leading-edge semiconductor manufacturing. We believe the structural prospects for the single wafer ALD market in the coming years remain solid and we believe growth to resume again in 2017.

The broader wafer fab equipment market had a solid year with an estimated 10% year-over-year increase. For the market as a whole increases in logic/foundry and particularly 3D NAND offset declines in DRAM and planar NAND. The difference with the weaker development in the ALD market is explained by 3D NAND spending, which strongly boosted wafer fab equipment spending but was not yet a strong driver for the single wafer ALD market.

Despite the weaker revenue development we strengthened our company’s positioning in a number of strategic areas in 2016. We substantially expanded our presence in the foundry segment where we grew our revenue significantly from 2015 to 2016. In 3D NAND, we booked orders for high volume manufacturing for multiple new applications with a number of customers. We continue our strong focus to broaden our participation in the 3D NAND market. We expect these efforts to become more visible in our results in 2017.

Our other product lines, epitaxy, vertical furnace and PECVD, continued to have a decent contribution to the bottom line. In the past year, we have increased our R&D efforts in selected parts of these activities, which we expect will create growth opportunities in the coming year.

### CONTINUED INVESTMENT IN STRATEGIC FOCUS AREAS

As far as our operational performance is concerned, in 2016 we continued to invest in strategic focus areas which are contributing to the structural maturity of the company. In 2016 we executed well on key operational improvement projects, including the development and implementation of leading-edge enterprise systems to further support more effective and efficient product development and product delivery. Our overall progress in operational excellence is also recognized by our customers and positions us well to continue to compete effectively in the future.

One of the highlights during the year was Intel’s prestigious Preferred Quality Supplier (PQS) award which we were awarded, for the first time, in March of 2016. And in February 2017, we received as one of five equipment suppliers a Supplier Excellence award from TSMC for the innovation, performance and support of ASMI’s ALD equipment and technology during 2016.

## FINANCIAL PERFORMANCE

The drop in the ALD market in 2016 caused our revenue to fall by 11%. We were able to keep gross margins stable at 44%, thanks to the measures taken in the last several years to increase the efficiency and flexibility of manufacturing and supply chain operations. The continued strong balance sheet and positive cash flow generation allowed our company to return again more cash to its shareholders. In October 2016, we announced a new share buyback program, the third consecutive program in the last three years. With the publication of our fourth quarter results we announced an increase in this program from €50 to €100 million. We will propose to the Annual General Meeting of Shareholders 2017 an ordinary dividend of €0.70 per share, which is stable compared to the dividend paid in 2016.

## ARTHUR DEL PRADO

Sadly, 2016 was also the year that our company lost its founder and former CEO, Arthur del Prado, who passed away last September. I would like to thank our shareholders and other stakeholders for the many messages of support we received. Arthur's strategic vision and steadfast focus on the long-term laid the foundation not only for the growth of ASMI, but of the entire European semiconductor equipment manufacturing sector. The best way we can remember Arthur is to continue the great work that he started.

## CORPORATE RESPONSIBILITY

This year marks the third year that we are releasing a Corporate responsibility (CR) report with this Annual report. Corporate responsibility continues to strengthen across ASMI and our value chain, and it's recognized by our stakeholders. Our Transparency Benchmark Evaluation score (per the Dutch Ministry of Economic Affairs), which measures transparency in corporate social reporting, more than doubled from the previous year. With respect to water conservation we commenced with the construction of a water reuse plant at our Phoenix facility. This is a big step and will contribute to our sustainability. These are only a few examples of how we continue to strengthen and grow Corporate responsibility at ASMI.

## ASMPT

In 2016, our 39% shareholding in ASMPT contributed solidly to our net earnings. Normalized result from investments, which includes the contribution from ASMPT, increased strongly by 52% to €68 million. ASMPT's revenue rebounded by 10% in 2016. Apart from a recovery in the overall Back-end market, ASMPT's growth was supported by strong developments in specific market segments such as equipment for CMOS image sensors and LED.

We believe the financial results reflect the success of a number of important strategic steps taken over the last few years. Importantly, the company entered new markets which enlarged its addressable market while offering potential for synergies with the existing activities. In Advanced Packaging ASMPT has built a solid and extensive product portfolio. In addition, profitability of both the semiconductor Back-end and SMT activities has markedly improved in the recent years.

**“RECEIVING INTEL'S PRESTIGIOUS PREFERRED QUALITY SUPPLIER AWARD WAS ONE OF THE HIGHLIGHTS THIS YEAR”**

“WE RECEIVED A SUPPLIER EXCELLENCE AWARD FROM TSMC FOR THE INNOVATION, PERFORMANCE AND SUPPORT OF ASMI’S ALD EQUIPMENT AND TECHNOLOGY DURING 2016.”

## OUTLOOK

Our industry has entered 2017 in good shape. Market watchers such as VLSI and Gartner expect again a mid-to-high single digit increase in Wafer Fab Equipment spending, while the increase in semiconductor end market is expected to accelerate from 2% growth in 2016 to 6% in 2017. Longer term, the outlook for our industry also looks favorable.

As our customers transition to the next technology nodes, the continuous improvements in speed, power efficiency and cost of semiconductor devices support massive increases in computing power, connectivity, data processing and storage capacity. This, in turn, helps our customers’ customers to develop new and potentially disruptive applications such as in the Internet of Things and Artificial Intelligence that will impact our everyday lives and the society at large.

The transition to the next nodes – Moore’s Law – is increasingly enabled by the introduction of new materials and complex chip architectures such as advanced FinFET technology. This plays to the strengths of ALD as more highly precise and conformal film deposition is required to manufacture the leading-edge semiconductor devices. As ALD will be used more and more for the critical process steps in leading-edge semiconductor manufacturing we expect the single wafer ALD market to grow as a percentage of the total deposition market. As a leader in ALD, our company continues to be well positioned.

We believe the single wafer ALD market will show a clear recovery in 2017. In logic/foundry ALD demand is likely to be supported by continued spending on the 10nm node and some early investments in 7nm. In NAND, we foresee a more meaningful contribution as single wafer ALD is used for more layers. In the DRAM segment demand for new ALD tools is believed to improve in the course of 2017, although overall spending is likely to remain relatively moderate compared to the spending levels in 2014/2015.

We would like to thank our employees for their continued dedication and hard work, our customers for their trust, and our shareholders for their continued support. ASMI remains committed to executing on the strategic plans that we believe will further create sustainable value for all our stakeholders.

March 9, 2017



Charles D. (Chuck) del Prado  
President and Chief Executive Officer

# CORPORATE RESPONSIBILITY

We are a global supplier of semiconductor wafer processing equipment and process solutions, primarily for the semiconductor industry. Our customers include the world's top semiconductor device manufacturers. Since 1968 we have helped the industry to create smaller, cheaper, and more powerful microchips. Our focus is on continuing to help our customers achieve their technology roadmap, by expanding our broad portfolio of innovative technologies and products.

Our corporate responsibility outlook is supported by our vision of **ZERO HARM!** This means we strive to (i) prevent all injuries to our employees and our customers' employees, (ii) reduce our environmental impact, and (iii) make positive contributions to society. We help create value for society through our technological innovations, and we try to meet the expectations of our stakeholders by engaging with them on the issues that matter to them.

We believe that our focus on sustainability not only creates value for our company, our stakeholders, and society, but also strengthens our brand and creates stronger relationships with our customers, employees, and investors. These strengthened relationships further drive our ability to innovate and bolster our product portfolio.

## PRODUCT STEWARDSHIP AND PRODUCT LIFE CYCLE MANAGEMENT

Focusing on product stewardship and product life cycle (PLC) management involves taking responsibility to minimize the product's environmental impact along its entire life cycle.

Ultimately, this approach enables our customers to be more efficient and productive. It also means ensuring that our products are safe to use throughout their life cycle.

To achieve this, we rely on our manufacturing, management controls, and robust product and process design practices to produce high quality, reliable and innovative products. We extend these processes to our supply chain partners, and work closely to develop and qualify them as strong partners.

To reduce the environmental impact during the manufacturing phase of our products, we look for ways to conserve energy, conserve water, reduce air emissions, and apply strict control and management of the use of chemicals and hazardous materials with our environmental management system. You can read more about how we manage the environmental impact of our product manufacturing in the Environment section of our Corporate responsibility report.

To further improve the safety of our products, in 2016 we reevaluated the way we design for safety throughout our product life cycle. As a consequence, we updated our Global Product Safety policy. This policy strengthens the requirements, processes, and roles and responsibilities that support **ZERO HARM!** in product safety.

Our product safety requirements are established at the start of product development. The requirements include EHS standards appropriate to our industry. The designs are continually assessed through design reviews and safety risk assessments to verify that safety requirements are being met. Independent third-party validations are done both at a sub-component and system level, at various product maturity levels. This helps ensure that our products are safe to operate and maintain, both at our own locations as well as those of our customers. You can read more about our product stewardship and safety in the Innovation and Product Stewardship section of our Corporate responsibility report.

## OUR COMMITMENT AND APPROACH TO CR

As an integral member of the semiconductor industry value chain, many of our customers are members of the Electronic Industry Citizenship Coalition (EICC). We have adopted the Electronics Industry Citizenship Coalition (EICC) Code of Conduct, which is a set of standards on social, environmental, and ethical issues in the electronics industry supply chain. The EICC code references and principally follows multiple international expectations and standards including the OECD Guidelines for Multinational Enterprises, the Universal Declaration of Human Rights, the ILO International Labor Standards, and the International Organization for Standardization (ISO). Differences between the EICC code of conduct and the OECD Guidelines include business to consumer aspects which are not relevant for our business.

We have adopted the EICC risk assessment and framework for continuous improvement, and since 2012 have completed the self-assessment questionnaires (SAQ) for each of our engineering and manufacturing sites. In 2016 all our sites achieved a 'low risk' ranking, based on the EICC risk assessment criteria. This program is monitored by our governance body, the Global EICC Committee, and the results are reported to our senior management team several times every year.

As the EICC Code of Conduct is an industry standard, we have adopted it as our Supplier Code of Conduct, and have implemented a supporting risk assessment process with our critical suppliers.

You can read more about our Corporate responsibility commitment and approach in the Integrated Corporate responsibility strategy section of our Corporate responsibility report.

## TAX PRINCIPLE

Paying tax is one of our contributions to society and a part of our value creation business model. Our income is reported in the countries where value is created. We do not use artificial tax structures solely aimed at tax avoidance. Taxes are determined and paid in accordance with all relevant rules and regulations in the countries in which we operate. We aim to follow both the letter as well as the spirit of the law.

We apply the arm's length principle to determine transfer prices in accordance with domestic and international rules and standards, such as the OECD (Organization for Economic Cooperation and Development) guidelines for Multinational Enterprises. Our disclosures are made in accordance with the relevant local and/or international regulations.

Our goal is to seek an open and constructive dialog with the tax authorities in the countries where we operate, and we aim to disclose all relevant facts and circumstances. We believe that this will enhance certainty on our respective tax position in view of the applicable tax rules and regulations.

## LOOKING AHEAD

Looking ahead, we will continue to standardize and unify our socially responsible business practices, and integrate them into our business strategies. Specifically, we will focus on the following areas and strategies to strengthen our overall corporate responsibility performance:

- › Communicate and interact with our stakeholders and use their feedback as input to design an integrated strategy, and to help manage and measure our performance and product stewardship;
- › Continue the progress we made in 2016 toward our 2020 Environmental Objectives;
- › Recruit and retain talent in technology development to maintain our technology leadership;
- › Strengthen our supply chain governance and assurance.



# CHIP MAKING

Semiconductors are vital to modern life. From the way we communicate and travel, to the cities we inhabit; from our dishwashers, microwaves and TVs, to our smartphones, PCs, and tablets, the chips we take for granted drive the devices we have come to rely on. Their use has revolutionized how we live, work, and play, enabling us to understand, create, and share information faster and more easily. Today, we expect devices to become smaller and more powerful every year, without fully understanding how.

## SEMICONDUCTOR DEVICE MANUFACTURING

The process of manufacturing semiconductor devices on a wafer can be divided into three distinct parts:

- › wafer manufacturing;
- › transistor formation (known as Front-end of the line (FEOL) processing);
- › interconnect formation (known as Back-end of the line (BEOL) processing).

We develop, manufacture and sell equipment, and provide services used by semiconductor device manufacturers, at each stage.

## WAFER PROCESSING

In the wafer manufacturing process, a large single crystal of very pure silicon is grown from molten silicon. The crystal is then sliced into a large number of thin slices, or wafers, of single crystalline silicon. These slices are polished to an atomic-level flatness before the next steps are executed. For advanced applications, some layers are deposited on the wafer for later use, by either epitaxy or diffusion/oxidation. Epitaxial wafers are even flatter and contain fewer defects at the surface than polished wafers.

## FROM WAFER TO DEVICES

During FEOL and BEOL wafer processing, multiple thin films of either electrically insulating material, also called dielectrics, or conductive material are modified, grown, or deposited on a silicon wafer.

This involves the following steps:

- › First, several material processing cycles are used in the FEOL to build the basic transistor and other components such as capacitors and resistors;
- › Second, several processing cycles are used in the BEOL to electrically connect the large number of transistors and components, and to build additional passive components such as capacitors, inductors, and resistors. Patterning of deposited layers with lithography and etching (described below) creates the transistors, passive components, and connecting wires, which together make up the integrated circuit. Each integrated circuit is a single chip or a die on the wafer.

A finished wafer may contain several dozen to several thousand individual dies. Wafer processing is performed either one wafer at a time in single wafer processing systems or many wafers at a time in batch processing systems. Multiple deposition, and patterning processes are performed on the same wafer to complete a device.

## PROCESS STEPS

The number and precise order of the process steps varies depending upon the complexity and design of the integrated circuit. The performance of the circuit is determined in part by the various electrical characteristics of the materials used in the layers of the circuit and the wafer. Simple circuits may have as few as ten layers, while complex circuits may have more than one hundred layers. The device manufacturing process is capital-intensive, requiring multiple units of several different production systems. Many different but complementary methods are used to modify, grow, or deposit materials on the wafers. The device manufacturing process on the wafer is complete when all of the layers have been deposited and patterned on the wafer.

## CLEANROOMS

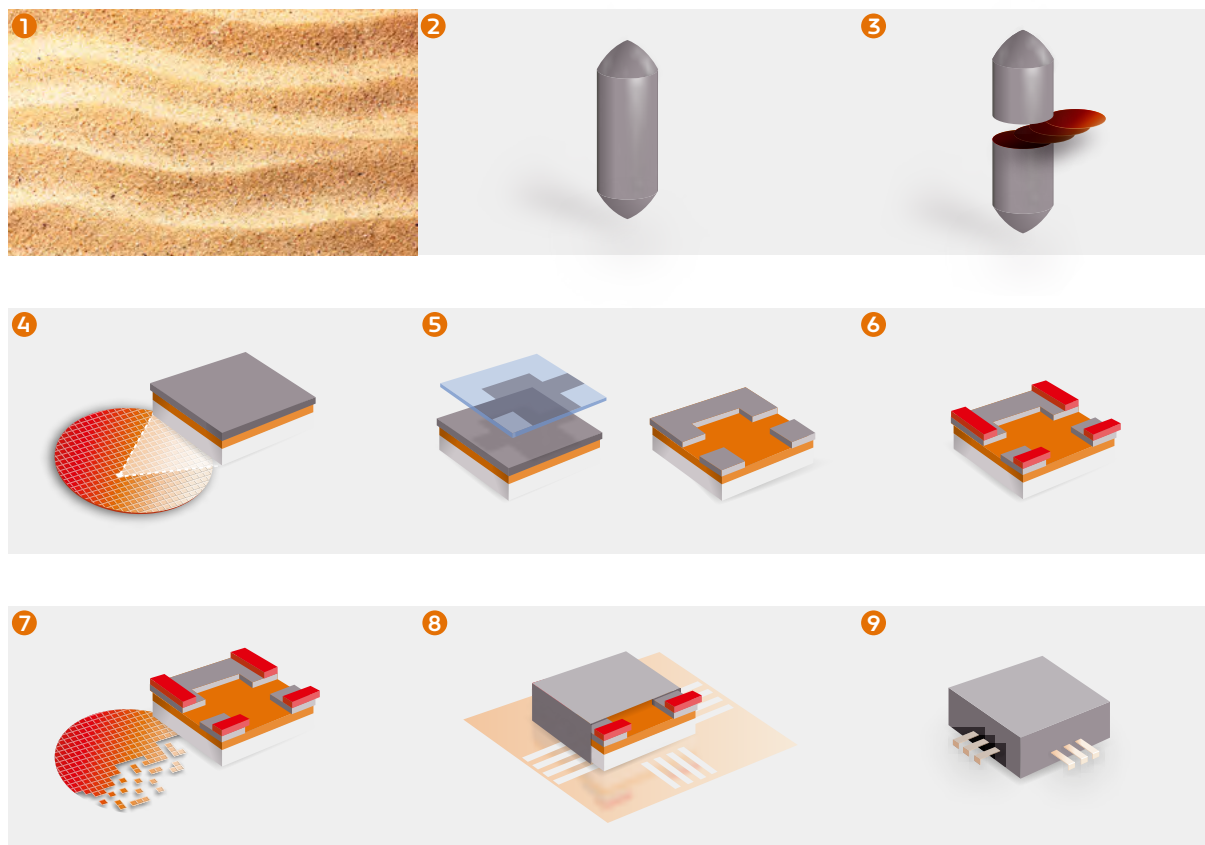
The introduction of even trace levels of foreign particles or material can make a circuit, or even an entire wafer, unusable. To reduce the level of foreign particles or material, wafer processing is performed in cleanrooms with ultra-low particle and contamination levels. The correct electrical functioning of the integrated circuits on each die is confirmed by probing. Non-functioning circuits are marked so they can later be discarded before money is spent on packaging the chip. The yield – or the percentage of known good die for a mature process – is usually well above 95%. For a process in development, the yield can be substantially smaller, and it is important to improve this as quickly as possible as it determines, to a large extent, the profitability of our customers.

## FRONT-END AND BACK-END PROCESSING

There are two basic segments of chip manufacturing to complete a final packaged chip product. We refer to them as wafer processing, and assembly and packaging. We are an equipment supplier for the Front-end part: wafer processing.

During wafer processing – the start of the manufacturing line – manufacturers process wafers made of silicon, on which the electrical components are formed. During assembly and packaging – the Back-end of the manufacturing line – the wafers are divided up into individual chips and tested before being assembled and packaged.

## CHIP MAKING PROCESS



### 1. FROM SAND TO PURE SILICON

It all starts with one simple, common substance – sand. The silicon found in sand is in the form of silicon dioxide. To make chips, manufacturers need pure silicon, which means the first step in the process is to separate the silicon from the oxygen molecules. The pure silicon needed to make silicon chips can have only one foreign atom for every billion silicon atoms. It must also be in monocrystalline form. The way atoms are organized in this form of silicon is essential to some of the later processes.

## 2. WAFER BLANKS

The silicon is then extracted, or pulled, from liquid silicon in the form of long cylindrical ingots at around 1,400 degrees centigrade.

## 3. WAFERS ARE CUT

Wafers are then cut from the ingots before being polished to produce a smooth surface. They are then sent to chip manufacturers for processing. The following steps in wafer processing are then repeated many times to create the finished wafer containing chips.

## 4. COATING A WAFER

The wafer is put into a high-temperature furnace and exposed to oxygen, forming a layer of silicon dioxide on the surface. Then chemical vapor deposition (CVD) is used to add a layer or film of nitride.

## 5. CREATING MASKS

Once the circuit layout of the chips has been designed, glass plates or masks are created which help copy the design onto the surface of the wafer. Several masks are used in sequence to add more complexity to the chips.

## 6. ADDING A PATTERN

Now comes the time to begin creating the design on the surface of the wafer using the masks as a guide. Photolithography, a type of optical printing, is used. The wafer is first coated with photoresist, which changes when exposed to ultraviolet (UV) light. The mask is placed above the wafer and precisely aligned with it. UV light shining above the mask reacts with the exposed parts of the photoresist, creating a pattern. The wafer is covered with a developing solution to develop these patterns, which are then etched, leaving the parts not exposed to UV light intact. The surface now contains 'trenches' that run across the surface.

## DEPOSITION

A dielectric or insulating film is deposited in the trenches by one of a number of deposition technologies such as CVD or ALD or PEALD. Gates are formed between the trenches, creating parts of the many millions of transistors that may be created on a single chip. Gates can be switched to allow charge carriers, such as electrons, to flow or to prevent them from flowing. Contacts are formed by each gate to create a source and drain. Ion implantation is used to implant special elements into the wafer for the source and drain. The charge carrier enters a gate channel at the source contact and exits at the drain contact.

## CONNECT

Once the basic chip components have been created, they need to be connected. The same processes of lithography, etching, and deposition, are used to form trenches filled with metal connections. These connections between components are created not just on one level, but on many. The finished wafer will contain up to several thousand individual chips in a space of 200mm to 300mm, and some chips can hold billions of transistors.

## 7. WAFERS SEPARATED INTO INDIVIDUAL CHIPS

Once wafer processing has been completed, the finished wafers are transported to another plant for cutting, assembly, and packaging. The individual wafers are cut into separate chips.

## 8. LEAD FRAMES

The chips are then placed in a lead frame, forming a protective housing.

## 9. TESTING PACKING

Each chip is then tested before being packaged to be sent for placement on circuit boards.

# CONNECTING THE DOTS



## OUR TECHNOLOGY HELPS CREATE CHIPS THAT ARE FUNDAMENTAL TO REALIZING THE EVER EXPANDING WORLD OF CONNECTIONS.

The world we live in is made up of a series of connections: people connecting to people; people connecting to machines; and machines connecting to machines. What connects them all is a power we take for granted.

That power is semiconductor chips. They sit at the heart of almost every electronic device we use today. They enable you to take a selfie and share it instantly. They run programs, apps, and operating systems. They connect your television to your wireless internet. Without them, today's society would simply disconnect.

And our technology is the first step towards making it all possible. Our semiconductor process tools enable chip manufacturers to make higher capacity, more powerful, and faster logic processor and memory chips. Our R&D investments lead to new device architectures, new materials, and new processes, together advancing nanotechnology that help us all make connections.

# CONNECTING THE DOTS



## CLOUD COMPUTING

### THE INTEGRATED EXPERIENCE

Cloud computing. Accessing your data or programs by connecting your computer to the Internet, wherever you are. Most of us recognize the convenience it brings. And it's a trend that is growing fast.

With people increasingly using integrated mobile devices to operate and manage their lives, working from a fixed office is no longer always necessary. Vast server farms and data storage centers located around the world make connecting to your virtual office a reality, no matter where you are. But to work, cloud computing relies on the technology used to produce high performance, high capacity wireless networking chips.

Our equipment and process technology is a vital link, translating the underlying physics and chemistry into the processes needed to deposit the complex layers in precise locations. Our atomic layer deposition technology is critical for chip makers to produce high density devices using 3D memory and FinFET transistors. ASMI and cloud computing: it's all connected.

## CONNECTING THE DOTS



# SMART CARS

## DRIVEN BY BIG DATA

The car has always been a symbol of independence and autonomy, enabling us to connect with each other across countries and across borders. But they are changing. Today's cars are miracles of computing power and sensors. They produce vast amounts of data, helping to make them safer, more efficient, more convenient, and more capable. And as cars become more connected they will increasingly communicate with one another, improving road safety, driver awareness, and reducing their environmental impact.

Driving this forward is microprocessor technology. It's also our innovations that are used to deposit the extremely precise, thin film layers that enable advanced solutions, such as double patterning technology, which make it possible to produce higher density memory chips. More bits per chip and faster data access time helps connected cars more quickly store and process data. We are working on the future, now.

CONNECTING  
THE DOTS



# INTERNET OF THINGS

## THE FUTURE OF SMART LIVING

As the devices we use every day become embedded with sensors and gain the ability to connect, our lives will change. We will enjoy greater functionality, efficiency, and freedom. Our homes will communicate with us and the outside world, helping fill the fridge before it's empty or enabling us to conserve energy and cut costs. Known as the Internet of Things, this vast collection of connected devices will enable us to automate many of our daily tasks, increasing their uniformity and quality and saving us valuable time.

And the driver behind the Internet of Things? The ongoing advances being made in chip technology. And it's also our thin-film deposition systems that are used to manufacture the complex sensors and wireless network controllers that make much of tomorrow's machine-to-machine interaction possible.

CONNECTING  
THE DOTS



# ARTIFICIAL INTELLIGENCE

## NEXT LEVEL LEARNING SYSTEMS

Imagine a school where the lessons are optimized for each student, as the system 'learns' what the students need to focus on. Or your doctor was automatically notified if your blood pressure increased to an unsafe level. To make education and health care more effective, we will rely on artificial intelligence to connect the dots in the treasure trove of big data we will produce. But to make that possible, we will need computers powerful enough to make cognitive decisions based on connected inputs, observations and results.

Our deposition technology is used to create transistors at the world's most advanced chip factories, enabling them to manufacture microprocessors containing billions of transistors, each only a few dozen atoms across. And through our ALD technology, transistors are now being built using a 3D vertical architecture, meaning even more transistors on each powerful chip.



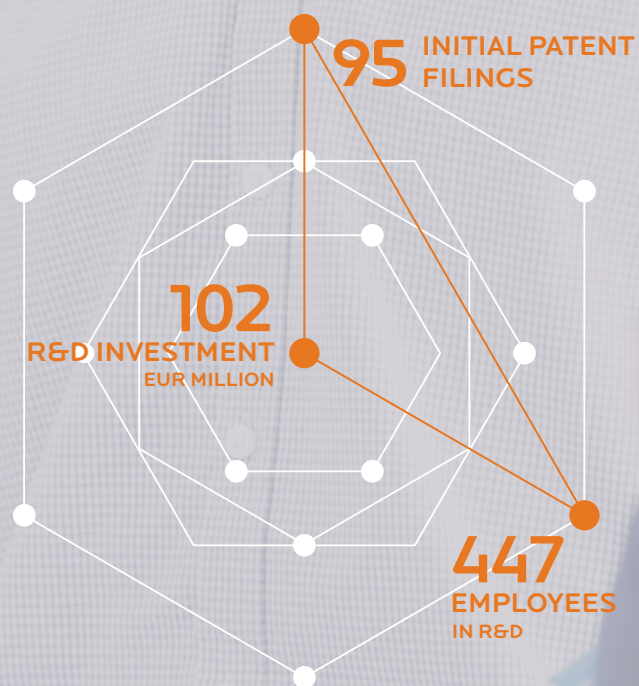
## STRATEGY & BUSINESS

### OUR STRATEGY

- > Mission, vision, strategy and focus areas
- > Value creation

### OUR INNOVATION AT WORK

- > Collaboration and innovation at work
- > Markets & products
- > Research & development
- > Breakthrough technologies
- > People
- > Patents and trademarks



# MISSION, VISION, 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 a 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:

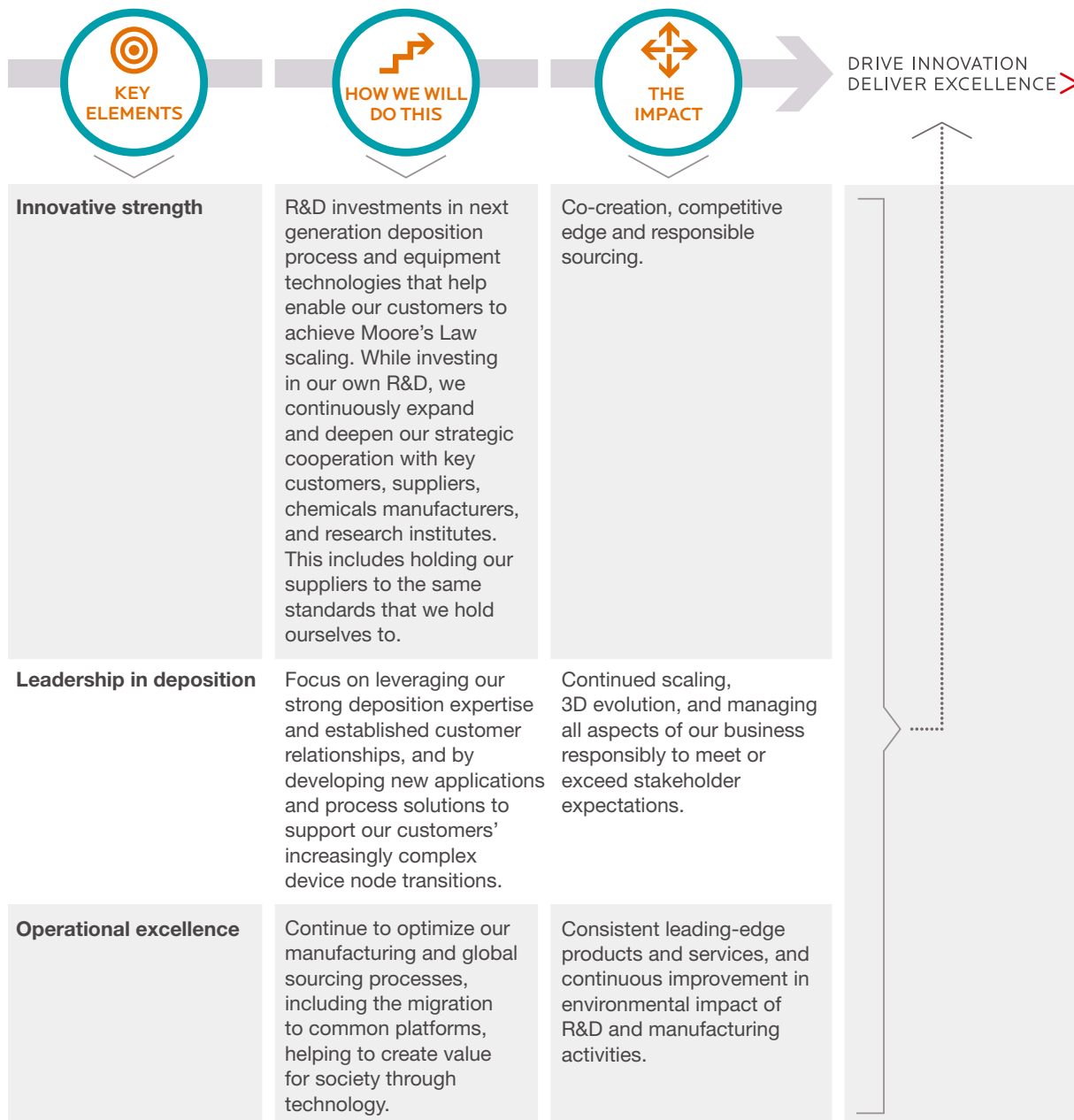
### › INNOVATIVE STRENGTH

We are recognized for our technology leadership. We provide leading 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, 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.

## OUR STRATEGY



## 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; and
- › strained silicon for transistor channel engineering.



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 top 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 many cases, new films developed for one device type can be utilized for other device types with relatively limited additional development.

### › 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.

# 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.

The chip-making process has entered the age of the nanometer, and we are now creating transistors that are only a small number of nanometers in width. But 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 and the continuous demand for smaller, faster, and cheaper semiconductor components drives the technology advances in the semiconductor manufacturing process. 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. Thus, the minimum size of a single transistor in an integrated circuit is an important parameter.

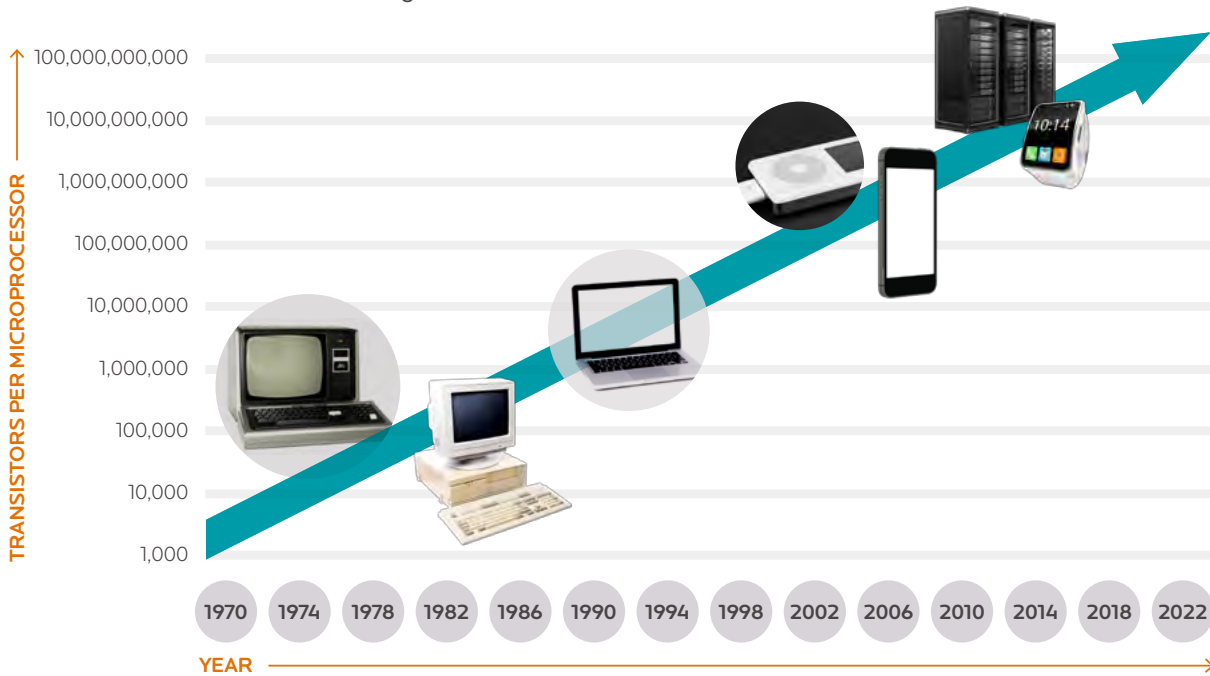
Today, our customers manufacture semiconductor devices as small as 10 nanometers (one nanometer, or nm, is one billionth of a meter), sometimes in a vertical 3D transistor or FinFET architecture. Our customers are already qualifying and testing new critical processes to generate devices with line widths 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;
- › new manufacturing processes that reduce device variability and increase yield.

## MOORE'S LAW

ASMI's technologies are focused on helping enable our customers to continue extending Moore's Law.



## 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 our silicon-germanium (SiGe) and silicon-carbon-phosphorous (SiCP) epitaxial materials that can increase the switching speed of the transistors and the circuit in which they are embedded by so-called strain engineering. This can be done without negatively affecting the power these transistors consume.

## 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. 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 DCM, or dual chamber modules, 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 the 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 Genitech 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 people, 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, and support them with new patent filings. 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 facility allows 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.

## INPUT

 <b>HUMAN</b> Employees <b>1,670</b>	 <b>INTELLECTUAL</b> R&D investment (EUR million) <b>102</b>	 <b>FINANCIAL</b> Market capital (EUR billion) <b>2.551</b> as of December 31, 2016	 <b>MANUFACTURING &amp; SUPPLIERS</b> Manufacturing supply chain spending (EUR million) <b>&gt;250</b>	 <b>NATURAL</b> Electric usage (KwH) <b>31,814,761</b>
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### OUR BUSINESS

ASMI designs, manufactures, sells and services complex wafer processing equipment used in various steps in the fabrication of semiconductor integrated circuit chips.

**CUSTOMER PARTNERSHIPS**

## OUTPUT

<b>HUMAN</b> Revenue per employee (EUR thousand) <b>358</b>	<b>INTELLECTUAL</b> Patents filed <b>95</b>	<b>FINANCIAL</b> Net sales (EUR million) <b>598</b>	<b>MANUFACTURING &amp; SUPPLIERS</b> Bookings (EUR million) <b>622</b>	<b>NATURAL</b> GHG emission scope 1&2 (mtCO <sub>2</sub> e) <b>17,181</b>
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## VALUE ADDED

ASMI's technology enables precision deposition of nanoscale thin films that help our customers build the most advanced semiconductor chips used to create the electronic systems throughout society.

## VALUE SHARED

Cash distribution to shareholders / Taxes and fees / Direct and indirect employment  
 Knowledge and skills transfer / Community involvement

All figures related to 2016 unless otherwise noted.



# COLLABORATION AND INNOVATION AT WORK

Collaboration and innovation are key to our success. While our core technologies, products, and services enable our customers to develop their technology roadmap, our capabilities hinge on the partnerships we enjoy with all our stakeholders. Partnerships that include our key customers, suppliers, research institutes, universities, society and, of course, our people. Without our people, we would not be the company we are today. Below we have outlined those areas where collaboration and innovation are vital to our continued success.

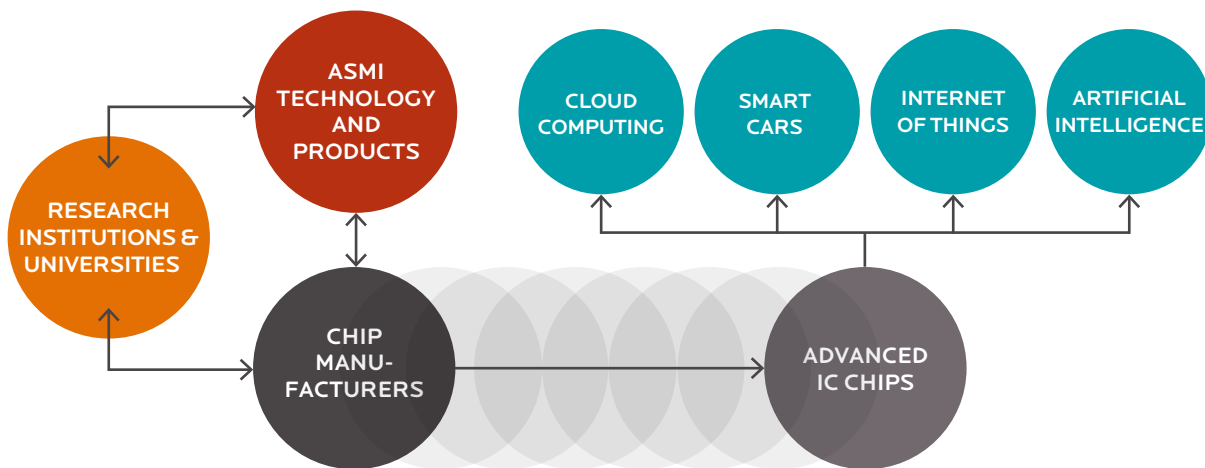
## MARKETS AND PRODUCTS

As an innovation leader for nearly a half century, the greatest contribution we make to society is through our advanced technology developments, including atomic layer deposition (ALD), plasma deposition, and epitaxy. The result? A broad range of products, services, and innovative solutions that support our customers to make the products that connect the world.

## RESEARCH AND DEVELOPMENT

Our research and development (R&D) teams develop the new materials and processes that lead to the technological breakthroughs that drive us forward. But achieving these breakthroughs involves working closely with our research partners and customers. As part of our efforts to increase innovation, we continue to pursue and enhance strategic R&D partnerships with universities, industry groups, and customers.

## DRIVING INNOVATIONS



## BREAKTHROUGH TECHNOLOGIES

Our long track record of scientific breakthroughs helps to create transistors only a few times larger than a single strand of DNA. Working alongside our customers, we have co-created technology roadmaps that have led to a range of advanced technologies, including the home computer, smartphones, medical equipment, and nearly every device containing an integrated circuit. Today, the strong relationships that enable us to develop our technologies help support the astonishing leaps behind the Internet of Things, cloud computing, artificial intelligence, and smart cars.

## PEOPLE

The world we live in is made up of a series of connections: people connecting to people; people connecting to machines; and machines connecting to machines. At ASMI, we know that it takes the right mix of people, working together, to solve big challenges. This is why we attract and invest in talented people from around the world. By investing in their future, we believe we are investing in all our futures.

# MARKETS & PRODUCTS

The semiconductor capital equipment market is composed of three major market segments: wafer processing equipment, assembly and packaging equipment, and test equipment. We operate in the semiconductor wafer processing equipment market, primarily for deposition equipment.

## MARKETS

In 2016 the semiconductor industry was driven by a US\$1.94 trillion global electronics industry (VLSI Research Chip Insider, February 14, 2017) that required approximately US\$290 billion of semiconductors. In turn, the semiconductor industry supported the approximately US\$54.4 billion semiconductor capital equipment industry, which supplies the required production systems and services.

We serve the wafer processing equipment segment, which is part of the capital equipment segment. This is worth approximately US\$35.2 billion annually. Demand for semiconductor capital equipment is driven both by growth in the market for semiconductor devices and the new technology needed to realize the next generation of devices.

In 2016 the semiconductor industry increased by about 2.1%, driving the equipment business up 11.4%. The equipment segment was driven mostly by capacity expansion in 3D NAND memory fabs and new technology generation investments in logic and foundry fabs.

## LOGIC, FOUNDRY AND MEMORY MARKETS

- › Our semiconductor wafer processing business supplies equipment to the leading semiconductor manufacturers in the logic, foundry, and memory markets, primarily for the deposition of thin films.
- › The logic market is made up of manufacturers who create chips that are used to process data. Known as the central processing unit (CPU), this microprocessor is the 'brains' of a computer system, and can be found 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.
- › The memory market covers manufacturers who make chips that store information either temporarily, such as Random Access Memory (RAM), or permanently, such as NAND non-volatile memory. The NAND memory market has evolved to include 3D NAND chips, which are designed for the vertical stacking of memory cells to increase bit density.

## ANALOG DEVICE MARKETS

We also supply equipment to leading manufacturers of analog semiconductor devices, which are important for enabling the increasing semiconductor content used in most products worldwide.

The analog market includes a wide array of chip types, including:

- › power management;
- › signal processing;
- › MEMS;
- › sensors;
- › discretes; and others.

The industry recently adopted the phrase called 'More than Moore', to identify and acknowledge a strongly-growing market of various types of analog chips which are not driven by the same Moore's Law technology scaling inflections of mainstream logic and memory chips.

## PRODUCTS

### MARKET COVERAGE

The semiconductor capital equipment market is composed of three major market segments:

- › wafer processing equipment;
- › assembly and packaging equipment;
- › test equipment.

We are active in the wafer processing segment. Within wafer processing equipment, the major segments are:

- › lithography;
- › CMP;
- › ion implant;
- › deposition;
- › etch & clean; and
- › process diagnostics.

The principal market segment in which we participate is deposition and related tools. According to VLSI, the deposition segment was worth approximately US\$8.8 billion in 2016.

Within the deposition market, the major equipment technology segments are:

- › chemical vapor deposition (CVD);
- › physical vapor deposition (PVD);
- › atomic layer deposition (ALD);
- › rapid thermal processing (RTP);
- › epitaxy; and
- › diffusion/furnace.

### 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.

Our XP platform is a high-productivity common 300mm single wafer platform that can be configured with up to four process modules. The XP platform enables high-volume multi-chamber parallel processing or integration of sequential process steps on one platform. The XP common platform benefits our customers through reduced operating costs, as many of our products use the same parts and consumables, and a common control architecture improves ease of use.

Our XP8 platform follows the basic architectural standards of the XP, but provides even higher productivity with up to eight chambers integrated on a single wafer platform with a small footprint.

## TECHNOLOGY – PRODUCT MATRIX

DEPOSITION APPLICATION	ASMI PRODUCT PLATFORM	ASMI PRODUCTS	PROCESS APPLICATION
ALD	XP <sup>1</sup>	Pulsar XP ALD system EmerALD XP ALD system	High-k gate dielectric Metal gate electrode
PEALD	XP8 <sup>1</sup>	Eagle XP8 PEALD system	Spacer for multipatterning Gate spacer Etch stop
PECVD	XP8 <sup>1</sup>	Dragon XP8 PECVD system	Inter-layer dielectric Silicon nitride
Diffusion Oxidation LPCVD ALD	Advance Series	A400 batch vertical furnace system A412 batch vertical furnace system	Furnace: - Diffusion, oxidation - Polysilicon - Silicon nitride
Epitaxy	XP <sup>1</sup>	Intrepid XP epitaxy	Silicon channel Strain layer
	Epsilon	Epsilon 2000 single wafer epitaxy system Epsilon 3200 single wafer epitaxy system	

<sup>1</sup> The XP is our standard single wafer processing platform designed to accommodate multiple process application modules with common platform standards. In 2012 ASMI launched the XP8 high productivity platform for PECVD and PEALD, based on our common XP platform standard with an expanded configuration that enables integration of up to eight chambers on one wafer handling platform.

## PRODUCT APPLICATIONS AND DESCRIPTIONS

**Atomic layer deposition (ALD)**

ASMI offers ALD tools in two technology segments: thermal ALD and plasma enhanced ALD (PEALD).

**Pulsar XP ALD system**

Pulsar XP is a 300mm thermal ALD tool designed for depositing extremely thin high-k dielectric materials required for advanced transistor gates and other applications. Pulsar is the benchmark ALD high-k gate dielectric tool for the industry. Up to four Pulsar process modules can be configured on a Pulsar XP system.

**EmerALD XP ALD system**

EmerALD XP is a 300mm thermal ALD tool designed for depositing metal gate layers for advanced high-k metal gate transistors and other applications. Up to four EmerALD process modules can be configured on an EmerALD XP system.

**Eagle XP8 PEALD system**

Eagle XP8 is a high-productivity 300mm tool for PEALD applications. The system can be configured with up to four Dual Chamber Modules (DCM), enabling eight chambers in high-volume production within a very compact footprint. The system is capable of a broad range of dielectric PEALD processes, including low-temperature spacers for multiple patterning applications.

**Advance series batch vertical furnace**

The Advance is our batch vertical furnace tool, available as the A412 for 300mm wafers and as the A400 for smaller wafer sizes. Various thermal ALD films can be deposited on the batch furnace for high productivity.

## Chemical Vapor Deposition (CVD)

ASMI offers two types of CVD tools: single wafer plasma enhanced CVD (PECVD) and batch low pressure CVD (LPCVD).

### Dragon XP8 PECVD system

Dragon XP8 is a high-productivity 300mm tool for PECVD applications. The system can be configured with up to four Dual Chamber Modules (DCM), enabling eight chambers in high-volume production within a very compact footprint. Processes include a broad range of dielectric PECVD films for applications such as interconnect dielectrics layers, passivation layers, and etch stop layers.

### Advance series batch vertical furnace

The Advance is our batch vertical furnace tool, available as the A412 for 300mm thermal LPCVD and as the A400 for LPCVD on smaller wafer sizes. CVD applications on the furnace include polysilicon, silicon nitride and silicon oxide.

## Epitaxy

We offer two families of Epitaxy tools: Intrepid and Epsilon.

### Intrepid XP epitaxy system

Intrepid XP is a 300mm epitaxy tool designed for critical transistor strain and channel layers. Processes include silicon (Si), silicon-germanium (SiGe), silicon-carbon (SiC), and other silicon-based compounds. Up to four Intrepid process modules can be configured on an Intrepid XP system.

### Epsilon

The Epsilon series is a single wafer, single chamber tool that deposits silicon-based materials for many applications, ranging from high-temperature silicon for wafer manufacturing, to low-temperature silicon, silicon-germanium (SiGe), silicon-carbon (SiC), and other silicon-based compounds. Epsilon is the market leader for epitaxy applications in the analog and power devices market.

## Diffusion

We offer batch vertical furnace tools for diffusion and oxidation applications.

### Advance series batch vertical furnace

The Advance is our batch vertical furnace tool series, available as the A412 for 300mm and as the A400 for smaller wafer sizes. Atmospheric thermal applications on the furnace include diffusion to introduce dopants in materials in controlled amounts, annealing to affect material properties by heating to a specific temperature and oxidation to form silicon oxide.

## Service and spare parts

Service and spare parts are important product offerings for ASMI's business. ASMI provides service support to our customers with technical service personnel who are trained to maintain our systems at customers' fabrication plants around the world. Our service team is located globally at regional and local service centers to assure prompt availability.

We sell spare parts for our equipment from parts stocks located at global distribution centers.

# RESEARCH & DEVELOPMENT

We have been an innovation leader for nearly 50 years. We are not only contributing to the remarkable advance of the semiconductor industry, we are shaping the industry itself. This success, and our future success, is largely dependent on our ability to develop new products and processes and to improve the features of existing products. Achieving this requires a large commitment to research and development (R&D). In 2015 and 2016, our R&D investment were €95.3 million and €101.5 million respectively. As of year-end 2016, 447 employees were employed in R&D, representing 27% of our total staff.

## GLOBAL RESEARCH

As a global company, we carry out R&D on different continents, giving us access to some of the smartest professionals working in the semiconductor sector today. In our research centers in Finland, the United States, Japan, South Korea, the Netherlands, and Belgium we are active at all stages of our innovations' life cycle, from developing the basic chemistry to implementing solutions on our equipment at our customers' production sites. We also work with specialists across a wide array of disciplines to develop our research goals, including scientists from research institutes, universities, and suppliers.

## REGIONAL EXPERTISE

With our R&D activities chiefly conducted in the principal semiconductor markets of the world, we are able to draw on innovative and technical capabilities internationally. Each geographical center provides expertise for specific products or technologies. This approach, combined with the interactions between the individual centers, enables efficient allocation of technical resources and customer interaction during development.

Under the umbrella of global product development policies, our local activities are directed both towards expanding and improving present product lines to incorporate technology advances and reduce product cost, as well as developing new products for existing and new markets. These activities require the application of physics, chemistry, materials science, chemical engineering, electrical engineering, precision mechanical engineering, software engineering, and systems engineering.

## CUSTOMER COLLABORATION

However, the most important collaborations we have are those with our global customers, with whom we co-create and jointly develop our technology roadmaps, and enabling new technologies and processes at the time our customers need them. The diversity in collaborations ranging from research and suppliers to customers means that we can bring together the best minds in the world to create new breakthroughs.

## GLOBAL PLATFORM ENGINEERING GROUP AND CORPORATE R&D

In 2010 we formed a global Platform Engineering group that addresses the needs for common platforms for the various products in our wafer processing product portfolio. Selected resources in Leuven, Belgium and Helsinki, Finland have been grouped under Corporate R&D, addressing the common needs for advanced materials research and process integration work for the 7nm, 5nm and 3nm nodes, and even beyond.

LOCATION	NUMBER OF R&D EMPLOYEES AS OF DECEMBER 31, 2016, EXCLUSIVE OF TEMPORARY WORKERS
Almere, the Netherlands	34
Leuven, Belgium	31
Helsinki, Finland	20
Phoenix, Arizona, United States	185
Cheonan, South Korea	69
Singapore	4
Tama, Japan	104
<b>TOTAL</b>	<b>447</b>

## ARRANGEMENTS WITH CUSTOMERS, INSTITUTES AND UNIVERSITIES

As part of our research and development activities, we are engaged in various formal and informal arrangements with customers, institutes and universities. As of December 31, 2016, we were engaged in several formal joint development programs with customers for 300mm applications of our products. As part of these efforts, we may sell new products to customers at a significantly reduced margin, and invest significant resources in the joint development and subsequent product qualification.

Additionally, we also occasionally cooperate with other semiconductor capital equipment suppliers in complementary fields, in order to gain knowledge on the performance of our own deposition processes, in cooperation with other processes, either in bilateral or in publicly funded projects.

In addition to cooperating with customers and other capital equipment suppliers, we also enter into research projects with technical universities and institutes. In 2011 we renewed our strategic R&D partnership with the Interuniversity Micro-Electronics Center (imec) in Leuven, Belgium. Our Epsilon, A412, Pulsar, EmerALD, Dragon, and Eagle-based products are involved in this partnership. From 2012 through 2016, we significantly expanded our partnership with additional ALD and epitaxy capability. This gives us the opportunity to investigate, both jointly and independently, the integration of individual process steps in process modules and electrically active devices. We have partnered with imec since 1990, with significant on-site representation since 1994.

In December 2003, we commenced a five-year partnership with the University of Helsinki that aims to further develop atomic layer deposition processes and chemistries. This partnership was extended for a second and then a third five-year period, extending into December 2018.

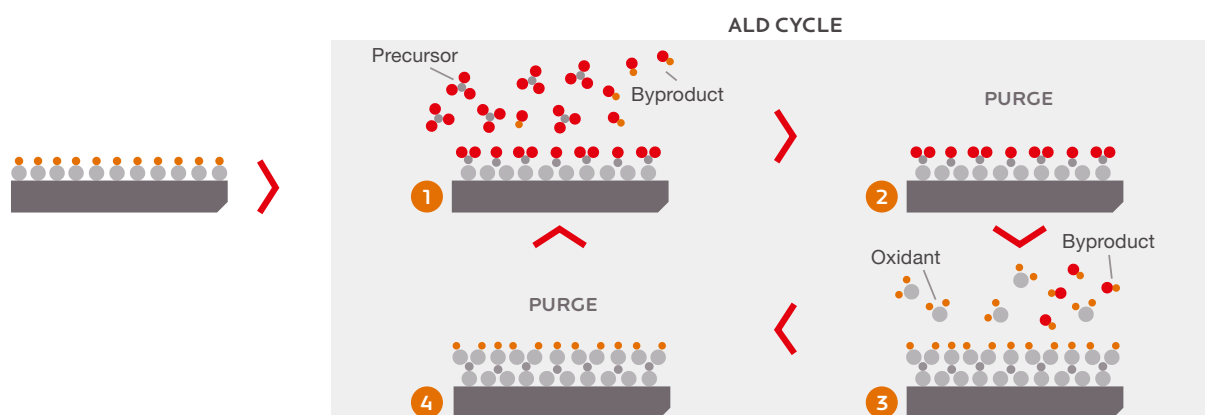
We participate in publicly funded programs to research and develop the production technology for semiconductor devices with line widths of 7nm and below, and in 'more than Moore' technologies. We are also involved in several cluster development programs in the Eureka initiative, as an active member of the AENEAS association as mentor or reviewer, and in roadmapping activities.

We contribute to several process and equipment development projects at the major Dutch technical universities through the Dutch FOM and STW funding organizations for fundamental and applied research.

# BREAKTHROUGH TECHNOLOGIES

We are the leading supplier of atomic layer deposition (ALD) equipment and process solutions for the semiconductor industry, and were one of the first companies to recognize ALD's potential for the industry. Today, our ALD process technology delivers the highest performance available to support the next generation of semiconductor devices.

## ATOMIC LAYER DEPOSITION



## INCREDIBLE PRECISION

ALD allows us to deposit thin films atom-by-atom on silicon wafers, meaning we can deliver atomic-scale thickness control, high-quality deposition film properties and large area uniformity.

With such precision, we can use materials that previously could not be considered, and develop 3D structures that are vital to the future of electronics. 3D technology provides a number of real benefits, including saving space while delivering chips with higher performance and consuming less power.

## ALD IN VOLUME MANUFACTURING

Our ALD technology is being used to build ICs for a wide range of leading-edge products, including high-performance computers and smartphones. The results of ALD are everywhere in the world around us.

ALD is also our basic platform for the development of a wide range of new materials. Our research centers across the globe are working on ALD, and we are conducting joint research projects with Europe's largest independent research institute, imec. Taken together, this helps make ALD one of the principal drivers for future growth in microelectronics.

## ALD – A DRIVER OF FUTURE GROWTH

Using ALD, we can deposit new materials several atoms thick on semiconductor wafers, producing ultra-thin films of exceptional quality and uniformity.

In PEALD, plasma is used to provide the reaction energy for the process, enabling us to use lower temperatures for low-thermal budget applications. This technology was introduced in DRAM and planar NAND flash manufacturing in the 3x nm node, for spacer-defined double patterning (SDDP), a technique that can reduce device dimensions, postponing the need for new lithography technologies.



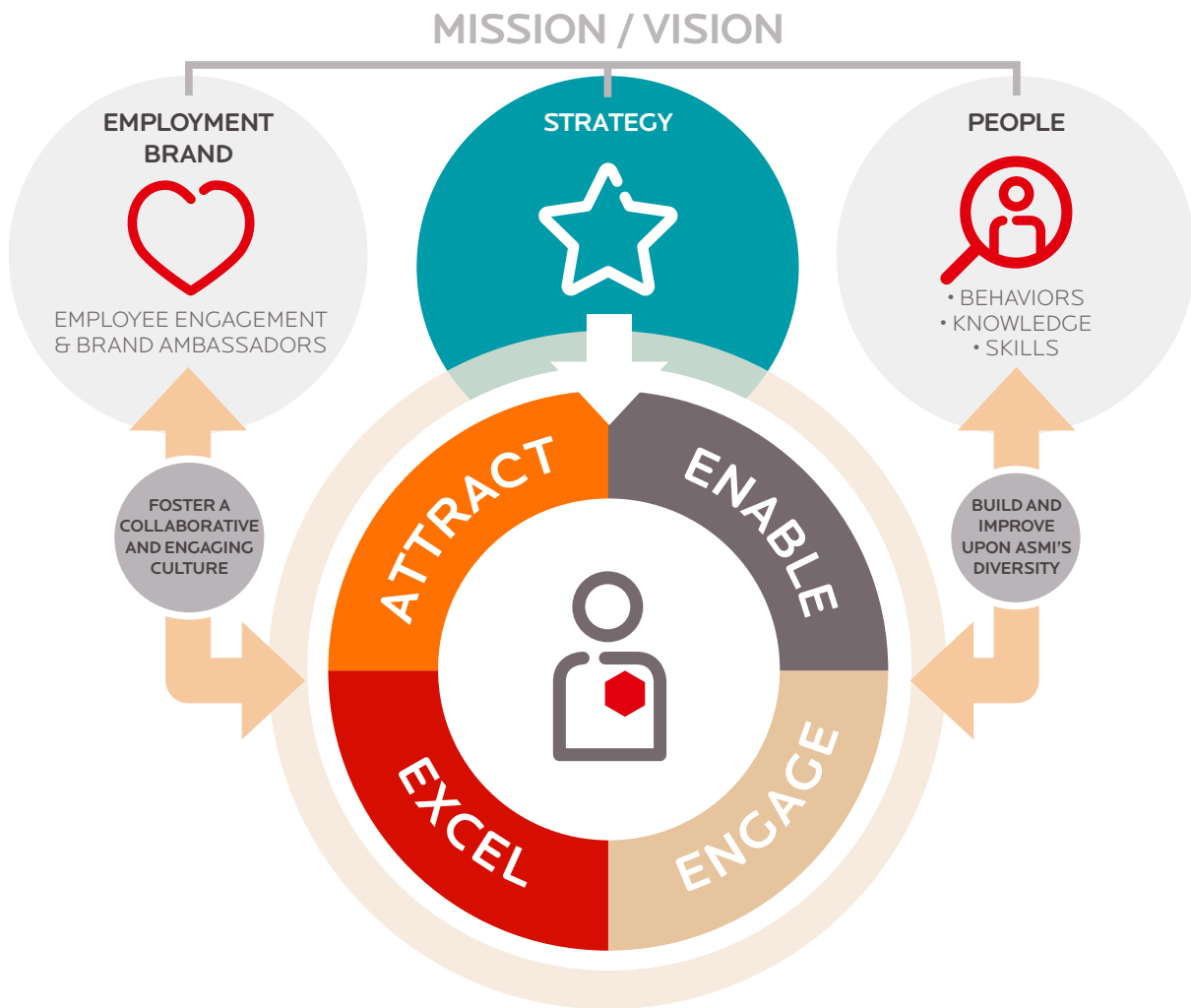


Using ALD technology, we can scale devices to smaller dimensions while reducing the power consumption of transistors, all of which helps the industry follow Moore's Law and create smaller, more powerful semiconductors. For advanced 3D memory applications, where devices are stacked vertically in high densities, ALD is critical for uniformly depositing films in deep trenches and over complicated features. Many new applications are emerging where ALD is the technology of choice, and in a number of cases the only solution that meets the challenging technology requirements.

We expect ALD to be one of the principal drivers of growth in microelectronics over the coming decade. In addition, we expect growth in other deposition technologies, including epitaxy for advanced transistors and PECVD for creating improved interconnects. Looking ahead, we will continue to develop the huge potential of our deposition technologies in support of the semiconductor industry, enabling the industry to support the future demands of consumers and businesses.

# PEOPLE

We contribute to society through innovation. To achieve this, we need the right people; talented people who are able to provide our customers with pioneering solutions. People who share our fascination for the future, but want answers today. From the sharpest graduates, to skillful engineers and inspirational leaders.



We manage our HR activities by following the HR value cycle. This cycle supports ASMI's mission and vision to be able to continue to develop the leading technologies and processes that help our customers and ourselves succeed.

The HR value cycle consists of four key areas:

- › Attracting the right talented people;
- › Enabling our people to fulfill their tasks to the best of their abilities;
- › Engaging our people by fostering a collaborative and appealing culture;
- › Helping our people to excel by offering them the possibility to accelerate their development and career.

## OUR WORKFORCE

In 2016 we employed 1,670 people across the globe, 535 in the US, 303 in Europe and 832 in Asia. As an innovative company 27% of our staff were employed in R&D.

## ATTRACTING A DIVERSE WORKFORCE

Part of attracting and developing the right talent is being an equal opportunities employer. We understand that everyone is unique. We recognize and respect the differences between individuals, including ethnicity, religious beliefs, nationality, age, gender, sexual orientation, family status, physical ability, experience, and perspective. In 2016 we continued to maintain a diverse workforce across the company, employing nationals from 28 countries. We slightly increased the percentage of women employed to 15%.

### WORKFORCE

	2013	2014	2015	2016
<b>EMPLOYEES</b>	1,503	1,635	1,597	<b>1,670</b>
<b>NATIONALITIES</b>	28	26	29	<b>28</b>
<b>MALE</b>	87%	86%	86%	<b>85%</b>
<b>FEMALE</b>	13%	14%	14%	<b>15%</b>
<b>VOLUNTARY TURNOVER RATE</b>	7.4%	6.9%	6.1%	<b>6.8%</b>

Recruiting and developing a diverse workforce gives us a wide range of perspectives, and allows us to explore and adopt new technological ideas and innovations. It also allows us to better understand and meet the needs of our diverse customers, suppliers and communities. Diversity also enables us to bring a range of different insights together to create breakthrough innovations, turning today's challenges into tomorrow's opportunities. In 2016 we introduced a globally harmonized recruitment policy and process to support us in attracting the right talent, which led to us hiring 253 new employees, 74% in Asia, 21% in America and 5% in Europe.

## ENABLE OUR PEOPLE

The second key area of the HR value cycle focuses on enabling our people to fulfill their tasks to the best of their abilities. To achieve this, we use high-quality global processes and tooling that provide managers and employees with access to the services they need – 24/7. We also use development programs, focusing on future leaders through New graduates programs and the development of our current leaders through the ASMI Leadership Academy.

In 2016 we launched a new and improved company-wide HR portal that acts as a gateway to the organization for all information related to HR. The portal offers harmonized HR information on policies, end to end process flows and descriptions, access to global and local HR tools and tasks and direct HR contact, service and support.

## THE ASMI NEW COLLEGE GRADUATE PROGRAM

To help attract and develop the brightest minds and future leaders, we have established the ASMI New College Graduate (NCG) program. We focus on top graduates with advanced degrees in physics, physical chemistry, chemistry, materials science, and engineering. Working with a select list of universities that focus on the education and training that fit our technology needs, we participate in career events, partnerships and projects that give us the opportunity to showcase the company. Following their training period, they begin working at the cutting edge of technology, alongside experienced innovators. Their goal is to resolve some of our toughest scientific challenges. During the first few years of their careers, they are based at one of our innovation centers in Helsinki, Finland, or Leuven, Belgium, before being given the opportunity to apply their knowledge in different product areas at one of our global facilities. In 2016 a number of NCGs transferred to our business and service units, while we hired a number of talented graduates to start their careers at our R&D facilities in Helsinki and Leuven.

## THE ASMI LEADERSHIP ACADEMY

Once we have attracted the right people, we work hard to ensure they engage with the company and its strategic goals, and provide an enabling environment that allows them to excel and turn today's challenges into tomorrow's opportunities. One example is the ASMI Leadership Academy, which offers our people different leadership programs. In 2016 we continued to enhance the ASMI Leadership Academy. Employees at different levels participated in an intensive training week, including course curriculum, team dynamics, and a real-time ASMI business case. Our Leadership Academy helps managers and leaders from all levels of the organization to foster a collaborative and engaging culture and build upon the diversity of their teams. Bringing managers and leaders together in these programs, while using consistent content, has also led to increased understanding and greater cross-cultural and business collaboration.

## HELPING OUR PEOPLE ENGAGE AND EXCEL

The third and fourth key areas of the HR value cycle focus on engaging our people. We achieve this by fostering a collaborative and engaging culture to motivate them to give the best of themselves, while offering the possibility to excel by accelerating their development and career.

## TALENT MANAGEMENT: ACCELERATING DEVELOPMENT AND CAREER

Talent Management (TM) is critical in developing and retaining the right talent, and a key factor in managing risks associated with our business operations. To successfully manage talent, we focus on attracting the right people and ensuring they are familiarized with the tools, processes and skills required to work successfully within the company. By helping them understand our strategic objectives and establish productive collaborations across the organization, we enable them to realize their professional ambitions, helping them to achieve excellent business performance. Successful Talent Management means having inclusive and relevant processes and tools in place across the company, ensuring that they are accessible to all cultures.

In 2016 we continued with our global Succession and Talent reviews. For all critical organizational areas, we identified the specific and unique organizational capabilities that are required and critical for executing the business strategies. For each organizational area we defined concrete action plans to enhance or build those capabilities. For those positions that are identified as pivotal to develop the capabilities, we defined the required talent related actions to ensure timely succession and support. All outcomes of the Succession and Talent reviews are captured in a Global Talent Database, supporting line managers in identifying talent early, developing their people, and building an internal succession pipeline to manage business risk, and safeguard the people side of their business strategies.

# PATENTS AND TRADEMARKS

We strive to maintain a culture of innovation at every level of the organization. We attract and retain creative people from around the world, who help us create a steady stream of innovations that we bring to volume manufacturing through close cooperation with our customers. It is this focus on innovation and collaboration that enables us to file an average of between 50 and 100 new utility patent applications each year.

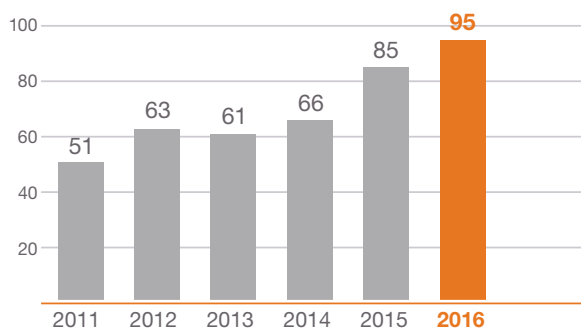
## CAPTURING IDEAS EFFICIENTLY

Intellectual Property (IP) managers work at all of our major global R&D sites, where they capture all patentable material resulting from our R&D activities. We now have nearly 1,500 patents in force worldwide, with many hundreds of those relating specifically to the ALD process technology platform. We expect new deposition technologies and chemistries to be a major driver for new IP in the future.

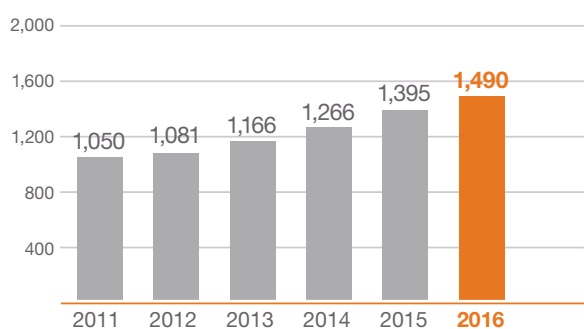
Patents protect our discoveries and enable us to speak more openly about our inventions and share ideas in the marketplace that benefit our customers. Our patents are usually registered in the principal countries where semiconductor devices or equipment are manufactured and/or sold.

Our vision is to increase our value to our customers and shareholders by using our IP in a way that differentiates our products, influences the market, and provides additional monetization opportunities. We seek to minimize IP risk for our products and R&D activities through strategic IP positioning and safeguarding technical know-how to preserve and grow our intrinsic value.

### INITIAL PATENT FILINGS



### PATENTS IN FORCE



## TRADEMARK LIST AS OF JANUARY 1, 2017

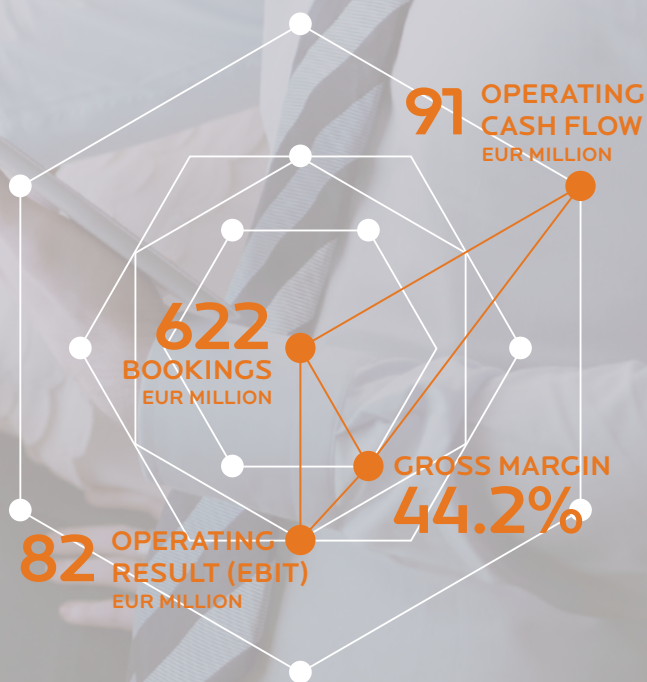
We have registered a number of trademarks covering our product portfolio in the principal countries.

ASM, the ASM International logo, Advance, Aurora, Dragon, Eagle, EmerALD, Epsilon, Horizon, Intrepid, Medallion, Polygon, Previm, Pulsar and Silcore are registered trademarks of ASM International NV. A400, A412, ALCVD, the ASM Qualified Licensed Supplier logo, Atomic Layer CVD, Axis, Loadstar, NCP, PEALD, Synergis, XP, and XP8 are our trademarks. 'The Switch Is On' and 'Drive Innovation. Deliver Excellence.' are our service marks.

## PERFORMANCE REVIEW

### FINANCIAL & NON-FINANCIAL RESULTS

- > Financial performance
- > CR performance



# FINANCIAL PERFORMANCE

## MANAGEMENT BOARD REPORT

### INTRODUCTION

We are an equipment supplier mainly to the semiconductor manufacturing industry. We design, manufacture, and sell equipment and services to our customers for the production of semiconductor devices, or integrated circuits. The semiconductor capital equipment market is composed of three major market segments: wafer processing equipment, assembly and packaging equipment, and test equipment. Through our Front-end business, we are active in the wafer processing segment. In addition, as per December 31, 2016, we have a 39.19% stake in ASM Pacific Technology (ASMPT), which is a leading supplier of assembly and packaging equipment to the semiconductor, LED, and electronics markets.

ASMI sells its products to the semiconductor manufacturing industry and, through its 39.19% stake in ASMPT, to the assembly industry, which is subject to sudden and extreme cyclical variations in product supply and demand. We conduct our Front-end business through wholly-owned subsidiaries, the most significant being ASM Front-End Manufacturing Singapore Pte Ltd (FEMS), located in Singapore, ASM Europe BV (ASM Europe), located in the Netherlands, ASM America, Inc (ASM America), located in the United States, ASM Japan KK (ASM Japan), located in Japan, and ASM Korea Ltd (ASM Korea), located in South Korea. The locations of our facilities allows us to interact closely with customers in the world's major geographical market segments: Europe, North America, and Asia.

Our wafer processing business supplies equipment to the leading semiconductor manufacturers in the logic, foundry and memory markets, primarily for the deposition of thin films. The logic market is made up of manufacturers who create chips that are used to process data; the foundry market consists of businesses that operate semiconductor fabrication plants to manufacture the designs of other semiconductor companies; and the memory market covers manufacturers who make chips that store information either temporarily or permanently, such as Random Access Memory (RAM). We also supply equipment to leading manufacturers of analog semiconductor devices.

The principal markets that we address in wafer processing are selected segments of the deposition equipment market. The total deposition equipment market was estimated to be US\$8.8 billion in 2016 (VLSI Research, January 2017). Within this market we focus on the following segments: vertical furnaces, epitaxy, PECVD, and atomic layer deposition (ALD). ALD is an advanced technology that deposits atomic layers one at a time on wafers. This process is used to create ultra-thin films of exceptional quality and flatness. Plasma is sometimes used to enhance the process further (plasma enhanced ALD, or PEALD) and enables the deposition at reduced process temperature.

### MOORE'S LAW

A key driver in the semiconductor industry is the continuous demand for smaller, faster, and cheaper semiconductor components. Through technology advances in the manufacturing process, semiconductor manufacturers are continuously scaling chips to smaller dimensions. This enables more transistors to fit in the same physical space, thereby reducing the costs and increasing the speed and performance of a device. Another trend is towards vertical or 3D transistors. This trend also helps to keep the industry on track with Moore's Law (processor speeds, or overall processing power for computers, will double every two years).

### Advanced deposition techniques

The manufacture of ever-smaller and more complex devices requires more advanced and precise deposit techniques. ALD offers the precision needed to deposit ultra-thin and highly conformal films, even on challenging 3D surfaces. Our portfolio of ALD products is an enabling technology for our customers, helping them to manufacture semiconductor devices at smaller line widths with new materials and 3D architectures. Our technologies support our customers in their roadmap towards chips with a higher performance and reduced energy consumption, which in turn enable the introduction of new and more advanced products ranging from high-end servers to smartphones, wearable devices, and automotive electronics.

### BACK-END OPERATIONS

Our investment in ASM Pacific Technology represents the Back-end business. The Back-end operations are conducted through facilities in Hong Kong, the People's Republic of China, Singapore, Malaysia, and Germany. On March 15, 2013, we reduced our shareholding in ASMPT from 52% to around 40%. The sale of the 12% stake in ASMPT caused and required the deconsolidation of ASMPT. Since that date, our share of the net result of ASMPT is reported on the line share in income of investments in associates.

### 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.

#### The key elements of our strategy are:

##### Innovative strength

We are recognized for our technology leadership. 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, 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, and quality systems. 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.

Our strategic objective is to realize profitable, sustainable growth by capitalizing on our innovative strength, operational excellence, and our leadership in ALD and other business segments we are active in.

##### 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.

### CORPORATE RESPONSIBILITY

Our corporate responsibility outlook is supported by our vision of **ZERO HARM!** This means we strive to (i) prevent all injuries to our employees and our customers' employees, (ii) reduce our environmental impact, and (iii) make positive contributions to society. We help create value for society through our technological innovations, and we try to meet the expectations of our stakeholders by engaging with them on the issues that matter to them.

We believe that our focus on sustainability not only creates value for our company, our stakeholders, and society, but also strengthens our brand and creates stronger relationships with our customers, employees, and investors. These strengthened relationships further drive our ability to innovate and bolster our product portfolio.

### OPERATIONS

The broader semiconductor wafer fab equipment market showed a considerably solid performance with an estimated 10% year-over-year increase in 2016. Both the memory and the logic/foundry segments of the WFE market increased. Within memory capital spending in the DRAM segment dropped but this was offset by higher spending in the NAND flash segment. The single wafer ALD market, however, showed a contraction in 2016. Following strong double-digit growth in 2015, the single wafer ALD market dropped by more than 10% in 2016. Spending by logic and foundry customers increased strongly during the year, as customers started the ramp of the 10nm technology node. The increase in logic/foundry was, however, not enough to offset a considerable drop in the memory segment, which was still the key driver behind the growth in the single wafer ALD market in 2015. Within the memory market, both DRAM and NAND flash saw lower spending on single wafer ALD equipment.

#### Revenue impacted by contraction in single wafer ALD market

Our revenue dropped by 11% in 2016 which is mainly explained by the contraction in the single wafer ALD market during the year. After a moderation in the second half of 2015, sales remained stable at a quarterly level of around €140 million in the first quarters of 2016. In the fourth quarter of 2016, sales increased to €173 million. In terms of customer segments, for the year as a whole, sales were led by foundry, followed by logic. In 2015, sales were led by memory. In the first quarter of 2016, sales were still led by memory, building on the strength in 2015, but in the rest of the year, foundry and logic led the revenue stream.

The 11% drop in our total revenue in 2016 was mainly explained by lower ALD tool sales. While single wafer ALD demand went through a softer patch in 2016, our company made further progress, in cooperation with customers, to expand the number of ALD process steps and applications for the most advanced technology nodes. ALD is now firmly established as a key enabling technology. In logic, foundry, and memory, the leading customers have already ramped several technology generations based on our ALD equipment. Our ALD equipment is an enabling technology for spacer-defined multiple patterning and used by virtually all of the memory customers. In the logic and foundry sector, ALD is a core technology for high-k metal gate and advanced FinFET applications.

### Broadening the customer base

In recent years, we have further broadened our customer base. While in 2015 our total revenue growth was to a large extent driven by an increased contribution from the top four to ten customers, in 2016 the contribution from the top three customers increased again, driven by logic/foundry. Following several years of steady growth in customer deployment and the development of new applications, ALD has turned into a key growth driver for our company. Despite a decrease in sales, our ALD product lines continued to account for clearly more than half of total equipment revenue in 2016.

For the year in total, our new bookings increased by 2% in 2016 to €622 million. The book-to-bill as measured by orders divided by sales increased from 0.9 in 2015 to 1.0 in 2016. After a moderation in the second half of 2015 bookings increased to a quarterly level of approximately €160 million in the first half of 2016. In the third quarter of 2016 bookings dropped to €123 million but finished the year strongly with a new record high of €177 million in the fourth quarter of 2016. Equipment bookings in 2016 for ASMI as a whole were led by the foundry segment, followed by logic and memory. Logic was the leading customer segment in the first quarter of 2016, and foundry in the rest of the year. We finished the year with an order backlog of €157 million, an increase of 23% compared to the end of 2015.

### Gross profit margin

The gross profit margin was relatively steady at 44.2% in 2016 compared to 44.1% in 2015. In the first three quarters of 2016, the gross margin was stable at around the 44% level, and increased to almost 45% in the fourth quarter of the year. Most of the quarter-by-quarter fluctuations can be explained by changes in the sales mix. Gross margins were stable in 2016 despite the drop in revenue. This reflects the impact from the programs that have been implemented in the recent years to further improve the efficiency and flexibility of our manufacturing and supply chain operations. These measures included new outsourcing initiatives, a stronger focus on sourcing of complete subassemblies and the migration of a major part of our supply base to Asia. Over time, these measures have contributed to a reduction in the fixed costs part of total costs of goods sold.

### Expenses

Selling, general and administrative expenses, including restructuring expenses, dropped by 4% in 2016 and as a percentage of sales increased from 14% in 2015 to 15% in 2016. Research and development (R&D) expenses excluding impairment charges on capitalized development costs increased from 11% to 15% of sales. The impairment charges in 2015 were mainly related to the write-off of the remaining 450mm assets. The increase in R&D excluding impairment charges was the result of an increase in customer requests for new applications.

### Operating profit

Operating profit decreased to €82.2 million from €111.1 million in 2015 and the operating profit margin decreased to 13.8% from 16.6%.

### Results from investments

Results from investments, which primarily reflects our 39.19% shareholding in ASMPT, increased to €67.7 million from €44.2 million in 2015. These exclude the amortization of intangible assets related to ASMPT. ASMPT's revenue increased by 10% in 2016 in Hong Kong dollars, following a 9% decrease in 2015. In 2015, particularly in the second half of that year, the market for assembly and packaging equipment went through a downturn but in 2016 market conditions clearly improved. ASMPT still recorded a slight year-on-year decrease in revenue in the first half of 2016, but returned to strong double digit growth in the second half of the year. Assembly equipment showed a revenue increase of more than 20% in 2016. Apart from a recovery in the overall Back-end market, ASMPT's growth was supported by strong developments in specific market segments such as equipment for CMOS image sensors and LED. For SMT Solutions revenue still dropped for the full year, although this business also returned to year-on-year growth in the second half of 2016. ASMPT increased the gross margin to 37.6%.

## OPERATIONS UPDATE

### RESULTS OF OPERATIONS 2016 COMPARED TO 2015

#### Results

The following table shows the operating performance for 2016, versus 2015:

(EUR million)	2015	2016	CHANGE
New orders	608.4	622.3	2%
Backlog	127.8	156.7	23%
Book-to-bill	0.9	1.0	
Net sales	669.6	597.9	(11%)
Gross profit	295.5	264.5	(10%)
Gross profit margin %	44.1%	44.2%	
Selling, general and administrative expenses	(94.7)	(91.1)	(4%)
Research and development expenses	(73.6)	(87.6)	19%
Impairment charges property, plant and equipment and other intangible assets	(16.2)	(3.6)	12.6
Operating result	111.1	82.2	(26%)
Operating margin %	16.6%	13.8%	
Financing income / (expense)	24.8	15.0	(9.7)
Tax income / (expense)	5.4	(2.3)	(7.6)
Net earnings before share in income of investments in associates	141.2	95.0	(46.2)
Share in income of investments in associates	16.1	40.5	24.4
<b>NET EARNINGS</b>	<b>157.3</b>	<b>135.5</b>	<b>(21.8)</b>
Net earnings per share, diluted	€2.50	€2.21	€(0.29)
Net earnings per share excluding effects from the sale of ASMPT shares	€2.93	€2.66	€(0.27)

The following table shows certain Consolidated statement of profit or loss data as a percentage of net sales for our operations for 2015 and 2016:

(in %)	2015	2016
Net sales	100.0%	100.0%
Cost of sales	(55.9%)	(55.8%)
<b>GROSS PROFIT</b>	<b>44.1%</b>	<b>44.2%</b>
Selling, general and administrative expenses	(14.1%)	(15.2%)
Research and development expenses	(11.5%)	(14.6%)
Impairment charges	(1.9%)	(0.6%)
<b>EARNINGS (LOSS) FROM OPERATIONS</b>	<b>16.6%</b>	<b>13.8%</b>
Net interest income (expense)	(0.1%)	0.3%
Foreign currency exchange gains (losses)	3.8%	2.2%
Share in income of investments in associates	2.4%	6.8%
<b>EARNINGS (LOSS) BEFORE INCOME TAXES</b>	<b>22.7%</b>	<b>23.0%</b>
Tax income / (expense)	0.8%	(0.4%)
<b>NET EARNINGS FROM OPERATIONS</b>	<b>23.5%</b>	<b>22.7%</b>

## Net sales

The sales cycle from quotation to shipment for our Front-end equipment generally takes several months, depending on capacity utilization and the urgency of the order. Usually, acceptance is within one to three months after shipment. The sales cycle is longer for equipment that is installed at the customer's site for evaluation prior to sale. The typical trial period ranges from six months to one year after installation.

Our sales are concentrated in the United States, Europe and Asia. The following table shows the geographic distribution of our net sales for 2015 and 2016:

(EUR million)	YEAR ENDED DECEMBER 31,			
	2015		2016	
United States	123.9	18.5%	145.1	24.3%
Europe	99.3	14.8%	113.8	19.0%
Taiwan	106.8	16.0%	182.8	30.6%
Japan	179.6	26.8%	60.2	10.1%
South Korea	109.9	16.4%	46.8	7.8%
China	38.3	5.7%	36.4	6.1%
Other	11.8	1.8%	12.8	2.1%
	<b>669.6</b>	<b>100.0%</b>	<b>597.9</b>	<b>100.0%</b>

A substantial portion of our sales is for equipping new or upgraded fabrication plants where device manufacturers are installing complete fabrication equipment. As a result, our sales in this segment tend to be uneven across customers and financial periods. Sales to our ten largest customers accounted for 81.0% and 78.5% of net sales in 2015 and 2016, respectively. The composition of our ten largest Front-end customers changes from year to year. The largest customer accounted for more than 10% of Front-end net sales in 2015 and 2016, respectively.

## Decrease in net sales

For the full year, net sales decreased by 11% in 2016 for the Front-end business. On a constant currency basis, our sales decreased by 14%.

The revenue in 2016 was led by tool sales in our ALD business. While ALD is now firmly established and a key enabling technology for logic, foundry and memory, it is still strongly impacted by the investment cycle of our customers. Following strong growth in the previous years, the single wafer ALD market showed a double digit contraction in 2016. This was mainly caused by lower demand in the memory sector. Although ALD is required for an increasing number of process steps and applications in logic and foundry as customers transition to the most advanced technology nodes, this could not offset the lower memory demand.

The following table shows the level of new orders for the full year 2016 and the backlog for the same period over 2015:

(EUR million)	YEAR ENDED DECEMBER 31,		
	2015	2016	% CHANGE
<b>BACKLOG AT THE BEGINNING OF THE YEAR</b>	<b>176.1</b>	<b>127.8</b>	<b>(27%)</b>
New orders	608.4	622.3	2%
Net sales	(669.6)	(597.9)	(11%)
FX-effect	12.9	4.5	
<b>BACKLOG AS PER REPORTING DATE</b>	<b>127.8</b>	<b>156.7</b>	<b>23%</b>
<b>BOOK-TO-BILL RATIO (NEW ORDERS DIVIDED BY NET SALES)</b>	<b>0.9</b>	<b>1.0</b>	

The 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 cancellations of orders, our backlog at any particular date is not necessarily indicative of actual sales for any subsequent period.

For the year in total, our new bookings increased by 2% in 2016 to €622 million. The book-to-bill as measured by orders divided by sales increased from 0.9 in 2015 to 1.0 in 2016. Equipment bookings in 2016 for ASMI as a whole were led by the foundry segment, followed by logic, and memory. We finished the year with an order backlog of €157 million, a 23% increase compared to the end of 2015.

### Gross profit

Total gross profit developed as follows:

(EUR million)	YEAR ENDED DECEMBER 31,				
	GROSS PROFIT		GROSS PROFIT MARGIN		INCREASE (DECREASE) PERCENTAGE POINTS
	2015	2016	2015	2016	
Front-end	295.5	264.5	44.1%	44.2%	10 ppt

Gross margin increased by ten basis points in 2016 to 44.2%. Throughout the year the margin was relatively stable at around the 44% level, with most of the quarter-by-quarter fluctuations explained by changes in the sales mix. Gross margins were stable in 2016 despite the drop in revenue. This reflects the impact from the programs that have been implemented in the last several years to further improve the efficiency and flexibility of our manufacturing and supply chain operations. These measures included new outsourcing initiatives, a stronger focus on sourcing of complete sub-assemblies and the migration of a larger part of our supply base to Asia. Over time, these measures have contributed to a reduction in the fixed costs part of total costs of goods sold.

Currency changes led to a 5% increase in gross profit compared to 2015.

### Selling, general and administrative expenses

Total selling, general and administrative expenses developed as follows:

(EUR million)	YEAR ENDED DECEMBER 31,		
	2015	2016	% CHANGE
Front-end	94.7	91.1	(4%)

Selling, general and administrative (SG&A) expenses decreased by 4% in 2016 compared to the previous year. As a percentage of sales, SG&A expenses were 15% in 2016 and 14% in 2015. SG&A included restructuring expenses of €3.1 million in 2016.

The impact of currency changes on SG&A expenses resulted in an increase of 1% year-over-year.

### Research and development expenses

Total research and development (R&D) expenses, excluding impairment charges, increased by 19% in 2016 compared to the previous year, mainly driven by additional investments to fulfill customer requirements. As a percentage of sales, R&D expenses increased to 15% compared to 11% in 2015. Currency changes resulted in a 3% increase in R&D expenses year-over-year.

Total research and development expenses developed as follows:

(EUR million)	YEAR ENDED DECEMBER 31,		
	2015	2016	% CHANGE
<b>Front-end:</b>			
Research and development expenses	95.3	101.5	7%
Capitalization of development expenses	(32.5)	(26.4)	(19%)
Research and development grants and credits	(1.0)	(0.8)	(14%)
Amortization of capitalized development expenses	11.8	13.3	13%
	<b>73.6</b>	<b>87.6</b>	<b>19%</b>
Impairment capitalized development expenses	16.2	3.6	n/a
<b>TOTAL</b>	<b>89.7</b>	<b>91.1</b>	<b>2%</b>

Impairment of capitalized development expenses related primarily to the development of new hardware that is now no longer as in-demand from customers, and purchased technology which became obsolete. Of the impairment charges for 2015, €13.4 million related to the impairment of capitalized development expenditures and other assets related to the 450mm technology, and €2.8 million related to the impairment of capitalized development expenses for other projects. In 2016 impairments of capitalized development expenses related to a customer specific project.

### Research and development investment

We continue to invest strongly in R&D. As part of our R&D activities, we are engaged in various development programs with customers and research institutes. These allow us to develop products that meet customer requirements and obtain access to new technology and expertise. The costs relating to prototypes and experimental models, which we may subsequently sell to customers, are charged to the cost of sales.

Our R&D operations in the Netherlands, Belgium, and the United States receive research and development grants and credits from various sources.

### Operating result

The operating result developed as follows:

(EUR million)	YEAR ENDED DECEMBER 31,		
	2015	2016	CHANGE
<b>Front-end:</b>			
<b>BEFORE SPECIAL ITEMS</b>	<b>129.0</b>	<b>90.7</b>	<b>(30%)</b>
Impairment charges	(16.2)	(5.3)	n/a
Restructuring expenses	(1.7)	(3.1)	n/a
<b>INCLUDING SPECIAL ITEMS</b>	<b>111.1</b>	<b>82.2</b>	<b>(26%)</b>

Operating profit decreased to €82.2 million from €111.1 million in 2015, and the operating profit margin decreased to 13.8% from 16.6%.

Impairment charges in 2015 related to capitalized development expenditures and assets. In 2016, impairment charges related to demo equipment and capitalized development expenditures.

### Financing costs

Financing costs mainly reflect translation results. A substantial part of our cash position is denominated in US dollars.

### Results from investments in associates

Results from investments, which primarily reflects our 39.19% shareholding in ASMPT, increased to €67.7 million from €44.2 million in 2015. These exclude the amortization of intangible assets related to ASMPT. ASMPT's revenue increased by 10% in 2016 in Hong Kong dollars, following a 9% decrease in 2015. In 2015 particularly in the second half of that year, the market for assembly and packaging equipment went through a downturn but in 2016 market conditions clearly improved. ASMPT still recorded a slight year-on-year decrease in revenue in the first half of 2016, but returned to strong double digit growth in the second half of the year. Assembly equipment showed a revenue increase of more than 20% in 2016. Apart from a recovery in the overall Back-end market, ASMPT's growth was supported by strong developments in specific market segments such as equipment for CMOS image sensors and LED. For SMT Solutions revenue still dropped for the full year, although this business also returned to year-on-year growth in the second half of 2016. ASMPT increased the gross margin to 37.6%.

The amortization of the recognized intangible assets and the depreciation of the fair value adjustment for property, plant & equipment had a €27.2 million impact on net earnings in 2016 (2015: €27.2 million). For further information on ASMPT, see Note 6 to the Consolidated financial statements.

### Income tax

The income tax expense of €2.3 million (2015: €5.4 million benefit) reflects an effective tax rate of 1.7% (2015: 3.5% positive). The tax benefit in 2015 included €9 million in a one-off cash benefit due to tax refunds in South Korea from previous years related to higher tax exemptions than originally assumed and a €5 million one-off benefit resulting from the recognition of deferred tax assets on tax losses, incurred in the past, in the Netherlands. For further information on tax, see Note 20 to the Consolidated financial statements.

### Net earnings

Net earnings developed as follows:

(EUR million)	YEAR ENDED DECEMBER 31,		
	2015	2016	CHANGE
<b>Front-end:</b>			
<b>BEFORE SPECIAL ITEMS</b>	<b>158.2</b>	<b>103.4</b>	<b>(54.8)</b>
Impairment charges	(16.2)	(5.3)	10.9
Restructuring expenses	(1.7)	(3.1)	(1.4)
<b>TOTAL</b>	<b>140.3</b>	<b>95.0</b>	<b>(45.3)</b>
<b>Back-end:</b>			
Investment in ASMPT (approximately 40%)	44.2	67.7	23.6
Amortization other intangible assets from purchase price allocation	(27.2)	(27.2)	(0.1)
<b>TOTAL</b>	<b>17.0</b>	<b>40.5</b>	<b>23.5</b>
<b>NET RESULT FROM OPERATIONS</b>	<b>157.3</b>	<b>135.5</b>	<b>(21.8)</b>

## Cash flow

The following table shows the cash flow statement:

(EUR million)	2015	2016
<b>NET EARNINGS FROM OPERATIONS</b>	<b>157.3</b>	<b>135.5</b>
<b>Adjustments to cash from operating activities:</b>		
Depreciation, amortization and impairments	54.3	51.7
Income tax	(5.4)	2.3
Share in income of investments in associates	(16.1)	(40.5)
Share-based compensation	8.2	8.4
Non-cash financing costs	(17.1)	(2.5)
<b>Changes in other assets and liabilities:</b>		
Accounts receivable	(2.8)	(43.4)
Inventories	13.4	(9.5)
Accounts payable and accrued expenses	(3.0)	7.0
Other assets and liabilities	(4.9)	(10.2)
Income tax paid	(9.2)	(7.4)
<b>NET CASH FROM OPERATING ACTIVITIES</b>	<b>174.8</b>	<b>91.4</b>
Capital expenditures	(33.2)	(25.7)
Capitalized development expenditure	(30.2)	(27.3)
Purchase of intangible assets	(7.2)	(7.0)
Dividend received from associates	42.9	22.1
Other	(0.9)	-
<b>NET CASH USED IN INVESTING ACTIVITIES</b>	<b>(28.6)</b>	<b>(38.0)</b>
Purchase treasury shares	(79.1)	(97.0)
Debt issuance fees paid	-	(0.8)
Proceeds from shares issued	11.3	14.7
Dividend paid to shareholders ASMI	(37.2)	(42.7)
<b>NET CASH USED IN FINANCING ACTIVITIES</b>	<b>(104.9)</b>	<b>(125.8)</b>
<b>TOTAL NET CASH PROVIDED / (USED)</b>	<b>41.3</b>	<b>(72.4)</b>

## Statement of financial position

Working capital at December 31, 2016 was €157 million (2015: €114 million). Working capital consists of: inventories, accounts receivable, other current assets, accounts payable, provision for warranty and accrued expenses, and other payables. The number of outstanding days of working capital, measured against quarterly sales, increased from 69 days at December 31, 2015 to 82 days at December 31, 2016. This was mainly due to a different mix in sales during the last quarter of 2016, leading to high accounts receivables at the end of the year.



## Employees

The following table lists the total number of employees, at the dates indicated, exclusive of temporary workers:

GEOGRAPHICAL LOCATION	DECEMBER 31,	
	2015	2016
Europe:		
- the Netherlands	146	141
- EMEA	168	162
United States	516	535
Japan	209	212
South Korea	148	157
Singapore	318	340
Asia, other	92	123
<b>TOTAL</b>	<b>1,597</b>	<b>1,670</b>

We had 1,670 employees as per December 31, 2016. The following table lists the number of employees per function:

FUNCTION	DECEMBER 31,	
	2015	2016
Research and development	420	447
Manufacturing	283	296
Marketing and sales	253	252
Customer service	476	506
Finance and administration	165	169
<b>TOTAL</b>	<b>1,597</b>	<b>1,670</b>

Our Dutch operations, which employed 141 staff as per December 31, 2016, is subject to standardized industry bargaining under Dutch law, and is required to pay wages and meet conditions established as a result of negotiations between all Dutch employers in their industry and unions representing employees of those employers. As required by Dutch law, management in our Dutch facilities meet with a works council consisting of elected employee representatives to discuss working conditions and personnel policies, as well as to explain major corporate decisions and to solicit their advice on major issues.

The assembly and packaging segment, ASMPT, had 14,360 employees as per December 31, 2016 (December 31, 2015: 14,348).

### Subsequent events

Subsequent events were evaluated up to March 9, 2017, which is the issuance date of this Statutory annual report 2016. There are no subsequent events to report.

## LIQUIDITY AND CAPITAL RESOURCES

### LIQUIDITY

Our liquidity is affected by many factors, some of which are related to our ongoing operations while others are related to the semiconductor and semiconductor equipment industries, and to the economies of the countries in which we operate. Although our cash requirements fluctuate based on the timing and extent of these factors, we believe that cash generated by operations, together with the liquidity provided by our existing cash resources and our financing arrangements, will be sufficient to fund working capital, capital expenditures and other ongoing business requirements for at least the next twelve months.

On December 31, 2016, our principal sources of liquidity consisted of €378 million in cash and cash equivalents and €150 million in undrawn bank lines.

For the most part, our cash and cash equivalents are not guaranteed by any governmental agency. We place our cash and cash equivalents with high-quality financial institutions to limit our credit risk exposure.

### CASH FLOW

We generated cash from operating activities of €91.4 million in 2016 (2015: €174.8 million). We invested €38.0 million (2015: €28.6 million), and used €125.8 million (2015: €104.9 million) in financing activities.

### DEBT

We were debt-free as of December 31, 2016.

In December 2016, we finalized the renewal of our current standby revolving credit facility. The security of the previous credit agreement has been released. The maturity date of the new credit commitment of €150 million is December 16, 2021 with an extension option for up to two years. As per December 31, 2016 this facility was undrawn.

The credit facility of €150 million includes two financial covenants:

- › Minimum consolidated tangible net worth; and
- › Consolidated total net debt/total equity ratio.

These financial covenants are measured twice each year, on June 30 and December 31. We were in compliance with these financial covenants as per December 31, 2016.

See Notes 10, 15 and 16 to the Consolidated financial statements for more on our funding, treasury policies and our long-term debt.

### ASMPT

The assembly and packaging segment of our business is organized in ASM Pacific Technology Ltd (ASMPT). Net cash of our 39.19%-owned associate was €262 million on December 31, 2016. The cash resources and borrowing capacity of ASMPT are not available to our wafer processing equipment segment.

Although certain directors of ASMI are directors of ASMPT, ASMPT is under no obligation to declare dividends to shareholders or enter into transactions that are beneficial to us. As a substantial shareholder, we can participate in the shareholders' approval of the payment of dividends, but cannot compel their payment or size. Cash dividends received from ASMPT during 2015 and 2016 were €42.9 million and €22.1 million, respectively.

The market value of our 39.19% investment ASMPT was approximately €1,608 million as per December 31, 2016.

## OUTLOOK

We have developed forecasts and projections of cash flows and liquidity needs for the upcoming year. These take into account the current market conditions, reasonable possible changes in trading performance based on such conditions, and our ability to modify our cost structure as a result of changing economic conditions and sales levels. In the forecasts, we have also taken into account: the total cash balances amounting to €378 million on December 31, 2016; the ability to renew debt arrangements and to access additional indebtedness; and whether or not we will comply with our financial covenants. Based on this, we believe that our cash on hand at the end of 2016 is adequate to fund our operations, and our investments in capital expenditures and to fulfill our existing contractual obligations for the next twelve months.

## CONTRACTUAL OBLIGATIONS, CONTINGENT LIABILITIES AND COMMITMENTS

We have contractual obligations, some of which are required to be recorded as liabilities in our Consolidated financial statements, including long- and short-term debt. Other contractual arrangements, such as operating lease commitments and purchase obligations, are not generally required to be recognized as liabilities on our Consolidated statement of financial position, but are required to be disclosed.

The following table summarizes our contractual obligations as per December 31, 2016, aggregated by type of contractual obligation:

	TOTAL	LESS THAN 1 YEAR	1-3 YEARS	3-5 YEARS	MORE THAN 5 YEARS
Accounts payable	60,910	60,910	-	-	-
Income tax payable	2,467	2,467	-	-	-
Accrued expenses and other payables	48,694	48,694	-	-	-
Operating leases	16,523	6,365	6,670	3,162	326
Pension liabilities	5,852	576	1,110	722	3,444
<b>Purchase obligations:</b>					
Purchase commitments to suppliers	87,078	86,885	175	18	-
Capital expenditure and other commitments	10,556	9,569	987	-	-
<b>TOTAL CONTRACTUAL OBLIGATIONS</b>	<b>232,080</b>	<b>215,466</b>	<b>8,942</b>	<b>3,902</b>	<b>3,770</b>

We outsource a substantial portion of the manufacturing of our Front-end operations to certain suppliers. As our products are technologically complex, the lead times for purchases from our suppliers can vary and can be as long as nine months. Generally, contractual commitments are made for multiple modules or systems in order to reduce our purchase prices per module or system. For the majority of our purchase commitments, we have flexible delivery schedules depending on the market conditions, which allow us, to a certain extent, to delay delivery beyond originally planned delivery schedules.

## MARKET RISK

We are exposed to market risks (including foreign exchange rate risk), credit risk, liquidity risk, and equity price risk. We may use forward exchange contracts to hedge foreign exchange risk. We do not enter into financial instrument transactions for trading or speculative purposes.

## FOREIGN EXCHANGE RATE RISK

We conduct business in a number of foreign countries, with certain transactions denominated in currencies other than the functional currency of ASMI (euro) or one of our subsidiaries conducting the business. The purpose of our foreign currency management is to manage the effect of exchange rate fluctuations on revenues, costs, and cash flows, and assets and liabilities denominated in selected foreign currencies, in particular in US dollars.

The majority of revenues and costs of our wafer processing equipment segment are denominated in US dollars, Singapore dollars, Korean won and Japanese yen. Since foreign currency exposure on our trading positions is not significant, no forward exchange contracts are used. The effect of exchange rate fluctuations on revenues, costs, and cash flows, and assets and liabilities denominated in foreign currencies is reviewed periodically.

### Forward contracts

We may use forward exchange contracts to hedge foreign exchange risk of anticipated sales or purchase transactions in the normal course of business, which occur within the next twelve months, for which we have a firm commitment from a customer or to a supplier. The terms of these contracts are consistent with the timing of the transactions being hedged. The hedges related to forecasted transactions are designated and documented at the inception of the hedge as cash flow hedges, and are evaluated for effectiveness quarterly. The effective portion of the gain or loss on these hedges is reported as a component of accumulated other comprehensive income in Shareholders' Equity, and is reclassified into earnings when the hedged transaction affects earnings. As per December 31, 2016, we had no foreign exchange contracts in place.

The majority of revenues and costs of our assembly and packaging segment are denominated in Hong Kong dollars, Chinese yuan, and US dollars. The functional currency of our assembly and packaging segment (Hong Kong dollar) is linked to the US dollar.

As we did not use forward exchange contracts, no unrealized gains were included in accumulated other comprehensive income as per December 31, 2016.

### Derivative instruments

Furthermore, we may manage the currency exposure of certain receivables and payables using derivative instruments, such as forward exchange contracts (fair value hedges) and currency swaps, and non-derivative instruments, such as debt borrowings in foreign currencies. The gains or losses on these instruments provide an offset to the gains or losses recorded on receivables and payables denominated in foreign currencies. The derivative instruments are recorded at fair value and changes in fair value are recorded in earnings under foreign currency exchange gains (losses) in the Consolidated statement of profit or loss. Receivables and payables denominated in foreign currencies are recorded at the exchange rate at the balance sheet date, and gains and losses as a result of changes in exchange rates are recorded in earnings under foreign currency exchange gains (losses) in the Consolidated statement of profit or loss.

To the extent that foreign currency fluctuations affect the value of our investments in our foreign affiliates, they are not hedged. The cumulative effect of these fluctuations is separately reported in Consolidated Shareholders' Equity. For the year ended December 31, 2016, we recorded a favorable movement of €41 million (year-end December 31, 2015: €137 million). See Note 11 to our Consolidated financial statements.

The following tables analyze our sensitivity to a hypothetical 10% strengthening and 10% weakening of the US dollar, Singapore dollar, Hong Kong dollar, Korean won or Japanese yen against the euro as per December 31, 2015 and December 31, 2016.

A positive amount indicates an increase in equity. Recognized in equity is the revaluation effect of subsidiaries denominated in US dollars, Singapore dollars, Hong Kong dollars, Korean won, and Japanese yen.

(EUR thousand)	IMPACT ON EQUITY	
	2015	2016
10% increase of US dollar versus euro	11,109	<b>13,135</b>
10% decrease of US dollar versus euro	(11,109)	<b>(13,135)</b>
10% increase of Singapore dollar versus euro	9,925	<b>11,927</b>
10% decrease of Singapore dollar versus euro	(9,925)	<b>(11,927)</b>
10% increase of Hong Kong dollar versus euro	118,085	<b>123,575</b>
10% decrease of Hong Kong dollar versus euro	(118,085)	<b>(123,575)</b>
10% increase of Korean won versus euro	12,123	<b>10,416</b>
10% decrease of Korean won versus euro	(12,123)	<b>(10,416)</b>
10% increase of Japanese yen versus euro	8,211	<b>9,134</b>
10% decrease of Japanese yen versus euro	(8,211)	<b>(9,134)</b>

A hypothetical 10% strengthening or 10% weakening of any other currency against the euro as per December 31, 2015 and December 31, 2016 would not result in a material impact on equity.

The following table analyzes our sensitivity to a hypothetical 10% strengthening and 10% weakening of the US dollar, Hong Kong dollar, Korean won, and Japanese yen against the euro at average exchange rates for 2015 and 2016. A positive amount indicates an increase in net earnings.

(EUR thousand)	IMPACT ON NET EARNINGS	
	2015	2016
10% increase of US dollar versus euro	640	<b>1,739</b>
10% decrease of US dollar versus euro	(640)	<b>(1,739)</b>
10% increase of Singapore dollar versus euro	1,580	<b>1,870</b>
10% decrease of Singapore dollar versus euro	(1,580)	<b>(1,870)</b>
10% increase of Hong Kong dollar versus euro	1,700	<b>4,049</b>
10% decrease of Hong Kong dollar versus euro	(1,700)	<b>(4,049)</b>
10% increase of Korean won versus euro	3,509	<b>1,413</b>
10% decrease of Korean won versus euro	(3,509)	<b>(1,413)</b>
10% increase of Japanese yen versus euro	344	<b>577</b>
10% decrease of Japanese yen versus euro	(344)	<b>(577)</b>

A hypothetical 10% strengthening or 10% weakening of any other currency against the euro at average exchange rates for 2015 and 2016 would not result in a material impact on net earnings.

### INTEREST RISK

We are not exposed to interest rate risk through our borrowing activities. We do not enter into financial instrument transactions for trading or speculative purposes or to manage interest rate exposure. As per December 31, 2016, the company is debt-free.

### CREDIT RISK

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents, accounts receivable, and derivative instruments. These instruments contain a risk of counterparties failing to discharge their obligations. We monitor credit risk and manage credit risk exposure by type of financial



instrument by assessing the creditworthiness of counterparties. We do not anticipate nonperformance by counterparties given their high creditworthiness.

Our customers are semiconductor device manufacturers located throughout the world. We perform ongoing credit evaluations of our customers' financial condition. We take additional measures to mitigate credit risk when considered appropriate by means of down payments or letters of credit. We generally do not require collateral or other security to support financial instruments with credit risk.

Concentrations of credit risk (whether on- or off-balance sheet) that arise from financial instruments exist for groups of customers or counterparties when they have similar economic characteristics that would cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions.

### **Small number of large clients**

We derive a significant percentage of our revenue from a small number of large customers. Our three largest customers accounted each for more than 7.5% of net sales in 2016. The ten largest customers accounted for approximately 78.5% of net sales in 2016 (2015: 81.0%). Sales to these large customers also may fluctuate significantly from time to time depending on the timing and level of purchases by these customers. Significant orders from such customers may expose us to a concentration of credit risk and difficulties in collecting amounts due, which could harm our financial results. At December 31, 2016, one customer accounted for 30.0% of total accounts receivable.

We invest our cash and cash equivalents in short-term deposits and derivative instruments with high-rated financial institutions. We only enter into transactions with a limited number of major financial institutions that have high credit ratings, and we closely monitor the creditworthiness of our counterparties. Concentration risk is mitigated by not limiting the exposure to a single counter party.

The maximum credit exposure is equal to the carrying values of cash and cash equivalent, and accounts receivable.

### **EQUITY PRICE RISK**

The ASMPT investment is accounted for under the equity method on a go-forward basis. Equity method investments are tested for prolonged decline in value. The determination of whether an investment is impaired is made at the individual security level in each reporting period.

If the fair value of an investment is less than its carrying value at the balance sheet date, we determine whether the impairment is temporary or prolonged. The amount per share recognized on December 31, 2016 under equity accounting amounts to HKD63.14, whereas the level 1 fair value per share (being the market price of a share on the Hong Kong Stock Exchange) was HKD82.15 on December 31, 2016. Management concluded that based on quantitative analysis, no impairment of our share in ASMPT existed as of December 31, 2016.

# CR PERFORMANCE

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.



## ASMI MISSION

Our mission is to provide our customers with the most advanced, cost-effective, and reliable products, services and global support network in the semiconductor industry, and beyond.



## CR VISION

As a truly global citizen, our vision of **ZERO HARM!** means we strive to prevent all injuries, reduce our impact to the environment, and make positive contributions to society.



## CR STRATEGY

- › Continue our strong focus on R&D and innovation to create value for society through technology.
- › Manage all aspects of our business responsibly to meet or exceed stakeholder expectations.
- › Hold our critical suppliers to the same standards that we hold ourselves to.

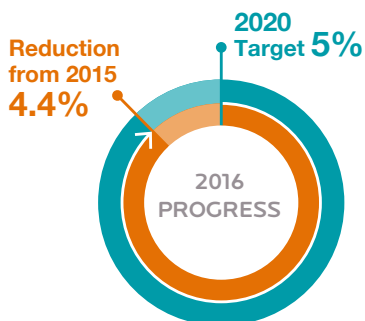
## PROGRESS IN 2016

We have solid strategies to deliver financial and non-financial performance. Both are equally important to our success.

In our Corporate responsibility report we discuss our approach, strategy and performance to our non-financial performance goals. The following table provides a high-level summary of our Corporate responsibility performance and goals in key areas. You can read more about performance in 2016 at our Corporate responsibility report.



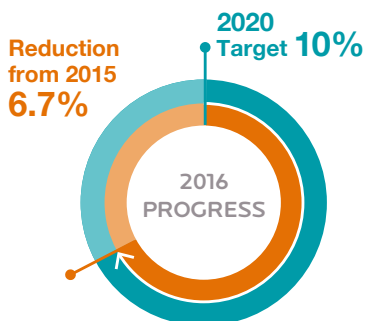
### GREENHOUSE GAS (GHG) EMISSIONS



Metric tons of CO<sub>2</sub> equivalents (mtCO<sub>2</sub>e) per R&D spend (EUR)



### WATER CONSUMPTION



Cubic meters (m<sup>3</sup>) of water per R&D spend (EUR)



### EMPLOYEES IN R&D

447



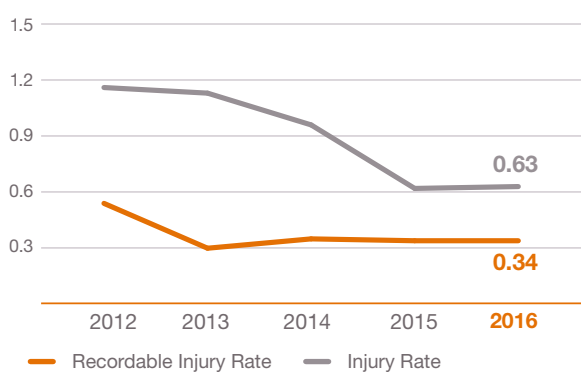
### INVESTED IN R&D

102

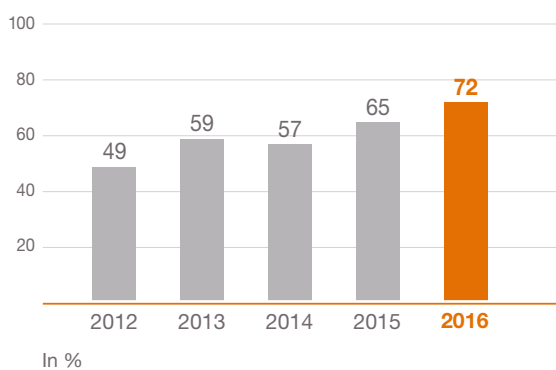
In EUR million

REPORT	2016 PROGRESS	TARGET
<b>INNOVATION</b>	<ul style="list-style-type: none"> <li>› We filed 95 patents and retained a total of 1,490 patents in force</li> <li>› R&amp;D investments of EUR 102 million</li> </ul>	<ul style="list-style-type: none"> <li>› Retain our technology leadership position in semiconductor equipment and processes with R&amp;D investment and Intellectual Property (IP) protection</li> </ul>
<b>PRODUCT STEWARDSHIP AND PRODUCT LIFE CYCLE</b>	<ul style="list-style-type: none"> <li>› We are making good progress in Product Life Cycle Management. We significantly strengthened our Product Safety Design team organization and standards</li> <li>› We continue to minimize chemical consumption needs during use of our products through design</li> </ul>	<ul style="list-style-type: none"> <li>› We have a goal of <b>ZERO HARM!</b>, which is not only during the design and manufacturing of our products, but also for the customers who use our product</li> <li>› We strive for <b>ZERO HARM!</b> throughout our product life cycle</li> </ul>
<b>PEOPLE/SOCIAL</b>	<ul style="list-style-type: none"> <li>› Retained number of employees, with increase in percent of employee in R&amp;D</li> <li>› 92.5% of all employees completed ethics training requirement</li> <li>› Our Recordable Injury Rate remains flat to prior years' performance at 0.34/100 employees</li> </ul>	<ul style="list-style-type: none"> <li>› Establish talent management competency at all ASMI locations worldwide</li> <li>› Develop leadership pipeline and build high-performing teams</li> <li>› Lower than industry turnover rate</li> <li>› <b>ZERO HARM!</b> to our employees</li> </ul>
<b>ENVIRONMENT</b>	<ul style="list-style-type: none"> <li>› We exceeded our water and greenhouse gas goals and made progress in our landfill diversion goal</li> <li>› Our electricity usage is 31,814,761 kwh, our water consumption 178.7 (m<sup>3</sup> x 1,000), and non-hazardous landfill diversion rate is 72% which is up from the previous year</li> </ul>	<ul style="list-style-type: none"> <li>› Our 2020 environmental goals are to drive reductions in normalized greenhouse gas emissions and water usage per R&amp;D investment, and to increase our non-hazardous waste landfill diversion rate. See the Environmental Section of our Corporate responsibility report for full details</li> </ul>
<b>SUPPLY CHAIN</b>	<ul style="list-style-type: none"> <li>› We are integrating our corporate responsibility requirements into our supply chain management system including contracts, scorecard and business reviews</li> <li>› &gt;90% of our critical suppliers acknowledged their commitment to our Supplier Code of Conduct and 86% of them completed the Self-Assessment Questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>› Our goal is for critical suppliers to acknowledge their commitment to the supplier code and develop their own management system to ensure supply chain conformance to labor, ethics and EHS standards, principles and policies, which supports us in having a resilient supply chain</li> </ul>

### GLOBAL INJURY AND RECORDABLE RATES



### LANDFILL DIVERSION RATE

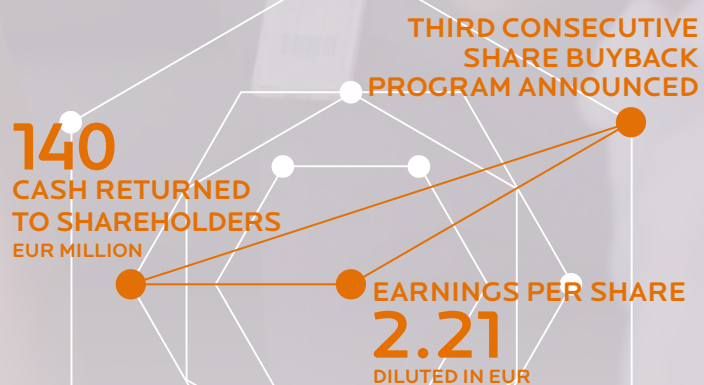




## SHAREHOLDERS

### SHAREHOLDER INFORMATION

- > Interview with the CFO
- > Share listing
- > Shareholder returns
- > Key dates
- > Key figures
- > Contact information



# INTERVIEW WITH THE CFO



Although the drop off in the single wafer ALD market affected ASMI's financial performance in 2016, Chief Financial Officer Peter A.M. Van Bommel expects this market to recover again in 2017. In the following interview he discusses some of the key financial topics that impacted the company in 2016, and explains the importance of maintaining a strong balance sheet to continue investing in the growth of the business.

## HOW WOULD YOU DESCRIBE ASMI'S FINANCIAL PERFORMANCE IN 2016?

After years of strong growth, the single wafer ALD market suffered a double-digit drop, due to lower spending in the memory segment. Even though we expect the single wafer ALD market to recover again in 2017, this slowdown impacted our financial performance last year. Our revenue was down 11% compared to the record level we saw in 2015. Gross margins were stable and operating expenses remained under control. SG&A expenses, excluding restructuring expenses were 5% lower. R&D expenses rose slightly which was the balance of an increase driven by customer requests for new applications and lower impairment charges compared to 2015. Operating margins remained comfortably in double digits at 13.8% (2015: 16.6%). Results from investments – reflecting our 39% share of ASMPT's net profits – showed a strong increase of 52% to €68 million. In total, normalized net profits decreased by 22% to €163 million.

## FREE CASH FLOW DROPPED IN 2016. WHAT FACTORS CAUSED THIS?

On the back of structural improvements in the gross margins and working capital levels, over the last few years we have consistently generated positive free cash flow. In 2016 the free cash flow dropped to €31 million, down from a record high of €104 million in 2015. Next to lower profitability, this was the result of cash used by working capital. While the quality and the underlying level of working capital remained healthy, this increase was impacted by the back-half weighted character of sales in the fourth quarter of 2016, as well as a rise in inventories in anticipation of increasing shipments in the forthcoming quarters.

## WHAT ARE YOUR EXPECTATIONS FOR GROSS MARGINS GOING FORWARD?

We kept gross margins stable at approximately 44% in 2016, despite the drop in revenue. This solid performance reflects the impact from the programs that we implemented over the last several years to further improve the efficiency and flexibility of our manufacturing and supply chain operations. These measures included new outsourcing initiatives and a stronger focus on sourcing of complete subassemblies. Over time, we have further reduced the fixed costs part of our total costs of goods sold, which means that our gross margins are not impacted as much by short-term fluctuations in activity levels. Another example is the migration of a larger part of our supply base to Asia. With an ongoing strong cost focus throughout our organization, we expect to maintain gross margins within a percentage range of low-to-mid 40s, barring a downturn in the semiconductor equipment market. On a quarterly basis, gross margins will continue to be impacted by factors such as revenue mix and utilization.

## ASMI ANNOUNCED ANOTHER SHARE BUYBACK PROGRAM LAST YEAR. CAN YOU SAY MORE ABOUT YOUR POLICY WITH RESPECT TO EXCESS CASH AND SHAREHOLDER REMUNERATION?

Our key priority is to maintain a strong balance sheet that enables us to continue investing in the growth of our business. With free cash flow consistently positive, over the past few years our cash position has remained above our minimum target level of around €300 million. Our commitment is to use excess cash for the benefit of our shareholders. We aim to pay a sustainable dividend. After an increase of 17% in 2016, we will propose a stable dividend of €0.70 per share to the AGM 2017. In addition, since 2014 we have announced three consecutive share buyback programs. Last October we announced a new buyback program for an amount of €50 million, which was 13% complete by the end of December 2016. As our financial position continues to be solid, we have announced early March an increase in the size of the current share buyback program from €50 million to €100 million. In total, we spent approximately €140 million on dividends and share buybacks during 2016, up 20% from €116 million in 2015.

# SHARE LISTING

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. This chapter provides information that is particularly relevant for shareholders and investors, including information related to the share listing and share price performance, dividends, and share buybacks.

ASMI's shares are listed on the NYSE Euronext Amsterdam exchange (symbol: ASM) where ASMI is included in the Midcap index.

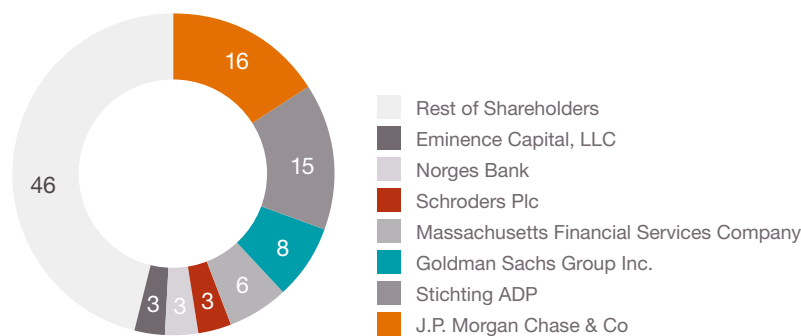
On December 31, 2016, we had 59,815,843 outstanding common shares, with 3,039 registered with us in the Netherlands; 59,409,659 registered with our transfer agent in the Netherlands, ABN AMRO Bank NV; and 403,145 registered with our transfer agent in the United States, Citibank, NA, New York.

## MARKET CAPITALIZATION

At year-end, ASMI had a total of 59,815,843 shares outstanding. The market capitalization of ASMI at year-end was €2,551 million, based on the closing share price of €42.64 at Euronext Amsterdam on December 30, 2016. At year-end 2015, the market capitalization was €2,231 million.

The graph below provides an overview of the shareholders' structure. Further details on the largest reported shareholders can be found in the Corporate Governance chapter on page 91.

## VOTING RIGHTS ASMI



## VOLUNTARY DELISTING FROM NASDAQ

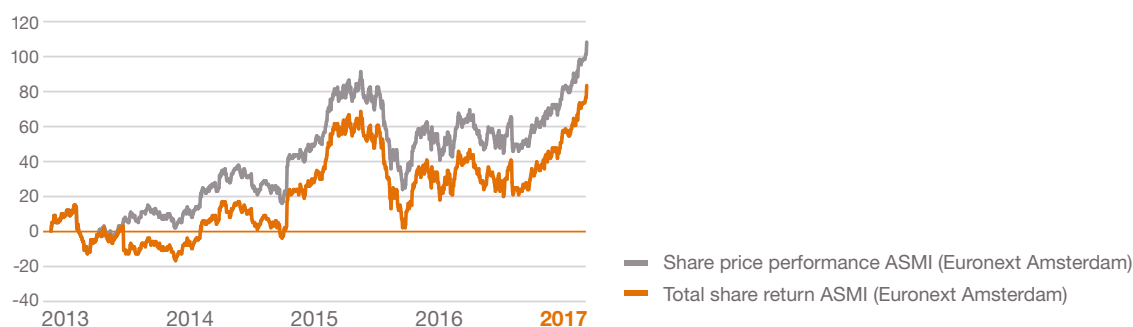
On July 29, 2015, we announced that we would apply for the voluntary delisting from the Nasdaq market. This was due to the low and declining trading volume of our NY Registry Shares on Nasdaq, which at that time accounted for less than 1% of the worldwide trading volume of our shares. On August 21, 2015, we announced that the delisting from Nasdaq had become effective. Since that date, our NY Registry Shares have been eligible for trading on the over-the-counter (OTC) market in the United States under the symbol ASMIY ([www.otcm Markets.com](http://www.otcm Markets.com)).

## SHARE PERFORMANCE

On December 30, 2016, the closing price of ASMI's shares on Euronext Amsterdam was €42.64. The highest closing price during the year was €43.05, on December 27, 2016, and the lowest was €32.14, on January 8, 2016. The average daily trading volume of ASMI shares on Euronext Amsterdam in 2016 was 197,807. This compares to an average daily volume of 236,152 in 2015.

The graph below shows the performance of ASMI's shares on Euronext. The total share return in this graph is the performance of the share including dividends paid and capital returned over the period.

### SHARE PRICE PERFORMANCE AND TOTAL SHARE RETURN %



Following the voluntary delisting from Nasdaq in August 2015, our NY Registry Shares have been eligible for trading on the over-the-counter (OTC) market in the United States under the symbol ASMIY. Information on the trading and share price of our shares on the OTC market in the United States can be found on [www.otcm Markets.com](http://www.otcm Markets.com).

## 20<sup>TH</sup> LISTING ANNIVERSARY EURONEXT AMSTERDAM

ASMI visited Euronext Amsterdam on December 12, 2016, to celebrate the 20<sup>th</sup> anniversary of the company's listing on the Amsterdam exchange.



Chuck del Prado, President and CEO of ASMI, sounds the opening gong at Euronext Amsterdam to celebrate the 20<sup>th</sup> listing anniversary.

# SHAREHOLDER RETURNS

We are committed to paying a sustainable dividend. Additionally, in recent years we have returned excess cash to the financial markets in the form of share buyback programs and an extraordinary return of capital.

## DIVIDENDS AND CAPITAL REPAYMENT

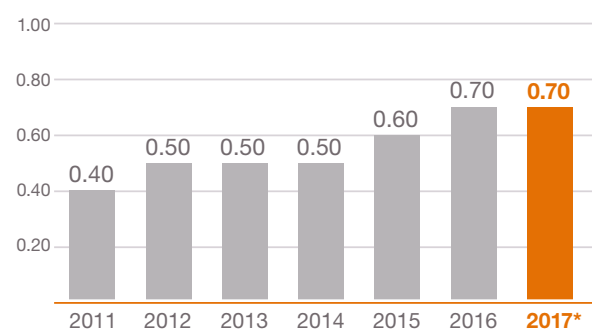
ASMI aims to pay a sustainable annual dividend. The proposed dividend for 2017 will mark the seventh consecutive year that we have paid a dividend. In 2012, 2013 and 2014, we paid a dividend of €0.50 per common share. In 2015 we paid a dividend of €0.60 per common share and in 2016 we paid a dividend of €0.70 per common share.

ASMI will propose to the forthcoming 2017 Annual General Meeting of Shareholders, which will be held on May 22, 2017, to declare a dividend of €0.70 per common share.

### DIVIDEND TIMETABLE

- › Ex-dividend date shares OTC US: May 23, 2017
- › Ex-dividend date shares Euronext: May 24, 2017
- › Record date: May 25, 2017
- › Payment date: June 1, 2017

### DIVIDEND PAID EUR



\* Proposed.

In July 2013, ASMI distributed €4.25 per ordinary share to its shareholders. This followed on the sale of 12% of the total shares in ASMPT in March 2013. The extraordinary return of capital in 2013 was in addition to the dividend paid that year.

## SHARE BUYBACK

On October 26, 2016, ASMI announced a new €50 million share buyback. This program started on December 13, 2016, and is to be executed within the 2016-2017 time frame. This share buyback program is part of ASMI's commitment to use excess cash for the benefit of its shareholders. As part of this program, we will purchase shares that we intend to cancel upon repurchase, as well as shares to cover employee stock and stock option plans. The share buyback will be realized through a program executed by intermediaries, and will end as soon as the aggregate purchase price of the common shares acquired has reached €50 million, but ultimately by November 24, 2017. The share buyback program will be executed in accordance with the conditions of the mandate given by the Annual General Meeting of Shareholders.

By December 31, 2016, 153,022 shares had been repurchased under the 2016-2017 program at an average price of €42.31, totaling €6.5 million. We update the markets on the progress of the share buyback program on a weekly basis. This information can be found on our website ([www.asm.com](http://www.asm.com)).

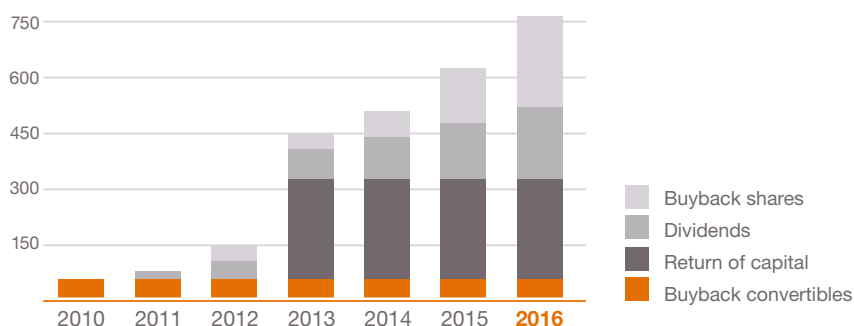
The program announced in October 2016 is the third consecutive share buyback program:

- › It followed on the 2015-2016 €100 million share buyback program that was announced in October 2015. This program started on November 28, 2015 and was completed on November 11, 2016. Under the 2015-2016 share buyback program 2,772,729 shares were repurchased at an average price of €35.98.
- › In October 2014, we also announced a €100 million share buyback program for the 2014-2015 period. This program started on November 24, 2014 and was completed on May 20, 2015. In total, 2,594,420 shares were repurchased at an average price of €38.55, for an amount of €100 million, under this program.

On March 2, 2017, ASMI announced an increase in the current share buyback program to €100 million.

During 2016 we returned approximately €140 million in total to shareholders in the form of dividends and share buybacks. This was up from €116 million in 2015 and €61 million in 2014. Over the 2010-2016 period, we returned €765 million to the financial markets through dividends, share repurchases, return of capital, and buyback of convertible bonds.

#### CUMULATIVE CASH RETURNED TO MARKET EUR million





# KEY DATES

Our key investor dates are listed below. An up-to-date investor calendar is available on our website.

## ANNUAL GENERAL MEETING OF SHAREHOLDERS

The Annual General Meeting of Shareholders will be held on May 22, 2017.

### APRIL 20, 2017

Announcement of first quarter results 2017

### JULY 25, 2017

Announcement of second quarter results 2017

### OCTOBER 31, 2017

Announcement of third quarter results 2017



# KEY FIGURES

## KEY FIGURES PER SHARE

The table below shows the key figures per share and other relevant share data for the last three years.

(EUR, except number of shares)	2014	2015	2016
Net earnings per share, diluted	2.20	2.50	<b>2.21</b>
Normalized net earnings per share, diluted	2.49	2.93	<b>2.66</b>
Dividend per share	0.60	0.70	<b>0.70<sup>1)</sup></b>
Shareholders' equity	27.66	31.58	<b>33.70</b>
Outstanding shares (thousand)	62,968	61,706	<b>59,816</b>
Average shares basic (thousand)	63,510	62,114	<b>60,616</b>
Average shares diluted (thousand)	64,209	62,928	<b>61,253</b>
<b>Closing share price Euronext Amsterdam</b>			
Year-end	35.10	36.16	<b>42.64</b>
High	35.10	45.91	<b>43.05</b>
Low	23.54	27.57	<b>32.14</b>
Market capitalization year-end (EUR million)	2,210	2,231	<b>2,551</b>

<sup>1</sup> Proposed.



# CONTACT INFORMATION

## OPEN DIALOG AND TIMELY INFORMATION

We maintain an open dialog with our shareholders and investors. We provide the financial markets with accurate and timely information through, amongst others, 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.

### VICTOR BAREÑO

Almere, the Netherlands

T: +31 88 100 8500

E: victor.bareno@asm.com



## GOVERNANCE

### CORPORATE GOVERNANCE

- > Corporate governance principles
- > Management Board
- > Supervisory Board
- > Supervisory Board report
- > Shares and shareholders' rights
- > External auditor
- > Declarations

### RISK MANAGEMENT

- > Risk management approach
- > Risk categories and factors



# CORPORATE GOVERNANCE PRINCIPLES

Good corporate governance is about applying sound business practices. At ASMI we do business in an ethical and transparent manner. We achieve this by setting up transparent processes and following internal policies and procedures that enable us to operate in the best interests of all our stakeholders, and which comply with applicable Dutch corporate governance requirements.

## HIGH STANDARD OF CORPORATE GOVERNANCE

ASMI aspires to high standards of corporate governance and ethics practices. Sound corporate governance is a key component of ASMI's culture, behavior, and management and is consistent with our core values. Our corporate governance is supported by a strong focus on integrity, transparency and clear and timely communication. We endeavor to ensure that our policies and procedures comply with both applicable Dutch corporate governance requirements, to the extent possible and desirable, and the relevant laws. Furthermore, our corporate governance structure supports our business and meets the needs of our stakeholders.

## COMPANY STRUCTURE

ASMI is a public company established under Dutch law. The company's management and supervision structure is organized in a two-tier system, comprising of a Management Board, composed of executive directors, and a Supervisory Board, composed of non-executive directors. The Company's Management Board has ultimate responsibility for the overall management of ASMI. The Management Board is supervised and advised by an independent Supervisory Board. The Management Board and the Supervisory Board are accountable to ASMI's shareholders.

ASMI's common stock trades on the Euronext Amsterdam Stock Exchange (symbol ASM) and is required to comply with the Dutch Corporate Governance Code adopted in 2003 as amended in 2008 (the Code).

Corporate governance-related documents are available on our website, these include:

- › Supervisory Board Profile;
- › Supervisory Board Rules;
- › Management Board Rules;
- › Audit Committee Charter;
- › Nomination, Selection and Remuneration Committee Charter;
- › Remuneration Policy;
- › Code of Ethics;
- › Whistleblower Policy;
- › Anti-Fraud Policy; and
- › Rules concerning Insider Trading.

## CORPORATE GOVERNANCE FRAMEWORK



# MANAGEMENT BOARD



**CHARLES D. (CHUCK) DEL PRADO**  
 Chairman of the Management Board,  
 President and Chief Executive Officer



**PETER A.M. VAN BOMMEL**  
 Member of the Management Board  
 and Chief Financial Officer

The Management Board, supervised and advised by the Supervisory Board, manages ASMI's strategic, commercial, financial, and organizational matters, and appoints senior managers. The Supervisory Board supervises and advises the Board of Management in the execution of its tasks and responsibilities and establishes their individual remuneration within the boundaries of the remuneration policies approved by the General Meeting of Shareholders and the recommendations by the Nomination, Selection and Remuneration Committee.

## COMPOSITION OF THE MANAGEMENT BOARD

### CHARLES D. (CHUCK) DEL PRADO – CEO

Mr del Prado was appointed as a member of the Management Board in May 2006 and President and Chief Executive Officer on March 1, 2008. Mr del Prado was reappointed on May 21, 2014 for a period of four years. Between 1989 and 1996, Mr del Prado held several marketing and sales positions at IBM Nederland NV. From 1996 to 2001 he worked in various management positions at ASML, in manufacturing and sales in Taiwan and the Netherlands. He was appointed as Director Marketing, Sales & Service of ASM Europe in March 2001. From 2003 to 2007, he was President and General Manager of ASM America. From January 1, 2008 to February 29, 2008, he acted as Executive Vice President Front-end Operations at ASM America. He holds a Master's of Science degree in Industrial Engineering and Technology Management from the University of Twente, the Netherlands. Mr del Prado is a Dutch national.

### PETER A.M. VAN BOMMEL – CFO

Mr van Bommel was appointed as a member of the Management Board on July 1, 2010 and became Chief Financial Officer on September 1, 2010. Mr van Bommel was reappointed on May 21, 2014 for a period of four years. Mr van Bommel has more than twenty years of experience in the electronics and semiconductor industry. He spent most of his career at Philips, which he joined in 1979. From the mid-1990s until 2005, he acted as CFO of several business units of the Philips group. Between 2006 and 2008, he was CFO at NXP, formerly Philips Semiconductors. He was CFO of Odersun AG, a manufacturer of thin-film solar cells and modules until August 31, 2010. He holds a Master's degree in Economics from the Erasmus University Rotterdam, the Netherlands. Mr van Bommel is a Dutch national.

On April 13, 2016 Mr van Bommel was reappointed for period of four years as a member of the Supervisory Board of Royal KPN NV. He also became the Chairman of the Audit Committee as per that day. On April 16, 2015, Mr Van Bommel was appointed as a member of the Supervisory Board of Neways Electronics International NV.

## THE IMPORTANCE OF DIVERSITY

We recognize the advantages of diversity. Diversity in our view consists of gender, but also relate to specific knowledge, background, (technical) experience, and skills. For the selection of future members of the Management Board, the criteria will therefore include a wide range of diversity aspects, and gender will be one of these.

## RESPONSIBILITIES

In addition to the duties of the Management Board stipulated by law and our Articles of Association, the Management Board has the following responsibilities:

- › Achieving the aims, strategy, policy and results of the Company;
- › Managing the risks associated with the activities of the Company;
- › Ensuring proper financing of the Company;
- › Establishing and maintaining disclosure controls and procedures that ensure that all major financial information is known to the Management Board in order to ensure that the external financial reporting is achieved in a timely, complete and accurate manner;
- › Determining relevant aspects and achieving aims relating to corporate social responsibility and sustainability.

The Management Board is guided by the interests of the Company taking the interests of all stakeholders into consideration.

The members of the Management Board are collectively responsible for managing the Company. They are collectively and individually accountable to the Supervisory Board and the Annual General Meeting of Shareholders for executing the Management Board's responsibilities. The Management Board has the general authority to enter into binding agreements with third parties.

The Management Board held various meetings throughout the year 2016. At least once a month, the Management Board meets to discuss and review the performance of the company.

## RISK MANAGEMENT AND CONTROL FRAMEWORK

The Management Board ensures that the Company has an adequately functioning Internal Risk Management and Control Framework. A comprehensive Risk Management and Control Framework, based on the 'three lines of defense model', has been established that allows the Audit Committee and the Management Board a clear overview of the effectiveness of internal controls and risk management. This is explained in more detail in the Risk Management chapter.

The Management Board periodically discusses the internal risk management and control systems with the Supervisory Board and the Audit Committee. The Management Board provides the Supervisory Board with all information required for the fulfillment of their obligations and the exercise of their powers.

The Management Board provides the General Meeting of Shareholders with all information required for the fulfillment of its obligations and the exercise of its powers in a timely fashion. The Management Board is responsible for the quality and completeness of financial and other reports that are publicly disclosed by or on behalf of the Company, including all reports and documents the Company is required to file.

## CONFLICTS OF INTEREST

Each Management Board member shall immediately report any potential conflict of interest to the Chairman of the Supervisory Board and to the other Management Board members. In such cases, a Management Board member shall provide the Chairman of the Supervisory Board and the other Management Board members with all information relevant to the conflict and follow the procedures as set out in the Management Board Rules.

## APPOINTMENT, SUSPENSION, AND DISMISSAL

The General Meeting of Shareholders appoints a Management Board member based on a binding nomination drawn up by the Supervisory Board. The General Meeting of Shareholders may set aside a binding nomination by a resolution taken with an absolute majority of the votes cast, representing at least one third of the share capital. If such a binding nomination is set aside, a new binding nomination will be drawn up by the Supervisory Board and submitted to a newly called General Meeting of Shareholders. If this binding nomination is set aside, the General Meeting of Shareholders is free to appoint a Management Board member, but only with an absolute majority of the votes cast representing at least one third of our issued capital.

A Management Board member may be suspended at any time by the Supervisory Board. A Management Board member may, in accordance with a proposal by the Supervisory Board, be dismissed by the General Meeting of Shareholders through a majority vote. A resolution to suspend or to dismiss a member of the Management Board, other than in accordance with a proposal of the Supervisory Board, shall require the affirmative vote of a majority of the votes cast at a meeting. The affirmative votes must represent at least one third of the issued capital.

## REMUNERATION

The remuneration of individual members of the Management Board is decided upon by the Supervisory Board, based on the recommendations by the Nomination, Selection and Remuneration (NSR) Committee of the Supervisory Board and on the Company's Remuneration Policy. Our Remuneration Policy was last adopted by the General Meeting of Shareholders in 2014. The remuneration structure includes five components: a fixed (base) salary component; a variable component (annual bonus or short-term incentive); a long-term component (performance shares and stock options); pension provisions and fringe benefits. The remuneration structure reflects short-term and long-term elements of the responsibilities of members of the Management Board.

The principal revisions of the Remuneration Policy are the following:

- › The annual bonus for the CEO is set at up to 100% of the annual fixed salary for on-target performance and up to a maximum of 150% in the case of out-performance;
- › The annual bonus for other members of the Management Board is set at up to 75% of the annual fixed salary for on-target performance and up to a maximum of 125% in the case of out-performance;
- › Performance shares are introduced as part of the long-term component for the Management Board;
- › The total value of stock options and performance shares for the CEO will be 133% of the annual base salary for on-target performance and up to a maximum of 200% of annual fixed salary in the case of out-performance;
- › The total value of stock options and performance shares for other members of the Management Board will be 100% of the annual base salary for on-target performance and up to a maximum of 150% of annual fixed salary in the case of out-performance;
- › Performance shares will become unconditional after three years depending on the achievement of pre-determined financial targets for those three years;
- › Members of the Management Board are required to hold the vested performance shares for an additional two years after vesting.

The relevant targets will be set annually by the Supervisory Board upon the recommendation of the NSR Committee. These targets will be pre-determined, assessable, influenceable, and supportive of the Company's long-term strategy in accordance with the best practices of the Dutch Corporate Governance Code.

For further information regarding the remuneration of the Management Board, please see the Remuneration Policy which is posted on our website, the Remuneration report 2016, the report of the Supervisory Board 2016, which is included in our Statutory annual report 2016, and Note 24 of the Consolidated financial statements.



## LIMITING SHARE DILUTION

In order to limit potential dilution of the long-term incentive to be awarded to the Management Board and the restricted shares to be awarded to other employees, the Supervisory Board reduced the maximum previously applicable dilution percentage of 7.5% of the issued ordinary share capital of ASMI to 5% of the issued ordinary share capital of ASMI. This previous applied dilution limit of 7.5% was applicable to the number of outstanding (vested and non-vested) stock options granted to the Management Board and other employees up to and including 2014. In order to facilitate the transition to the new share- and option-based program, and to attain this dilution limit of 5%, the Supervisory Board will apply a transition period of maximum four years, during which the potential dilution may exceed 5% but will not exceed 7.5%. In addition, ASMI may repurchase outstanding shares in order to mitigate possible dilution.



# SUPERVISORY BOARD



## Top left to right

Jan C. Lobbezoo – Chairman  
Heinrich W. Kreutzer

## Bottom left to right

Martin C.J. van Pernis  
Ulrich H.R. Schumacher

The Supervisory Board oversees strategic and commercial policymaking by the Management Board and the way in which it manages and directs ASMI's operations and affiliated/associated companies. Members of the Supervisory Board are appointed by the General Meeting of Shareholders upon binding nomination by the Supervisory Board.

## COMPOSITION

NAME	POSITION	NATIONALITY	YEAR OF BIRTH	INITIAL APPOINTMENT	TERM EXPIRES
Jan C. Lobbezoo <sup>1) 2)</sup>	Chairman of the Supervisory Board	Dutch	1946	2009	2017
Heinrich W. Kreutzer <sup>1)</sup>	Member of the Supervisory Board	German	1949	2006	2018
Martin C.J. van Pernis <sup>2)</sup>	Member of the Supervisory Board	Dutch	1945	2010	2018
Ulrich H.R. Schumacher <sup>1)</sup>	Member of the Supervisory Board	German	1958	2008	2020

<sup>1)</sup> Member of Audit Committee.

<sup>2)</sup> Member of Nomination, Selection and Remuneration Committee.

### Jan C. Lobbezoo

Mr Lobbezoo was initially elected as a member of the Supervisory Board in May 2009 and was reappointed on May 16, 2013 for a period of four years, and became Chairman of the Supervisory Board in July 2013. Mr Lobbezoo was Executive Vice President and Chief Financial Officer of the semiconductor division of Royal Philips Electronics from 1994 to 2005. He was a member of the Board of Taiwan Semiconductor Manufacturing Company (TSMC) for 12 years until 2007 and remains its adviser, specifically in the areas of US corporate governance, international reporting and financial review. Mr Lobbezoo was on the Board of FEI, a US-based nanotechnology equipment company, until the Board resigned in September 2016, due to the take-over by Fisher Scientific and subsequent delisting from Nasdaq. Currently Mr Lobbezoo is on the Supervisory Board of 5BY2, a Dutch based automatic parking systems company, and on the one-tier Board of Time Acquisition formerly TMC (Non-Executive member). He is also Chairman of the Supervisory Board of Point One Innovation Investment Fund. He holds a Master's degree in Business Economics from Erasmus University Rotterdam, the Netherlands and is a Dutch Registered Accountant. Mr Lobbezoo is a Dutch national.

### **Heinrich W. Kreutzer**

Mr Kreutzer was initially elected as a member of the Supervisory Board in November 2006 and was reappointed on May 21, 2014 for a period of four years. Between 1999 and 2003, Mr Kreutzer was a member of the Management Board as Chief Operating Officer and Chief Technology Officer of Alcatel Germany. From 2004 to 2006, he was Managing Director of Kabel Deutschland GmbH in Munich, Germany. Prior to that he worked at several companies including General Telephone & Electronics in Waltham, US and Alcatel in Stuttgart, Germany. Mr Kreutzer was on the Board of Directors of Micronas Semiconductor AG (Chairman) in Zurich, Switzerland, Micronas Semiconductor GmbH (Chairman) in Freiburg, Germany until March 2016, and is currently on the Board of BKtel Communications GmbH (Chairman), Germany. He holds a Master's degree in Engineering and a Master's degree in Economics, and studied at the Technical University of Berlin and the University of Hagen, Germany. Mr Kreutzer is a German national.

### **Martin C.J. van Pernis**

Mr van Pernis was initially elected as a member of the Supervisory Board in May 2010 and was reappointed on May 21, 2014 for a period of four years. Mr van Pernis joined Siemens in 1971 and retired from the Siemens Group at the end of 2009 as Chairman of the Management Board of Siemens Nederland NV. Mr van Pernis is on the Supervisory Board of Batenburg Techniek NV (Chairman), Aalberts Industries NV (Vice Chairman), Rotterdams Philharmonisch Orkest - RPhO (Chairman), and Member of the Advisory Board of G4S. Mr van Pernis is a Dutch national.

### **Ulrich H.R. Schumacher**

Mr Schumacher was initially elected as a member of the Supervisory Board in May 2008 and was reappointed on May 25, 2016 for a period of four years. Mr Schumacher is Chairman of the Executive Board and CEO of Zumtobel Group AG. From 1986 to 1999, he held various engineering and management positions at Siemens AG. Between 1996 and 1999, he was CEO and President of Siemens Semiconductor Group, and became President and CEO of Infineon Technologies AG after the spin-off from Siemens Semiconductor Group in 1999. From 2004 to 2007, he was a Partner at Francisco Partners, a private equity investment company based in the US. Between 2007 and 2016, he was the CEO and President of Grace Semiconductor Manufacturing Corporation. He holds a PhD in Electrical Engineering from the University of Aachen, Germany, and has completed further education in Business Administration. Mr Schumacher is a German national.

## RESPONSIBILITIES

The supervision over the policies of our Management Board and the general course of our business, and the related management actions, is entrusted to the Supervisory Board. In our two-tier structure under applicable Dutch law, the Supervisory Board is a separate body independent from the Management Board.

The Supervisory Board supervises and advises the Management Board in executing its responsibilities, particularly regarding:

- › achievement of the Company's objectives;
- › corporate strategy and the risks inherent in the business activities;
- › structure and operation of the internal risk management and control systems;
- › financial reporting process;
- › compliance with legislation and regulations;
- › relation of the Company to its shareholders; and
- › relevant aspects of corporate social responsibility.

The Supervisory Board is responsible for monitoring and assessing its own performance.

## CONFLICTS OF INTEREST

A Supervisory Board member facing a conflict of interest shall, in accordance with Article 13 of our Supervisory Board Rules, inform the Chairman of the Supervisory Board immediately. The Chairman shall, if possible in consultation with the other members of the Supervisory Board, determine the course of action to be taken.

## APPOINTMENT

In accordance with Dutch law and the Code, the Supervisory Board has drawn up a profile for its own composition. This Supervisory Board Profile is available on our website. The Supervisory Board shall consist of at least three members. The members should operate independently of each other and within a good relationship of mutual trust. They should be experienced in the management of an international, publicly listed company, and have sufficient time available to fulfill the function of a Supervisory Board member. The Supervisory Board members appoint a Chairman from among themselves.

The Supervisory Board is currently composed of four members after the retirement of Mr Danneels in May 2016. All members of the Supervisory Board meet the profile. Supervisory Board members serve a four-year term and may be re-elected twice. Pursuant to section III.3.5 of the Code 2008, a Supervisory Board member can serve for a maximum period of three four-year terms.

## THE IMPORTANCE OF DIVERSITY

We recognize the advantage of diversity. Diversity in our view consists of gender, but also relate to specific knowledge, background, (technical) experience, and skills. For the selection of future members of the Supervisory Board, the criteria will therefore include a wide range of diversity aspects, and gender will be one of these.

Any appointment or reappointment to the Supervisory Board shall be based on the candidate's match with the Supervisory Board Profile. For reappointment, the candidate's performance during the previous period shall be taken into account. A Supervisory Board member who is available for reappointment must be interviewed by the Chairman of the Nomination, Selection and Remuneration Committee. The Chairman of the Nomination, Selection and Remuneration Committee must be interviewed by the Chairman of the Supervisory Board. All members of the Supervisory Board follow an introduction program after their first appointment, in which financial and legal aspects as well as financial reporting and specific features of ASMI are discussed.

## REMUNERATION

The remuneration of the members of the Supervisory Board is not dependent on our financial results. No member of the Supervisory Board personally maintains a business relationship with ASMI other than as a member of the Supervisory Board. The Nomination, Selection and Remuneration Committee is responsible for reviewing and, if appropriate, recommending changes to the remuneration of the Supervisory Board. Any recommended changes to the remuneration of the members of the Supervisory Board must be submitted to the General Meeting of Shareholders for approval.

The remuneration of the Supervisory Board was approved by the shareholders in the 2011 Annual General Meeting of Shareholders. The Supervisory Board's annual remuneration has been fixed as follows:

(Amount in euros)	
<b>Base remuneration:</b>	
Chairman of the Supervisory Board	<b>60,000</b>
Member of the Supervisory Board (other than the Chairman)	<b>45,000</b>
<b>Additional remuneration:</b>	
Chairman of the Audit Committee	<b>7,500</b>
Member of the Audit Committee (other than the Chairman)	<b>5,000</b>
Chairman of the Nomination, Selection and Remuneration Committee	<b>7,500</b>
Member of the Nomination, Selection and Remuneration Committee (other than the Chairman)	<b>5,000</b>

## INDEPENDENCE

The Supervisory Board is of the opinion that its current members are all independent as defined by the Code. Neither the Chairman nor any other member of the Supervisory Board is a former member of ASMI's Management Board, or has another relationship with ASMI which can be judged 'not independent' of ASMI.

## COMMITTEES

In order to more efficiently fulfill its role and in compliance with the Code, the Supervisory Board has created two committees: the Audit Committee and the Nomination, Selection and Remuneration Committee.

### AUDIT COMMITTEE

The Audit Committee assists the Supervisory Board in its responsibility to oversee ASMI's financing, financial statements, financial reporting process, and system of internal business controls and risk management. The Audit Committee is responsible for the nomination of the external auditor of the Company.

The Audit Committee consists of:

- › Heinrich Kreutzer (Chairman);
- › Jan Lobbezoo; and
- › Ulrich Schumacher.

The Audit Committee supervises the activities of the Management Board with respect to:

- › the structure and operation of the internal risk management and control systems, including supervision of the enforcement of the relevant legislation and regulations;
- › role and functioning of Internal Audit;
- › policy on tax planning;
- › the applications of information and communication technology;
- › financing of the Company;
- › compliance with recommendations and observations of internal and external auditors;
- › release of financial information; and
- › relations with the external auditor, including, in particular, its independence, remuneration, and any non-audit services performed for the Company.

The Audit Committee meets periodically to:

- › consider the adequacy of the internal control procedures;
- › review the operating results with management and the independent auditors;
- › review the scope and results of the audit with the independent auditors;
- › review the scope and results of internal audits with Internal Audit;
- › review performance evaluations relating to the auditor's independence;
- › review performance and services of the external auditor; and
- › review adequateness of the financing structure and tax planning of the Company.

The Chief Executive Officer, Chief Financial Officer, Director Internal Audit, Director External Reporting & Treasury, and representatives of the external auditor are invited to, and also attend, the Audit Committee meetings.

Mr Lobbezoo, Chairman of the Supervisory Board and member of the Audit Committee, is the Supervisory Board's financial expert, taking into consideration his extensive financial background and experience.

### **NOMINATION, SELECTION AND REMUNERATION COMMITTEE**

The Nomination, Selection and Remuneration Committee (NSR Committee) advises the Supervisory Board on matters relating to the selection and nomination of the members of the Management Board and Supervisory Board. The Committee further monitors and evaluates the Remuneration Policy for the Management Board.

The NSR Committee consists of:

- › Martin van Pernis (Chairman); and
- › Jan Lobbezoo.

The objective of the Remuneration Policy is two-fold:

- › To create a remuneration structure that will allow ASMI to attract, reward and retain qualified executives who will lead ASMI in achieving its strategic objectives;
- › To provide and motivate these executives with a balanced and competitive remuneration.

The remuneration structure includes five elements:

- › base salary;
- › annual incentive (bonus);
- › long-term share-based incentive;
- › pension; and
- › fringe benefits.



This remuneration structure reflects short-term and long-term elements of the responsibilities of members of the Management Board.

The NSR Committee ensures that a competitive remuneration structure is provided by benchmarking with other multinational companies of comparable size and complexity operating in comparable geographical and industrial markets. The NSR Committee evaluates the achievement of performance criteria specified per Management Board member. After the evaluation, it recommends the level of remuneration to the Supervisory Board.

On an annual basis, the NSR Committee reports to the Supervisory Board on the application of the Remuneration Policy in the previous year and recommends the Remuneration Policy for the following years.

The Chief Executive Officer and the Vice President Global Human Resource are invited to, and also attend, the Nomination, Selection and Remuneration Committee meetings.

# SUPERVISORY BOARD REPORT

During the year under review, the Supervisory Board performed its duties in accordance with applicable legislation and the Articles of Association of ASM International NV and supervised and advised the Management Board on an ongoing basis.

## FINANCIAL STATEMENTS

We present the ASMI 2016 Statutory annual report in accordance with IFRS, as prepared by the Management Board and reviewed by the Supervisory Board. Our independent auditors, KPMG Accountants NV, have audited these financial statements and issued an unqualified opinion. Their report appears on pages 166 to 173 of the Financial statements.

All of the members of the Supervisory Board have signed the financial statements in respect of the financial year 2016.

## SUPERVISION

Supervision of the Management Board, its policy decisions and actions are entrusted to the Supervisory Board. In accordance with Dutch law, the Supervisory Board is a separate body, independent of the Management Board. The Supervisory Board supervises and advises the Management Board in executing its responsibilities. The profile of the Supervisory Board describes the range of expertises that should be represented within the Board. The procedures of the Supervisory Board and the division of its duties are laid down in the Supervisory Board Rules. Both documents are available on our website [www.asm.com](http://www.asm.com).

## MEETINGS OF THE SUPERVISORY BOARD

During 2016, the Supervisory Board met with the Management Board on five occasions. Jan Lobbezoo, Heinrich Kreutzer, and Martin van Pernis attended all Supervisory Board meetings with the Management Board, while Ulrich Schumacher attended all meetings except two. In these meetings, the Boards discussed strategy progress, operations, business risks, product and market developments, the Company's organization, management and financial structure, and performance, including further profitability improvements. One of those meetings was specifically earmarked to discuss with Management the long-term strategy of the company, the planned implementation of it, and the risks attached to its realization.

In addition, the Supervisory Board discussed the functioning of the Supervisory Board and its individual members, the relationship between the Supervisory Board and the Management Board, the composition of the Management Board, its performance, and the performance of its individual members without the members of the Management Board attending.

## CORPORATE GOVERNANCE

Included in the responsibilities of the Supervisory Board is to oversee the Company's compliance with corporate governance standards and best practices. The Supervisory Board is of the opinion that the Company complies with the Dutch Corporate Governance Code.

## SHAREHOLDERS

Also in 2016, the Company announced a share buyback program of €50 million with the announcement of the third-quarter results. This is in line with the earlier communicated message that the Company uses excess cash for the benefit of its shareholders.

## SUPERVISORY BOARD COMPOSITION

The Supervisory Board is composed of four members. In 2016 the term of Mr Danneels expired and he left the Supervisory Board after serving for 16 years. All four members are independent, in line with the Corporate Governance Code.

## MANAGEMENT BOARD COMPOSITION

The Management Board remains composed of two members. During 2016 no changes have taken place in its composition.

## DIVERSITY

We recognize the advantages of diversity. Diversity in our view consists of gender, but also relate to specific knowledge, background, (technical) experience, and skills. For the selection of future members of the Boards, the criteria will therefore also include a wide range of diversity aspects, and gender will be one of them.

## SUPERVISORY BOARD COMMITTEES

### Audit Committee

The role of the Audit Committee is described in its charter, which is available on the Company's website ([www.asm.com](http://www.asm.com)). The Audit Committee consists of Messrs. Heinrich Kreutzer (Chairman), Jan Lobbezoo and Ulrich Schumacher. During the year, the Audit Committee met with the Management Board and KPMG Accountants, the Company's independent auditors, on four occasions, and in one conference call. Audit Committee discussions included: the Company's financial reporting including the application of accounting principles; the Company's financial position and financing programs, and tax planning; the Company's internal risk management systems; effectiveness of internal controls; the audit performed and its findings, the annual report and financial statements; and the budget and the quarterly progress reports prepared by the Management Board. The internal auditor participated in all four Audit Committee meetings presenting her own actions and findings.

On several occasions, the Audit Committee met with KPMG Accountants, without the members of the Management Board present, to discuss the risk of fraud. Furthermore, the Audit Committee discussed the auditor's performance with the Management Board without KPMG Accountants present.

### Nomination, Selection and Remuneration Committee

The role of the Nomination, Selection and Remuneration Committee is described in its charter, which is available on the Company's website, [www.asm.com](http://www.asm.com). In general, the Committee advises the Supervisory Board on matters relating to the selection and nomination of new Management Board members, as well as the remuneration of the members of the Management Board. This Committee consists of Messrs. Martin van Pernis (Chairman), and Jan Lobbezoo.

In 2016 the Nomination, Selection and Remuneration Committee held one meeting and one conference call. The topics discussed included the remuneration of the individual members of the Management Board. During the meetings of the Committee, the Chief Executive Officer was present, except on the occasion when his own remuneration was discussed.

The remuneration of the members of the Management Board is disclosed in Note 24 on the financial statements of the Statutory annual report. The remuneration of the members of the Management Board during 2016 is fully in accordance with the Remuneration Policy.

## WORD OF THANKS

We extend gratitude and appreciation to ASMI employees worldwide for their many contributions and enduring commitment to the Company. It is their commitment and determination that enabled us to make substantial progress in 2016. We recognize that the cumulative efforts of our workforce are truly creating real value for all of our stakeholders.

## SUPERVISORY BOARD

J.C. Lobbezoo, Chairman

H.W. Kreutzer

M.C.J. van Pernis

U.H.R. Schumacher

Almere, the Netherlands

March 9, 2017



# SHARES AND SHAREHOLDERS' RIGHTS

## GENERAL MEETING OF SHAREHOLDERS

ASMI shareholders exercise their rights through Annual and Extraordinary General Meetings of Shareholders. ASMI is required to convene an Annual General Meeting of Shareholders in the Netherlands each year, no later than six months after the end of the Company's financial year. Additional Extraordinary General Meetings of Shareholders may be convened at any time by the Supervisory Board or the Management Board.

The convocation date is legally set at 42 days prior to the date of the General Meeting of Shareholders.

The record date is legally set at 28 days prior to the date of the General Meeting of Shareholders. Those who are registered as shareholders at the record date are entitled to attend the meeting and to exercise other shareholder rights. Shareholders may be represented by written proxy.

## PUBLICATION IN ENGLISH

The Statutory annual report, the Financial statements and other regulated information such as defined in the Dutch Act on Financial Supervision (Wet op het Financieel Toezicht), will solely be published in English on the Company's website ([www.asm.com](http://www.asm.com)).

The draft minutes of the General Meeting of Shareholders are available on the Company's website no later than three months after the meeting. Shareholders may provide their comments in the subsequent three months. Thereafter, the minutes are adopted.

## 2016 AGM OF ASMI

On May 25, 2016, ASMI held its Annual General Meeting of Shareholders in Amsterdam, the Netherlands. The attendance rate was 66.9% of the total issued share capital of ASMI as per the registration date. In line with the ASMI Boards' recommendations, the shareholders approved all resolutions as proposed to the Annual General Meeting of Shareholders.

The main resolutions were as follows:

- › The Financial statements for the year 2015 were adopted and the shareholders granted discharge to the members of the Management Board and the Supervisory Board from liability in relation to the exercise of their duties in the financial year 2015;
- › The shareholders voted in favor of the dividend payment of €0.70 per ordinary share.

## VOTING RIGHTS

In the General Meeting of Shareholders, each ordinary share with a nominal value of €0.04 entitles the holder to cast one vote, each financing preferred share with a nominal value of €40.00 entitles the holder to cast one thousand votes and each preferred share with a nominal value of €40.00 entitles the holder to cast one thousand votes. Presently, there are no preferred shares and financing preferred shares outstanding. Treasury shares held by the Company cannot be voted on.

The authorized capital of the Company amounts to 110,000,000 shares of €0.04 par value common shares, 118,000 shares of €40 par value preferred shares and 8,000 shares of €40 par value financing preferred shares, of which 59,815,843 common shares, no preferred and no financing preferred shares were outstanding as at December 31, 2016. All per December 31, 2016 outstanding common shares were fully paid.

Of our 59,815,843 outstanding common shares at December 31, 2016, excluding treasury shares, 3,039 are registered with us in the Netherlands, 59,409,659 are registered with our transfer agent in the Netherlands, and 403,145 are registered with our transfer agent in the United States.

Financing preferred shares are designed to allow ASMI to finance equity with an instrument paying a preferred dividend, linked to EURIBOR loans and government loans, without the dilutive effects of issuing additional common shares.

## PREFERRED SHARES

Preferred and financing preferred shares are issued in registered form only and are subject to transfer restrictions. Essentially, a preferred or financing preferred shareholder must obtain the approval of the Company's Supervisory Board to transfer shares. If the approval is denied, the Supervisory Board will provide a list of acceptable prospective buyers who are willing to purchase the shares at a cash price to be fixed by consent of the Supervisory Board and seller within two months after the approval is denied. If the transfer is approved, the shareholder must complete the transfer within three months, at which time the approval expires.

Preferred shares are entitled to a cumulative preferred dividend based on the amount paid-up on such shares. Financing preferred shares are entitled to a cumulative dividend based on the par value and share premium paid on such shares.

## STICHTING AGREEMENT

ASMI is party to an agreement with Stichting Continuïteit ASM International (Stichting), pursuant to which Stichting is granted an option to acquire up to a number of our preferred shares corresponding with a total par value equal to 50% of the par value of our common shares issued and outstanding at the date of the exercise of the option. Stichting is a non-membership organization organized under Dutch law. The objective of Stichting is to serve the interests of the Company. For that objective, Stichting may, amongst others, acquire, own, and vote our preferred shares in order to maintain our independence and/or continuity and/or identity.

The members of the board of Stichting are:

- › Dick Bouma, Retired Chairman Board Pels Rijcken & Droogleever Fortuijn;
- › Rob Ruijter, Chairman Supervisory Board Delta Lloyd; and
- › Rinze Veenenga Kingma, President Archeus Consulting BV.

The purpose of above mentioned option is to protect the independence, the continuity and the identity of ASMI against influences that are contrary to the interests of ASMI, its enterprise and the enterprises of its subsidiaries and all stakeholders.

## POWERS

The powers of the General Meeting of Shareholders are defined in our Articles of Association.

The main powers of the shareholders are to:

- › appoint, suspend, and dismiss members of the Management Board and Supervisory Board;
- › adopt the financial statements;
- › declare dividends;
- › discharge the Management Board and Supervisory Board from responsibility for the performance of their respective duties for the previous financial year;
- › appoint the external auditors;
- › adopt amendments to the Articles of Association;
- › issue shares and grant subscriptions for shares;
- › authorize the Management Board to issue shares and grant subscriptions for shares;
- › withdraw pre-emptive rights of shareholders upon issuance of shares;
- › authorize the Management Board to withdraw pre-emptive rights of shareholders upon issuance of shares; and
- › authorize the Management Board to repurchase or cancel outstanding shares.

## MAJOR SHAREHOLDERS

Pursuant to the Dutch Financial Supervision Act ("Wet op het financieel toezicht" or WFT), legal entities as well as natural persons must immediately notify the Dutch Authority for the Financial Markets (AFM) when a shareholding equals or exceeds 3% of the issued capital. The AFM must be notified again when this shareholding subsequently reaches, exceeds or falls below a threshold. This can be caused by the acquisition or disposal of shares by the shareholder or because the issued capital of the issuing institution is increased or decreased. Thresholds are: 3%, 5%, 10%, 15%, 20%, 25%, 30%, 40%, 50%, 60%, 75%, and 95%. The AFM incorporates the notifications in the public register, which is available on its website. Failure to disclose the shareholding qualifies as an offense, and may result in civil penalties, including suspension.

The following table sets forth information with respect to the ownership of our common shares as of February 1, 2017, by each beneficial owner known to us of more than 3% of our common shares:

	NUMBER OF SHARES	PERCENT	NUMBER OF VOTING RIGHTS	PERCENT <sup>1)</sup>
J.P. Morgan Chase & Co <sup>2)</sup>	9,628,500	16.1%	9,628,500	16.1%
Stichting ADP <sup>3)</sup>	8,707,323	14.6%	8,707,323	14.6%
Eminence Capital LP <sup>4)</sup>	5,134,627	8.6%	1,910,167	3.2%
Goldman Sachs Group Inc. <sup>5)</sup>	4,529,018	7.6%	4,529,018	7.6%
Massachusetts Financial Services Company <sup>6)</sup>	3,096,673	5.2%	3,587,647	6.0%
Norges Bank <sup>7)</sup>	1,921,275	3.2%	1,921,275	3.2%
Schroders Plc <sup>8)</sup>	–	–	2,049,027	3.4%

<sup>1)</sup> Calculated on the basis of 59,827,101 common shares outstanding as of February 1, 2017, and without regard to options.

<sup>2)</sup> Of the share capital interest and voting rights held by J.P. Morgan Chase & Co, 407,161 shares are indirectly actual and 9,221,339 are indirectly potential. Based on the notification filed with the AFM on January 13, 2017.

<sup>3)</sup> The total capital interest of Stichting ADP is held indirectly actual, while of the 8,707,323 voting rights 8,704,284 are held indirectly actual and 3,039 are held indirectly potential. Based on the AFM notification dated September 9, 2016.

<sup>4)</sup> Of the share capital interest that Eminence Capital LP holds, 1,910,167 shares are directly actual and 3,224,460 are directly potential. Based on the AFM notification dated May 29, 2015.

<sup>5)</sup> Of the 4,529,018 shares and voting rights held by Goldman Sachs Group Inc. 2,105,332 are held indirectly actual and 2,423,686 indirectly potential. Based on the AFM notification dated November 9, 2016.

<sup>6)</sup> Massachusetts Financial Services Company's capital interest amounts to 3,022,833 shares held directly actual and 73,840 shares indirectly actual. Of the voting rights, 3,201,169 are held directly actual and 386,478 indirectly actual. Based on the notification filed with the AFM on July 6, 2016.

<sup>7)</sup> Of the share capital interest and voting rights held by Norges Bank, 1,907,726 shares are directly actual and 13,549 are directly potential. Based on the notification filed with the AFM on February 1, 2017.

<sup>8)</sup> All of the 2,049,027 voting rights held by Schroders Plc are indirectly actual. Based on the notification filed with the AFM on May 3, 2016.

## BENEFICIAL OWNERS

A 'beneficial owner' of a security includes any person who, directly or indirectly, through any contract, arrangement, understanding, relationship, or otherwise has or shares (i) voting power which includes the power to vote, or to direct the voting of, such security and/or (ii) investment power which includes the power to dispose, or to direct the disposition, of such security. In addition, a person shall be deemed to be the beneficial owner of a security if that person has the right to acquire beneficial ownership of such security, as defined above, within 60 days, including but not limited to any right to acquire: (i) through the exercise of any option, warrant or right; (ii) through the conversion of a security; or (iii) pursuant to the power to revoke, or pursuant to the automatic termination of, a trust, discretionary account, or similar arrangement.

## DIVIDEND

ASMI aims to pay a sustainable annual dividend. Annually, the Supervisory Board, upon proposal of the Management Board, will assess the amount of dividend that will be proposed to the Annual General Meeting of Shareholders. The decision that a dividend be proposed to the Annual General Meeting of Shareholders will be subject to the availability of distributable profits as well as retained earnings and may be affected by our potential future funding requirements. Accordingly, dividend payments may fluctuate and could decline or be omitted in any year.

In 2016 we paid a dividend of €0.70 per common share. In 2015 we paid a dividend of €0.60 per common share, and from 2012 to 2014 we paid €0.50 per common share and in July 2013 we paid €4.25 per common share as an extraordinary capital repayment subsequent to the realized gain on the sale of a 12% share in our associate ASMPT. We will propose to the forthcoming 2017 Annual General Meeting of Shareholders to declare a dividend of €0.70 per share.

# EXTERNAL AUDITOR

In accordance with Dutch law, ASMI's external auditor is appointed by the General Meeting of Shareholders and is nominated for appointment by the Supervisory Board upon advice from the Audit Committee and the Management Board. Our current external auditor, KPMG, was reappointed as external auditor by the 2016 Annual General Meeting of Shareholders for the reporting year 2016.

The external auditor is present at our Annual General Meeting of Shareholders to respond to questions, if any, from the shareholders about the auditor's report on the financial statements.

The Audit Committee has determined that the provision of services by KPMG and its member firms is compatible with maintaining KPMG's independence. All audit and permitted non-audit services provided by KPMG and its member firms during 2016 were pre-approved by the Audit Committee.

## AUDIT COMMITTEE POLICIES AND PROCEDURES

The Audit Committee has adopted the following policies and procedures for pre-approval of all audit and permitted non-audit services provided by our external auditor:

### AUDIT SERVICES

Management submits to the Audit Committee for pre-approval the scope and estimated fees for specific services directly related to performing the independent audit of our statutory and Consolidated financial statements for the current year.

### AUDIT-RELATED SERVICES

The Audit Committee may pre-approve expenditures up to a specified amount for services included in identified service categories that are related extensions of audit services and are logically performed by the auditors. Additional services exceeding the specified pre-approved limits require specific Audit Committee approval.

### TAX SERVICES

The Audit Committee may pre-approve expenditures up to a specified amount per engagement and in total for identified services related to tax matters. Additional services exceeding the specified pre-approved limits, or involving service types not included in the pre-approved list, require specific Audit Committee approval.

### OTHER SERVICES

In the case of specified services for which utilizing our external auditor creates efficiencies, minimizes disruption or preserves confidentiality, or for which management has determined that our external auditor possesses unique or superior qualifications to provide such services, the Audit Committee may pre-approve expenditures up to a specified amount per engagement and in total. Additional services exceeding the specified pre-approved limits, or involving service types not included in the pre-approved list, require specific Audit Committee approval.

# DECLARATIONS

## COMPLIANCE WITH DUTCH CORPORATE GOVERNANCE CODE

The Dutch Corporate Governance Code was last amended on December 8, 2016. In 2017, Dutch listed companies are still required to report on compliance with the Code 2008 for the 2016 financial year. As of 2018, Dutch listed companies will report for the first time on compliance with the revised Code. The full text of the Dutch Corporate Governance Code can be found on the website of the Monitoring Commission Corporate Governance Code ([www.mccg.nl](http://www.mccg.nl)).

ASMI applies the relevant principles and best practices of the Code 2008 applicable to the Company, to the Management Board, and to the Supervisory Board, in the manner set out in this Corporate Governance section, as long as it does not entail disclosure of commercially sensitive information, as accepted under the Code.

ASMI agrees with rule II.2.8 of the Code that in most circumstances a maximum severance payment of one year for Management Board members is appropriate. However, we want to reserve the right to agree to different amounts in case we deem this to be required by the circumstances. Any deviations will be disclosed.

## RESPONSIBILITY STATEMENT

The members of the Management Board state that, to the best of their knowledge, the statutory financial statements prepared in accordance with IFRS-EU and Title 9 of part 2 of the Dutch Civil Code as included in this Statutory annual report 2016 provide a true and fair view of the assets, liabilities, financial position, and results of the Company and its subsidiaries included in the Consolidated statements and that the management report provides a true and fair view of the position and the business of the Company and its subsidiaries, and the Statutory annual report 2016 provides a description of the principal risks and uncertainties that the Company faces.

## CORPORATE GOVERNANCE STATEMENT

According to the Corporate Governance Code, the Company is required to publish a statement on corporate governance. This statement has to report on compliance with the Code. Furthermore, a description must be included of the main characteristics of the internal risk management and control systems connected with the Company's financial reporting process. The corporate governance statement must also provide information on the functioning of the General Meeting of Shareholders, including its main rights, the composition of the Management Board and the Supervisory Board, including its committees.

The Management Board states that the information required by the December 23, 2004 (as lastly amended on December 10, 2008) decree is included in this Corporate Governance chapter and in the Risk Management chapter.

Corporate governance-related documents are available on our website. These include the Supervisory Board Profile, Supervisory Board Rules, Management Board Rules, the Audit Committee Charter, the Nomination, Selection and Remuneration Committee Charter, the Code of Ethics, the Whistleblower Policy, the Anti-Fraud Policy, the Rules concerning Insider Trading, and the Remuneration Policy.

## ARTICLE 10 EU TAKEOVER DIRECTIVE DECREE

The Management Board states that the information required under Article 10 of the EU Takeover Directive Decree is disclosed in this Corporate Governance chapter to the extent that it is applicable to ASMI.

# RISK MANAGEMENT APPROACH

ASMI can be adversely affected by a variety of business risks and economic developments. A structured risk management process helps management to better understand how risks might impact the Company and to take appropriate risk mitigation initiatives.

Doing business inherently involves taking risks. ASMI strives for a culture of openness and transparency in which identified risks are disclosed pro-actively and unexpected events are reported as soon as they occur. The following is an overview of ASMI's approach to risk management and control systems. Also, we include an assessment of the key risks.

## RISK MANAGEMENT APPROACH

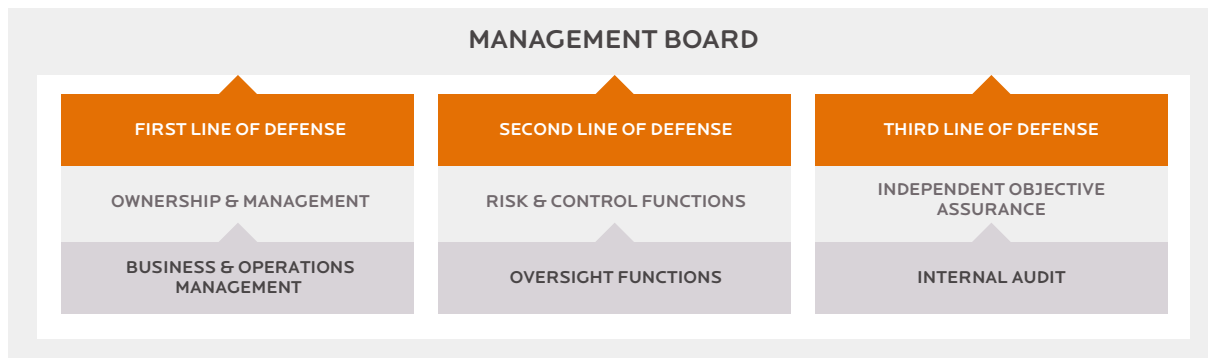
A comprehensive Risk Management and Control Framework, based on the 'three lines of defense model', has been established that allows the Audit Committee and the Management Board a clear overview of the effectiveness of internal controls and risk management. Within the framework, the Management Board is responsible for designing, implementing, and operating an adequately functioning Internal Risk Management and Control Framework in the Company. The objective of this framework is to identify and manage the strategic, operational, financial, financial reporting, and compliance risks to which the Company is exposed, to promote effectiveness and efficiency in the Company's operations, to promote reliable financial reporting and to promote compliance with laws and regulations. The Management Board is aware that such a framework can neither provide absolute assurance that its objectives will be achieved, nor can it entirely prevent material errors, losses, fraud, and the violation of laws and regulations.

Supporting the Management Board are the following three pillars:

- › **Business & Operations management.** These management functions own and manage risk, and are responsible for maintaining effective controls and for executing risk and control procedures on a daily basis. This involves identifying and assessing risks being undertaken and establishing appropriate controls to mitigate the risks. There are adequate management controls in place to monitor ongoing compliance and to highlight control breakdowns.
- › **Oversight functions.** These management functions support Business & Operations management and help ensure that the risk and control procedures are operating as intended.
- › **Internal Audit.** This function provides independent objective assurance on the effectiveness of governance, risk management and internal controls including the manner in which Business & Operations Management and the oversight functions manage and control risk. Internal audit brings a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

Our Internal Risk Management and Control Framework is based on the Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Framework aims to provide reasonable assurance regarding effectiveness and efficiency of an entity's operations, reliability of financial reporting, prevention of fraud, and compliance with laws and regulations.

We have embedded an Internal Risk Management and Control Framework in the Company. Within the Framework, we continue to enhance our identification and assessment of our strategic, operational, financial, financial reporting, and compliance risks, and continue to expand our risk management policies. We have identified key controls over financial reporting and embedded these in common business and financial reporting processes to provide further assurance for the reliability of our financial reporting.



## RISK APPETITE

Undertaking business activity inevitably leads to taking risks. Risk appetite is the level of risk we deem acceptable to achieve our objectives. ASMI's risk appetite is primarily established based on the defined and agreed strategy and the individual objectives within this strategy. Risk appetite is further guided by our code of ethics as well as detailed policies and procedures.

Our risk appetite differs per risk type:

- › **Strategic risks:** we aim to deliver on our strategic ambitions and priorities, and are willing to accept reasonable risks to achieve this.
- › **Operational risks:** we face operational challenges which require an appropriate level of management attention. The overall objective is to avoid risks that could negatively impact our goal to achieve operational efficiency, while ensuring our quality standards are unaffected.
- › **Financial risks:** our financial strategy is focused on a strong financial position and creating long-term value for our shareholders.
- › **Legal and regulatory risks:** we strive to be fully compliant with our code of conduct and national and international laws and regulations of the markets in which we operate.

## INTERNAL AUDIT

The internal audit function of ASMI forms one of the key elements to address the topics of risk management and internal control over financial reporting as required under the Code. To ensure the independence of this function, the Director Internal Audit reports to the Management Board and the Audit Committee. The Audit Committee is involved in reviewing and approving the audit plan for the year which the internal auditor executes.

The internal auditor regularly provides updates on its findings to the Audit Committee.



## CONTROL EFFECTIVENESS STATEMENT

The Management Board is responsible for ASMI's Internal Risk Management and Control Framework. This system is designed to manage the main risks that may prevent ASMI from achieving its objectives. However, this system cannot provide absolute assurance that material misstatements, fraud, and violations of laws and regulations can be avoided. The Internal Risk Management and Control Framework and the evaluation of the effectiveness of our internal controls and areas for improvement are regularly discussed with the Audit Committee and KPMG Accountants, our external auditor. The Audit Committee reports on these matters to the Supervisory Board.

The Management Board conducted an evaluation of the effectiveness of our internal control over financial reporting based on the Internal Control Integrated Framework issued by the COSO. Based on this evaluation of the effectiveness of the Company's internal control over financial reporting, all members of the Management Board concluded that, as of December 31, 2016, the Company's internal control over financial reporting was effective and provides reasonable assurance for the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. In addition, to the best of the knowledge of the Management Board, the management report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation as a whole, as well as a description of the principal risks and uncertainties that the Company faces. No changes to the Company's internal control over financial reporting have occurred during 2016 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

All internal control systems, no matter how well designed and implemented, have inherent limitations. Even systems determined to be effective may not prevent or detect misstatements or fraud, and can only provide reasonable assurance with respect to disclosure and financial statement presentation and reporting. Additionally, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate due to changed conditions and that the degree of compliance with the policies or procedures may deteriorate.

In view of all of the above, the Management Board believes that it complies with the requirements of best practice provision II.1.5 of the Code.

# RISK CATEGORIES AND FACTORS

In conducting our business, we face a number of risks that may interfere with our business objectives. Some of these risks relate to our operational processes, while others relate to our business environment. It is important to understand the nature of these risks and the impact they may have on our business, financial condition, and results of operations. Some of the more relevant risks are described below, which may not be in order of likelihood or materiality. These risks are not the only ones we face. Some risks may not yet be known to us and certain risks that we do not currently believe to be material could become material in the future.

## STRATEGIC RISKS

- › The semiconductor industry is highly cyclical and is subject to rapid technological change. We face intense competition from companies which have greater resources than we do, and potential competition from new companies entering the market in which we compete. Therefore, we invest in research and development, in an effort to compete effectively. Our primary competitors for our wafer processing equipment include Applied Materials, LAM Research Corporation, Tokyo Electron, Hitachi Kokusai, Wonik IPS, and Jusung.
- › We have to recruit or retain qualified personnel or integrate qualified personnel into our organization in order to avoid reduced sales, delayed product development, and diversion of management resources. Our business and future operating results depend in part upon our ability to attract and retain qualified management, technical, sales, and support personnel for our operations on a worldwide basis. Competition for qualified personnel is intense, and we cannot guarantee that we will be able to continue to attract and retain qualified personnel.
- › The costs of semiconductor manufacturers for switching from one semiconductor equipment supplier to another can be high, therefore it may be more difficult to sell our products to customers having a competing installed base.

## OPERATIONAL RISKS

- › The Company derives a significant percentage of its revenue from a small number of large customers. The ten largest customers accounted for approximately 78.5% of net sales in 2016 (2015: 81.0%). Reduction, rescheduling or cancellation of orders would reduce our revenues.
- › Our products generally have long sales cycles and implementation periods, which increase our costs of obtaining orders and reduce the predictability of our earnings. Our products are technologically complex. Prospective customers generally must commit significant resources to test and evaluate our products and to install and integrate them into larger systems. In addition, customers often require a significant number of product presentations and demonstrations, in some instances evaluating equipment on site, before reaching a sufficient level of confidence in the product's performance and compatibility with the customer's requirements to place an order. As a result, our sales process is often subject to delays associated with lengthy approval processes that typically accompany the design and testing of new products.
- › We outsource a significant portion of the manufacturing of our business to a limited number of suppliers. If our suppliers were unable or unwilling to deliver products in a timely manner to us in the quantities we require, we may be unable to fill customer orders on a timely basis, which could negatively affect our customer relationships and financial performance. We have shifted much of our operational activities to our Front-end Manufacturing Singapore (FEMS) facility. If this facility experiences a manufacturing disruption for any reason, our ability to timely meet our customers' needs may be impaired, which would negatively affect our customer relationships and financial performance.

- › Our internal information technology systems are a fundamental component of our business operations. In today's world, these systems are subject to compromise by aging and other matters such as computer viruses, unauthorized access, and general system failures or unforeseen difficulties. Such incidents could result in business disruption and theft of confidential information. We focus on proactive measures to prevent and mitigate such risks.

## LEGAL AND REGULATORY RISKS

- › Our success and ability to compete depend in large part upon protecting our proprietary technology. We rely on a combination of patent, trade secret, copyright and trademark laws, non-disclosure and other agreements, and technical measures to protect our proprietary rights and confidential information. These agreements and measures may turn out not to be sufficient. Our technology may be infringed by third parties. In addition, patents issued to us may be challenged, invalidated or circumvented, rights granted to us under patents may not provide competitive advantages to us. In addition, monitoring unauthorized use of our intellectual property is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology. The laws of some countries in which our products are or may be developed, manufactured or sold, including various countries in Asia, may not protect our products or intellectual property rights to the same extent as do the laws of the Netherlands and the United States. In past years, there has been substantial litigation regarding patent and other intellectual property rights in our semiconductor and related technology industries. In the future, litigation may be necessary to enforce patents issued to us, to protect trade secrets or know-how owned by us or to defend us against claimed infringement of the rights of others and to determine the scope and validity of the proprietary rights of others. On the flip side a threat is be that third parties may assert that our products infringe their intellectual property.
- › We are party from time to time to various legal proceedings and claims generally incidental to our business including without limitation 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.
- › Our operations are subject to many laws and regulations wherever we operate. To the extent such regulations or directives apply to our business throughout the world, such legislation may adversely affect our business; for example by forcing us or our suppliers to change production processes or use more costly or scarce materials. As with other companies engaged in similar activities, we face inherent risks of environmental liability in our current and historical manufacturing, R&D activities, and operations. Accordingly, costs and regulatory fines associated with such future environmental compliance or remediation obligations could adversely affect our business.
- › Changes in taxation could affect our future profitability.

## RISKS RELATED TO OUR INVESTMENT IN ASM PACIFIC TECHNOLOGY

A significant portion of our total assets is composed of our interest in ASMPT. Prior to March 2013, we owned approximately 52% of the outstanding equity of ASMPT, and the assets and operating results of ASMPT were reported by us on a consolidated basis. On March 15, 2013, we disposed of a 12% stake in ASMPT, which reduced our ownership to approximately 40% of the outstanding equity. As a result of this, ASMPT ceased to be a consolidated subsidiary as of that date and our pro rata interest in the net earnings of ASMPT is reported in our Consolidated Statement of Profit or Loss. As per December 31, 2016, our interest in ASMPT is 39.19%. Although ASMPT operates in the same industry as ASMI, ASMPT addresses a different segment of the industry, which may involve different market dynamics and competitive factors from time to time, as well as different business risks unique to their operations. ASMPT is a public company traded on the Hong Kong Stock Exchange.

The significant risks currently considered relevant, potential consequences, and applicable mitigating measures can be outlined as follows:

RISK	POTENTIAL CONSEQUENCES	MITIGATING MEASURES
<b>STRATEGIC</b>		
Ability to respond to changes in product demand and technology change.	Financial loss due to decreased orders and/or reputation damage.	Appropriate investment in R&D initiatives to support both strategic objectives and customer requests.
Ability to attract and retain appropriately qualified and experienced personnel.	Reduced sales, delayed product development and diversion of management resources.	Robust talent management and succession planning programs and tools.
Cyclical nature of the semiconductor market.	Financial loss due to reduced demand and fixed overheads during industry downturns. Abrupt increases in demand for semiconductor devices and insufficient production capacity during industry upturns.	<ul style="list-style-type: none"> <li>› Outsourcing generic manufacturing..</li> <li>› Financial structure, cash, standby credit facility.</li> </ul>
<b>OPERATIONAL</b>		
Failure to deliver product of sufficient quality or on time.	Financial loss due to penalties, rework and/or reduced future demand.	Commitment to: <ul style="list-style-type: none"> <li>› delivering quality tools and equipment with robust quality assurance processes and controls in place; and</li> <li>› timely response to customer requests through 24/7.</li> </ul>
Dependence on small number of large customers.	Loss of a customer or significant reduction in demand could result in significant downturn in financial results.	Commitment to: <ul style="list-style-type: none"> <li>› delivering quality tools and equipment with robust quality assurance processes and controls in place;</li> <li>› timely response to customer requests; and</li> <li>› pro-actively working with customers to strengthen relationships and ensure as far as possible we meet expectations.</li> </ul>
IT security breaches including cyber attacks.	Reputation damage and/or financial loss.	IT risk management framework.
Failure of contract manufacturer to deliver.	Financial loss due to penalties, rework and/or reduced future demand.	Effective disaster recovery plan in place for contract manufacturers.
Disruption of material supplies.	Loss of reputation and/or financial loss.	Effective disaster recovery plan to ensure continuity of material supplies.
Disruption of critical business processes through IT downtime.	Potential loss of reputation and/or financial loss.	Comprehensive IT disaster recovery plan based on detailed business impact analysis.
Safety, health and environment (SHE).	Incidents and accidents in the supply chain.	Effective global SHE organization and tracking, monitoring and evaluation of accidents.
<b>FINANCIAL</b>		
Financial reporting is not complete or accurate.	Reputation damage and/or financial loss.	Finance Control Framework.
<b>LEGAL AND REGULATORY RISKS</b>		
Non-adherence to laws and regulations.	Reputation damage and/or financial loss.	Use of policies, procedures and work instructions.



## FINANCIAL STATEMENTS

### CONSOLIDATED FINANCIAL STATEMENTS

- > Consolidated statement of profit or loss
- > Consolidated statement of comprehensive income
- > Consolidated statement of financial position
- > Consolidated statement of changes in equity
- > Consolidated statement of cash flows
- > Notes to the Consolidated financial statements

### ASM INTERNATIONAL NV FINANCIAL STATEMENTS

- > Company balance sheet
- > Company statement of profit or loss
- > Notes to the Company financial statements

### INDEPENDENT AUDITOR'S REPORT

### OTHER INFORMATION



# CONSOLIDATED STATEMENT OF PROFIT OR LOSS

(EUR thousand, except per share data)	NOTES	YEAR ENDED DECEMBER 31,	
		2015	2016
<b>Net sales</b>	19	669,621	597,930
Cost of sales		(374,094)	(333,430)
<b>GROSS PROFIT</b>	19	295,527	264,500
<b>Operating expenses:</b>			
Selling, general and administrative	21	(94,729)	(91,130)
Research and development	22	(89,735)	(91,129)
<b>TOTAL OPERATING EXPENSES</b>		<b>(184,464)</b>	<b>(182,259)</b>
<b>RESULT FROM OPERATIONS</b>	19	111,063	82,241
Finance income		1,112	3,095
Finance expense		(1,620)	(1,096)
Foreign currency exchange gain, net		25,264	13,032
Share in income of investments in associates	6	16,108	40,488
<b>RESULT BEFORE INCOME TAXES</b>		151,927	137,760
Income taxes	20	5,350	(2,289)
<b>NET EARNINGS FROM OPERATIONS, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>		157,277	135,471
<b>Per share data</b>	23		
<b>Basic net earnings per share (EUR):</b>			
<b>FROM OPERATIONS</b>		2.53	2.23
<b>Diluted net earnings per share (EUR):</b>			
<b>FROM OPERATIONS</b>		2.50	2.21
<b>Weighted average number of shares (thousand):</b>			
Basic		62,114	60,616
Diluted		62,928	61,253



# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(EUR thousand)	NOTES	YEAR ENDED DECEMBER 31,	
		2015	2016
<b>NET EARNINGS FROM OPERATIONS, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>		<b>157,277</b>	<b>135,471</b>
Other comprehensive income, items that may be subsequently reclassified to profit or loss:			
Foreign currency translation effect		136,744	40,731
Proportionate part in other comprehensive income (loss) investments in associates		567	(1,344)
<b>TOTAL</b>		<b>137,311</b>	<b>39,387</b>
Related tax		-	-
<b>TOTAL COMPREHENSIVE INCOME, ATTRIBUTABLE TO COMMON SHAREHOLDERS</b>	<b>11</b>	<b>294,588</b>	<b>174,858</b>

# CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(EUR thousand)	NOTES	DECEMBER 31,	
		2015	2016
<b>Assets</b>			
Property, plant and equipment	3	91,794	95,004
Goodwill	4	11,270	11,270
Other intangible assets	5	81,535	100,179
Investments in associates	6	1,180,839	1,235,738
Deferred tax assets	20	11,563	13,919
Other non-current assets		-	4,824
Evaluation tools at customers	7	28,999	36,594
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,406,000</b>	<b>1,497,528</b>
Inventories	8	113,502	112,339
Accounts receivable	9	90,190	137,020
Income taxes receivable	20	515	370
Other current assets		18,855	22,849
Cash and cash equivalents	10	446,915	378,157
<b>TOTAL CURRENT ASSETS</b>		<b>669,977</b>	<b>650,735</b>
<b>TOTAL ASSETS</b>		<b>2,075,977</b>	<b>2,148,263</b>
<b>Equity and liabilities</b>			
<b>EQUITY</b>			
Pension liabilities	12	1,170	1,418
Deferred tax liabilities	20	11,332	13,118
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>12,502</b>	<b>14,536</b>
Accounts payable		54,441	60,910
Provision for warranty	13	9,023	5,800
Income taxes payable	20	6,841	2,467
Accrued expenses and other payables	14	44,791	48,694
<b>TOTAL CURRENT LIABILITIES</b>		<b>115,096</b>	<b>117,871</b>
<b>TOTAL LIABILITIES</b>		<b>127,598</b>	<b>132,407</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>2,075,977</b>	<b>2,148,263</b>



# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(EUR thousand except for share data)	NOTES	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 AS OF JANUARY 1, 2015</b>		<b>62,968,184</b>	<b>2,553</b>	<b>216,322</b>	<b>(27,733)</b>	<b>1,497,109</b>	<b>54,770</b>	<b>1,743,021</b>
Net earnings		-	-	-	-	157,277	-	157,277
Other comprehensive income	11	-	-	-	-	-	137,311	137,311
<b>TOTAL COMPREHENSIVE INCOME (LOSS)</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>157,277</b>	<b>137,311</b>	<b>294,588</b>
Dividend paid to common shareholders		-	-	-	-	(37,158)	-	(37,158)
Compensation expense share-based payments	12	-	-	8,213	-	-	-	8,213
Exercise stock options out of treasury shares		630,600	-	(2,667)	20,985	(6,886)	-	11,432
Purchase of common shares	11	(1,892,397)	-	-	(77,252)	-	-	(77,252)
<b>Other movements in investments in associates:</b>								
Dilution	6	-	-	-	-	5,535	-	5,535
<b>BALANCE AS OF DECEMBER 31, 2015</b>		<b>61,706,387</b>	<b>2,553</b>	<b>221,868</b>	<b>(84,000)</b>	<b>1,615,877</b>	<b>192,081</b>	<b>1,948,379</b>
Net earnings		-	-	-	-	135,471	-	135,471
Other comprehensive income	11	-	-	-	-	-	39,387	39,387
<b>TOTAL COMPREHENSIVE INCOME (LOSS)</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>135,471</b>	<b>39,387</b>	<b>174,858</b>
Dividend paid to common shareholders		-	-	-	-	(42,673)	-	(42,673)
Compensation expense share-based payments	12	-	-	8,387	-	-	-	8,387
Exercise stock options out of treasury shares	12	720,572	-	(2,591)	27,836	(10,536)	-	14,709
Vesting restricted shares out of treasury shares	12	55,041	-	(1,827)	1,827	-	-	-
Purchase of common shares	11	(2,666,157)	-	-	(97,140)	-	-	(97,140)
<b>Other movements in investments in associates:</b>								
Dilution	6	-	-	-	-	9,336	-	9,336
<b>BALANCE AS OF DECEMBER 31, 2016</b>		<b>59,815,843</b>	<b>2,553</b>	<b>225,837</b>	<b>(151,477)</b>	<b>1,707,475</b>	<b>231,468</b>	<b>2,015,856</b>

<sup>1)</sup> Other reserves consist of the currency translation reserve and the reserve for proportionate share in other comprehensive income investments in associates. See Note 11.

# CONSOLIDATED STATEMENT OF CASH FLOWS

(EUR thousand)	NOTES	YEAR ENDED DECEMBER 31,	
		2015	2016
<b>Cash flows from operating activities</b>			
Net earnings from operations		157,277	135,471
<b>Adjustments to reconcile net earnings to net cash from operating activities</b>			
Depreciation, amortization and impairments	3,5	54,290	51,690
Share-based compensation	12	8,213	8,387
Non-cash financing costs		(17,105)	(2,483)
Share in income of investments in associates	6	(16,108)	(40,488)
Income tax		(5,350)	2,289
<b>Changes in assets and liabilities</b>			
Accounts receivable		(2,835)	(43,352)
Inventories		13,436	(9,510)
Other current assets		(4,860)	(10,212)
Accounts payable and accrued expenses		(2,976)	7,045
Income tax paid		(9,165)	(7,425)
<b>NET CASH FROM OPERATING ACTIVITIES</b>		<b>174,817</b>	<b>91,412</b>
<b>Cash flows from investing activities</b>			
Capital expenditures	3	(33,576)	(26,890)
Proceeds from sale of property, plant and equipment	3	411	1,147
Capitalized development expenditure	5	(30,178)	(27,327)
Purchase of intangible assets	5	(7,215)	(7,024)
Dividend received from associates	6	42,865	22,083
Investments in associates	6	(900)	-
<b>NET CASH USED IN INVESTING ACTIVITIES</b>		<b>(28,593)</b>	<b>(38,011)</b>
<b>Cash flows from financing activities</b>			
Debt issuance fees paid		-	(810)
Purchase of treasury shares ASMI	11	(79,076)	(97,024)
Proceeds from issuance of shares and exercise of stock options	12	11,323	14,709
Dividends to common shareholders of ASMI		(37,158)	(42,673)
<b>NET CASH USED IN FINANCING ACTIVITIES</b>		<b>(104,911)</b>	<b>(125,798)</b>
<b>FOREIGN CURRENCY TRANSLATION EFFECT ON CASH AND CASH EQUIVALENTS</b>			
		<b>19,825</b>	<b>3,639</b>
<b>NET INCREASE / (DECREASE) IN CASH AND CASH EQUIVALENTS</b>		<b>61,138</b>	<b>(68,758)</b>
Cash and cash equivalents at beginning of year	10	385,777	446,915
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR</b>	<b>10</b>	<b>446,915</b>	<b>378,157</b>

# NOTES TO THE CONSOLIDATED 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 of America 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 financial statements include the financial statements of ASM International NV, and its consolidated subsidiaries (together referred to as ASMI, or the Company). ASMI's subsidiaries are listed in Note 2, and associates are listed in Note 6.

### BASIS FOR ACCOUNTING

The Consolidated financial statements for the year ended December 2016 have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and also comply with the financial reporting requirements included in Section 362(9) of Part 9, Book 2 of the Dutch Civil Code.

The financial statements have been prepared by the Management Board of the Company and authorized for issue on March 9, 2017 and will be submitted for adoption to the Annual General Meeting of Shareholders (AGM) on May 22, 2017.

The financial statements will be filed at the Trade Register of the Chamber of Commerce in Almere, the Netherlands within eight days of adoption by the 2017 AGM.

### FUNCTIONAL AND PRESENTATION CURRENCY

The accompanying Consolidated financial statements are presented in thousands of euros (EUR), which is the Company's functional currency. All financial information is presented in euros thousand unless stated otherwise, and has been rounded to the nearest thousand.

### BASIS FOR MEASUREMENT

The Consolidated financial statements have been prepared under the historical cost convention, unless otherwise indicated. The Company applies the going concern basis in preparing its financial statements.

### 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.

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial year are described below and other relevant disclosures are disclosed in the following notes:

- › Notes 3, 4, 5, 6 and – Valuation of non-financial assets
- › Note 20 – Valuation of deferred tax assets

## CRITICAL ACCOUNTING POLICIES

A critical accounting policy is defined as one that is both material to the presentation of ASMI's Consolidated financial statements and that requires management to make difficult, subjective or complex judgments that could have a material effect on ASMI's financial condition or results of operations. Specifically, these policies have the following attributes: (1) ASMI is required to make assumptions about matters that are highly uncertain at the time of the estimate; and (2) different estimates ASMI could reasonably have used, or changes in the estimate that are reasonably likely to occur, could have a material effect on ASMI's financial condition or results of operations.

Estimates and assumptions about future events and their effects cannot be determined with certainty. ASMI bases its estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained, and as ASMI's operating environment changes. These changes have historically been minor and have been included in the Consolidated financial statements as soon as they became known. In addition, management is periodically faced with uncertainties, the outcomes of which are not within its control and will not be known for prolonged periods of time. Based on a critical assessment of its accounting policies and the underlying judgments and uncertainties affecting the application of those policies, management believes that ASMI's Consolidated financial statements are fairly stated in accordance with IFRS, and provide a meaningful presentation of ASMI's financial condition and results of operations. An analysis of specific sensitivity to changes of estimates and assumptions is included in the notes to the financial statement.

Management believes that the following are critical accounting policies:

- › revenue recognition;
- › inventories;
- › evaluation of long-lived assets for impairment;
- › evaluation of investments in associates for impairment;
- › intangible assets; and
- › income taxes.

## SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Consolidation

The Consolidated financial statements include the accounts of ASM International NV and all of its subsidiaries where ASMI holds a controlling interest. Non-controlling interest is disclosed separately, as appropriate, in the Consolidated financial statements.

Control exists when ASMI has:

- › the power over an investee;
- › exposure, or rights, to variable returns from its involvement with the investee; and
- › the ability to use its power over the investee to affect the amount of the investor's returns.

As from the date that these criteria are met, the financial data of the relevant subsidiary are included in the consolidation. The financial data are deconsolidated from the date on which ASMI's control ceases.

### Loss of control

Upon the loss of control, ASMI derecognizes the assets and liabilities of the subsidiary, any non-controlling interests and the other components of equity related to the subsidiary. Any surplus or deficit arising on the loss of control is recognized in profit or loss. If ASMI retains any interest in the previous subsidiary, then such interest

is measured at fair value at the date on which control is lost. Subsequently, it is accounted for as an equity-accounted investee or as an available-for-sale financial asset, depending on the level of influence retained.

### Foreign currency translation

The individual financial statements of each group entity are presented in their functional currency. For the purpose of the Consolidated financial statements, the results and financial position of each entity are expressed in euros, which is ASMI's functional currency, and the presentation currency for the Consolidated financial statements.

In preparing the financial statements of the individual entities, transactions in foreign currencies are recorded at the rates of exchange prevailing on the date of the transactions. At each balance sheet date, monetary items denominated in foreign currencies are translated at the rates prevailing on the balance sheet date. Non-monetary items carried at fair value that are denominated in foreign currencies are translated at the rates prevailing on the date when the fair value was determined.

Exchange rate differences arising on the settlement of monetary items, and on the translation of monetary items, are recognized in the Consolidated statement of profit or loss in the period in which they arise. Exchange rate differences arising on the translation of non-monetary items carried at fair value are recognized in the Consolidated statement of profit or loss for the period except for differences arising on the translation of non-monetary items in respect of which gains and losses are recognized directly in equity.

For the purpose of presenting Consolidated financial statements, the assets and liabilities of our foreign subsidiaries (including comparatives) are expressed in euros using exchange rates prevailing on the balance sheet date. Income and cost items (including comparatives) are translated at the average exchange rates for the period. Exchange rate differences arising are classified as other comprehensive income in equity. Such translation differences are recognized in the Consolidated statement of profit or loss in the period in which the foreign operation is disposed. Currency differences on intercompany loans that have the nature of a long-term investment are also accounted for directly in equity.

### Segment reporting

The Back-end segment is still reported as a separate segment after the Company ceased control on March 15, 2013, since the full results of the Back-end segment are continued to be reviewed by our Chief Operating Decision Maker (CODM).

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 CODM. Operating segments are in line with the reporting segments.

Accordingly, the asset and profit/loss 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 is 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.

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, Japan 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 39.19% interest, whilst the remaining shares are listed on the Stock Exchange of Hong Kong.

### Fixed assets

Fixed assets include goodwill, other intangible assets, property, plant and equipment, and evaluation tools at customers.

Property, plant and equipment are carried at cost, less accumulated depreciation and any impairment losses. Finance leased assets are recorded at the present value of future lease obligations. Depreciation is calculated using the straight-line method over the estimated useful lives. Leasehold improvements are depreciated over the lesser of the estimated useful life of the leasehold improvement or the term of the underlying lease. Any gain or loss on disposal of an item of property, plant and equipment is recognized in profit or loss.

Business combinations are accounted for under the acquisition method. The Company reviews its recorded goodwill and other intangible assets with indefinite lives for impairment each year on December 31 and whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Goodwill represents the excess of the costs of an acquisition over the fair value of the amounts assigned to assets acquired and liabilities incurred or assumed of the acquired subsidiary at the date of acquisition. Goodwill on acquisition of subsidiaries is allocated to cash generating units (CGUs) for the purpose of impairment testing. The allocation is made to those CGUs that are expected to benefit from the business combination in which the goodwill arose. Goodwill is tested for impairment annually and whenever events or changes in circumstances indicate that the carrying amount of the goodwill may not be recoverable. If the recoverable amount of the CGU is less than the carrying amount of the unit, the impairment loss is recognized. An impairment loss recognized for goodwill is not reversed in a subsequent period. Goodwill is stated at cost less accumulated impairment losses.

Other intangible assets are carried at cost, less accumulated amortization and any impairment losses. Amortization is calculated using the straight-line method over the estimated useful lives.

In determining the capitalization of development expenses, the Company makes estimates and assumptions based on expected future economic benefits generated by products that are the result of these development expenses. Other important estimates and assumptions are the required internal rate of return, the distinction between research, development and high-volume manufacturing and the estimated useful life.

Development expenses are capitalized when all of the following criteria are demonstrated:

- › the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- › its intention to complete the intangible asset and use or sell it;
- › its ability to use or sell the intangible asset;
- › how the intangible asset will generate probable future economic benefits;
- › the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- › its ability to reliably measure the expenditure attributable to the intangible asset during its development.

The Company capitalizes development expenses that meet the above-mentioned criteria in its Consolidated financial statements. Amortization of capitalized development expenses is calculated using the straight-line method over the estimated useful lives of the developed product. Amortization starts when the developed product is transferred to high-volume manufacturing. Other intangible assets with finite lives are amortized over the estimated useful lives using the straight-line method.

Evaluation tools at customers are systems generally delivered to customers under evaluation or a conditional purchase order and include substantial customization by our engineers and R&D staff in the field. Evaluation tools are recorded at cost and depreciated using the straight-line method over their estimated useful life of five years, or their shorter economic life. The depreciation expenses are reported as cost of sales.

On final acceptance of the system, the purchase consideration is recognized as revenue. The carrying value of the evaluation system at that point in time is recognized as cost of sales. In the circumstance that the system is

returned, at the end of the evaluation period, a detailed impairment review takes place, and future sales opportunities and additional costs are identified. It is only when the fair value is below the carrying value of the evaluation tool that an additional depreciation is recognized. The remaining carrying value is recognized as finished goods (inventory).

### **Impairment of fixed assets**

Each year on December 31, the Company reviews the carrying amounts of its tangible and intangible assets (other than goodwill) to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any).

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. An impairment loss is recognized immediately in the Consolidated Statement of Profit or Loss, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

Where an impairment loss is subsequently reversed, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss is recognized immediately in the Consolidated Statement of Profit or Loss, unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

### **Equity accounted investees**

Equity accounted investees are investments in entities in which ASMI can exert significant influence but which ASMI does not control, generally by ASMI having between 20% and 50% of the voting rights. These entities are accounted for using the equity method and are initially recognized at cost. Dividend income from the Company's associated companies is recognized when the right to receive payment is established. Their carrying value includes goodwill identified upon acquisition, net of any accumulated impairment.

When ASMI's share of losses in an associate equals or exceeds its interest in the associate, including any other receivables for which settlement is neither planned nor likely to occur in the foreseeable future, ASMI does not recognize further losses, unless ASMI has obligations to or made payments on behalf of the associate.

At each reporting date, the Company determines if there is any objective evidence that the associate is impaired. An impairment, being the difference between the recoverable amount of the associate and its carrying value, is recognized in the Consolidated Statement of Profit or Loss.

ASMI does not separately test associates' underlying assets for impairment. However, ASMI recognizes its share of any impairment charge recorded by an investee and considers the effect, if any, of the impairment on the basis difference in the assets giving rise to the investee's impairment charge. A loss in value of an investment which is significant or prolonged will be recognized. Significant is defined as at least 20% over an uninterrupted period of nine months, or more than 40% on the reporting date. Prolonged is defined as measured below cost for more than a year.

Equity method investments are tested for prolonged decline in value. If the fair value of an investment is less than its carrying value, the Company determines whether the decline in value is temporary or prolonged. A prolonged decline in value is measured as of a balance sheet date. If after a prior recognized impairment the fair value is more than its carrying value, this impairment is reversed. The determination of whether an investment is impaired is made at the individual security level in each reporting period.

### Inventories

Inventories are stated at the lower of cost or net realizable value. The cost of inventories is based on standard cost principle. In the case of manufactured inventories, cost includes an appropriate share of production overheads based on normal operating capacity. Costs include net prices paid for materials purchased, charges for freight and custom duties, production labor costs and factory overhead. Allowances are made for slow-moving, obsolete or unsellable inventory.

Allowances for obsolescence of inventory are determined based on the expected demand as well as the expected market value of the inventory. We regularly evaluate the value of our inventory of components and raw materials, work in progress and finished goods, based on a combination of factors including the following: forecasted sales, historical usage, product end of life cycle, estimated current and future market values, service inventory requirements and new product introductions, as well as other factors. Purchasing requirements and alternative uses for the inventory are explored within these processes to mitigate inventory exposure. We record write-downs for inventory based on the above factors and take into account worldwide quantities and demand into our analysis.

### Accounts receivable

Accounts receivable are measured at initial recognition at fair value, and are subsequently measured at amortized cost using the effective interest rate method.

A significant percentage of our accounts receivable is derived from sales to a limited number of large multinational semiconductor device manufacturers located throughout the world. In order to monitor potential credit losses, we perform ongoing credit evaluations of our customers' financial condition. An allowance for doubtful accounts is maintained for potential credit losses based upon management's assessment of the expected collectability of all accounts receivable. The allowance for doubtful accounts is reviewed periodically to assess the adequacy of the allowance. In making this assessment, management takes into consideration any circumstances of which we are aware regarding a customer's inability to meet its financial obligations; and our judgments as to potential prevailing economic conditions in the industry and their potential impact on the Company's customers.

The allowance is based on historical experience, credit evaluations, specific customer collection history and any customer-specific issues ASMI has identified. Changes in circumstances, such as an unexpected adverse material change in a major customer's ability to meet its financial obligation to ASMI or its payment trends, may require us to further adjust our estimates of the recoverability of amounts due to ASMI, which could have an adverse material effect on ASMI's financial condition and results of operations.

### Cash and cash equivalents

Cash and cash equivalents comprise of deposits held at call with banks, investments in money market funds that invest in debt securities of financial institutions and other short-term highly liquid investments with original maturity of three months or less. Bank overdrafts are included in notes payable to banks in current liabilities.

### Accounts payable

Accounts payable are measured at initial recognition at fair value, and are subsequently measured at amortized cost using the effective interest rate method.

### Revenue recognition

The Company recognizes revenue when persuasive evidence exists, usually in the form of an arrangement; that significant risks and rewards of ownership have been transferred to the buyer, there is no continuing managerial involvement with the goods sold, the amount of the revenue can be measured reliable, the recovery delivery has occurred or services have been rendered; seller's price to buyer is fixed or determinable; and collectability is reasonably assured. The Company's revenue includes revenue from contractual arrangements consisting of multiple deliverables, such as equipment and installation. The revenue for the total transaction is first allocated to its components, based on their relative selling prices. Then the revenue that was allocated to the undelivered component is deferred. The revenue from the undelivered element of the arrangement is deferred at their relative selling prices until delivery of the element.



A major portion of our revenue is derived from contractual arrangements with customers that have multiple deliverables, such as installation. The revenue relating to the undelivered elements of the arrangements, the installation, is deferred until delivery of these elements.

In general, the Company recognizes revenue from sales of equipment upon shipment of equipment, only if testing at the factory has proved that the equipment has met substantially all of the customer's criteria and specifications.

The Company recognizes revenue from installation of equipment upon completion of installation at the customer's site. At the time of shipment, the Company defers that portion of the sales price related to the installation. The relative selling price of the installation process is measured based upon the per-hour amounts charged by third parties for similar installation services. Installation is completed when testing at the customer's site has proved that the equipment has met all of the customer's criteria and specifications. The completion of installation is signed-off by the customer (final acceptance). The revenue relating to the undelivered elements of the arrangements is deferred at their relative selling prices until delivery of these elements.

We provide training and technical support service to customers. Revenue related to such services is recognized when the service is rendered. Revenue from the sale of spare parts and materials is recognized when the goods are shipped.

Revenue on royalties and licenses is recognized when due.

The Company's sales frequently involve complex equipment, which may include customer-specific criteria, sales to new customers or equipment with new technology. For each sale, the decision whether to recognize revenue is, in addition to shipment and factory acceptance, based on the contractual agreement with a customer, the experience with a particular customer, the technology and the number of similarly configured equipment previously delivered. Instead of recognizing revenue, the Company could decide to defer revenue recognition until completion of installation at the customer's site and obtaining final acceptance from the customer.

Freight charges billed to customers are recognized as revenue, the related costs are recognized as cost of sales. Revenues are recognized excluding the taxes levied on revenues.

### **Cost of sales**

Cost of sales comprise direct costs such as labor, materials, cost of warranty, depreciation, shipping and handling costs and related overhead costs. Cost of sales also includes third party commission, depreciation expenses of evaluation tools at customers, royalty payments and costs relating to prototype and experimental products, which the Company may subsequently sell to customers. Costs of warranty include the cost of labor and material necessary to repair a product during the warranty period.

### **Warranty**

We provide maintenance on our systems during the warranty period, on average one year. Costs of warranty include the cost of labor and material necessary to repair a product during the warranty period. We accrue for the estimated cost of the warranty on products shipped in a provision for warranty, upon recognition of the sale of the product. The costs are estimated based on historical expenses incurred and on estimated future expenses related to current sales, and are updated periodically. Actual warranty costs are charged against the provision for warranty. The actual warranty costs may differ from estimated warranty costs, and we adjust our provision for warranty accordingly. Future warranty costs may exceed our estimates, which could result in an increase of our cost of sales.

### **Income tax**

Income tax expense comprises current and deferred tax. It is recognized in the Statement of Profit or Loss except to the extent that it relates to a business combination, or items recognized directly in Equity or in Other Comprehensive Income.

### Current tax

The current corporate income tax charge recognized in the Consolidated Statement of Profit or Loss is calculated in accordance with the prevailing tax regulations and rates, taking into account non-taxable income and non-deductible expenses. The current income tax expense reflects the amount for the current reporting period that the Company expects to recover from or pay to the tax authorities. Current income tax related to items recognized directly in equity is recorded in equity and not in the Consolidated Statement of Profit or Loss. ASMI's management periodically evaluates positions taken in the tax returns regarding situations in which applicable tax regulations are subject to interpretation, and establishes provisions when deemed appropriate. Current tax also includes any tax arising from dividends.

Current tax assets and liabilities are offset only if certain criteria are met.

### Deferred taxes

Deferred income tax positions are recognized for temporary differences between the tax basis of assets and liabilities and their carrying values in ASMI's Consolidated Statement of Financial Position.

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognized only to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilized. Both the recognized and unrecognized deferred tax assets are reassessed at each reporting date. Deferred tax assets are recorded for deductible temporary differences associated with investments in subsidiaries and are recorded only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

Deferred tax liabilities are recognized for all taxable temporary differences except when they affect neither the profit or loss reported in the Consolidated Statement of Profit or Loss nor the taxable profit or loss. Also, no deferred tax liabilities are recorded for taxable temporary differences associated with investments in subsidiaries when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax positions are stated at nominal value and are measured at the corporate income tax rates the Company expects to be applicable in the year when the asset is realized or liability is settled based on enacted or substantially enacted tax laws.

Deferred income tax assets and liabilities are netted if there is a legally enforceable right to set off current tax assets against current tax liabilities, deferred income tax assets and deferred income tax liabilities relate to income taxes levied by the same taxation authority on the same taxable entity, and there is an intention to settle on a net basis.

We recognize a liability for uncertain tax positions when it is probable that an outflow of economic resources will occur. Measurement of the liability for uncertain tax positions is based on management's best estimate of the amount of tax benefit that will be lost.

### Retirement benefit costs

The Company has retirement plans covering substantially all employees. The principal plans are defined contribution plans, except for the plans of the Company's operations in the Netherlands and Japan. The Company's employees in the Netherlands participate in a multi-employer defined benefit plan. Payments to defined contribution plans and the multi-employer plan are recognized as an expense in the Consolidated Statement of Profit or Loss as they fall due. The Company accounts for the multi-employer plan as if it were a defined contribution plan since the manager of the plan is not able to provide the Company with the required Company-specific information to enable the Company to account for the plan as a defined benefit plan.

The Company's employees in Japan participate in defined benefit plans. Pension costs in respect to this defined benefit plan are determined using the projected unit credit method. These costs primarily represent the increase in the actuarial present value of the obligation for pension benefits based on employee service during the year and the interest on this obligation in respect to employee service in previous years, net of the expected return on plan assets.

For the defined benefit plan the Company recognizes in its Consolidated statement of financial position an asset or a liability for the plan's over-funded status or underfunded status respectively. Actuarial gains and losses are recognized when incurred.

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

### Share-based payments

The costs relating to employee stock options and shares (compensation expense) are recognized based upon the grant date fair value of the stock options or the shares. The fair value at grant date of employee stock options is estimated using a Black-Scholes option valuation model. This model requires the use of assumptions including expected stock price volatility, the estimated life of each award and the estimated dividend yield. The risk-free interest rate used in the model is determined, based on a euro government bond with a life equal to the expected life of the options. The estimated fair value at grant date of shares is based on the share price of the ASMI share at grant date minus the discounted value of expected dividends during the vesting period.

The grant date fair value of the stock options and shares is expensed on a straight-line basis over the vesting period, based on the Company's estimate of stock options and shares that will eventually vest. The impact of the true up of the estimates is recognized in the Consolidated statement of profit or loss in the period in which the revision is determined. The total estimated share-based compensation expense, determined under the fair value based method is amortized proportionally over the option vesting periods.

### Operating lease

Leases in which the company is the lessee and in which substantially all risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are recognized in the Statement of Profit or Loss on a straight-line basis over the term of the lease.

### Issuance of shares by an equity accounted investee

The associate ASMPT yearly issues common shares pursuant to their Employee Share Incentive Scheme. The effect of these issuances is a dilution of the Company's ownership in ASMPT. The Company recognizes the impact of these issuances directly into equity.

### Commitments and contingencies

The Company has various contractual obligations such as operating lease commitments, purchase commitments and commitments for capital expenditure. These obligations are generally not recognized as liabilities on the Company's statement of financial position but are disclosed in the notes to the financial statements.

### Comprehensive income

Comprehensive income consists of net earnings (loss) and other comprehensive income. Other comprehensive income includes gains and losses that are not included in net earnings, but are recorded directly in equity.

### Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions are eliminated. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

## ADOPTION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS AND INTERPRETATIONS EFFECTIVE IN 2016 OR THEREAFTER

Implementation of new and revised IFRS-EU in 2016 did not have a material impact on the Company's Consolidated financial statements.

At the date of authorization of these Consolidated financial statements, the following standards and interpretations have been issued, however they are not yet effective and/or have not yet been adopted by the EU and have not yet been adopted by us.

In July 2014, the IASB finalized the reform of financial instruments accounting and issued IFRS 9 (as revised in 2014), which will supersede IAS 39 Financial Instruments: Recognition and Measurement in its entirety (the IASB tentatively decided that the mandatory effective date of IFRS 9 will be no earlier than annual periods beginning on or after January 1, 2018). Compared to IFRS 9 (as revised in 2013), the 2014 version includes limited amendments to the classification and measurement requirements by introducing a 'fair value through other comprehensive income' measurement category for simple debt instruments. It also adds the impairment requirements relating to the accounting for an entity's expected credit losses on its financial assets and commitments to extend credit. The completed IFRS 9 (as revised in 2014) contains the requirements for: a) the classification and measurement of financial assets and financial liabilities; b) impairment methodology; and c) general hedge accounting. The actual impact of adopting IFRS 9 on the Company's Consolidated financial statements in 2018 is not known and cannot be reliably estimated because it will be dependent on the financial instruments that the Company holds and economic conditions at that time as well as accounting elections and judgments that it will make in the future. The new standard will require ASMI to revise its accounting processes and internal controls related to reporting financial instruments and these changes are not yet complete.

IFRS 15 Revenue from Contracts with Customers was issued in May 2014. In April 2015, the effective date of this standard was postponed to January 1, 2018, with additional clarifications to the standard being issued in April 2016. IFRS 15 introduces new guidance on the recognition and measurement requirements of revenues. The standard applies to revenue from contracts with customers and also provides a model for the sale of some non-financial assets that are not an output of a company's ordinary business activities. IFRS 15 provides more detailed requirements than the current standards. We are currently reviewing the extent of the impact of this new standard. We have started an IFRS 15 implementation project comprising two phases: phase 1 involves a detailed analysis of the impact of the principles of the new standard on our major contracts with customers. Based on the contract analysis, a detailed concept will be developed for the transition of revenue recognition to the new principles, including the need for adjustments to existing processes and IT systems. The subsequent phase 2 of the project will serve particularly to implement the adjustments identified in phase 1. We are in the process of the contract assessment and the full qualitative impact analysis is yet to be finalized, however the timing of recognition for installation, conditional equipment sales and fixed fee royalties are expected to be impacted. At this moment, the quantitative impact of IFRS 15 is not yet known.

IFRS 16 Leases was issued in January 2016. The standard has an effective date of January 1, 2019. Endorsement has not been scheduled yet. IFRS 16 will replace IAS 17 and introduces on balance sheet accounting for (almost) all leases. Therefore, assets in use under an operating lease contract, reported as off balance sheet obligation under IAS 17, will be recognized on the balance sheet. Paid lease fees will no longer be part of operating expenses but will become part of depreciation and interest expenses. The standard will have an impact on our Consolidated statement of financial position due to the recognition of the leased assets and corresponding financial liabilities. Also, an impact is expected on our Consolidated statement of profit or loss. Result from operations is expected to increase, but the impact on income before income taxes is not expected to be material. We are currently reviewing the extent of the impact of this new standard.



### **Recognition of Deferred Tax Assets for Unrealized Losses (Amendments to IAS 12)**

The amendments clarify the accounting for deferred tax assets for unrealized losses on debt instruments measured at fair value. The amendments are effective for annual periods beginning on or after 1 January 2017, with early adoption permitted. The Group is assessing the potential impact on its Consolidated financial statements resulting from the amendments. So far, the Group does not expect any significant impact.

### **Disclosure Initiative (Amendments to IAS 7)**

The amendments require disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flow and non-cash changes.

The amendments are effective for annual periods beginning on or after 1 January 2017, with early adoption permitted. To satisfy the new disclosure requirements, the Group intends to present a reconciliation between the opening and closing balances for liabilities with changes arising from financing activities.

The following changes to Standards following Amendments by the IASB and the Annual Improvement Cycles are not expected to have a significant impact on the Company's Consolidated financial statements.

- › Classification and Measurement of Share-based Payment Transactions (Amendments to IFRS 2).
- › Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (Amendments to IFRS 10 and IAS 28).

## NOTE 2. SUBSIDIARIES

Unless otherwise indicated, these are, directly or indirectly, wholly-owned subsidiaries. With respect to the separate financial statements of the Dutch legal entities included in the consolidation, the Company availed itself of the exemption laid down in section 403, subsection 1 of Book 2 of the Dutch Civil Code.

NAME	LOCATION	% OWNERSHIP DECEMBER 31,	
		2015	2016
<b>Subsidiaries (consolidated)</b>			
ASM Europe BV <sup>1)</sup>	Almere, the Netherlands	100%	100%
ASM United Kingdom Sales BV <sup>1)</sup>	Almere, the Netherlands	100%	100%
ASM Germany Sales BV <sup>1)</sup>	Almere, the Netherlands	100%	100%
ASM Pacific Holding BV <sup>1) 2)</sup>	Almere, the Netherlands	100%	100%
ASM France SARL	Crolles, France	100%	100%
ASM Belgium NV	Leuven, Belgium	100%	100%
ASM Italia Srl	Agrate, Italy	100%	100%
ASM Microchemistry Oy	Helsinki, Finland	100%	100%
ASM Services and Support Ireland Ltd	Dublin, Ireland	100%	100%
ASM Services and Support Israel Ltd	Kiryat Gat, Israel	100%	100%
ASM America Inc	Phoenix, Arizona, United States of America	100%	100%
ASM Japan KK	Tokyo, Japan	100%	100%
ASM Netherlands Holding BV	Almere, the Netherlands	100%	100%
ASM China Ltd	Shanghai, People's Republic of China	100%	100%
ASM Wafer Process Equipment Singapore Pte Ltd	Singapore	100%	100%
ASM Front-End Sales & Services Taiwan Co Ltd	Hsin-Chu, Taiwan	100%	100%
ASM Services & Support Malaysia SDN BHD	Kuala Lumpur, Malaysia	100%	100%
ASM Front-End Manufacturing Singapore Pte Ltd	Singapore	100%	100%
ASM Korea Ltd	Cheonan, South Korea	100%	100%
ASM IP Holding BV <sup>1)</sup>	Almere, the Netherlands	100%	100%
ASM NuTool Inc	Wilmington, Delaware, United States of America	100%	100%
ASM Europe Holding BV	Almere, the Netherlands	100%	100%
Beheer- en Beleggingsmaatschappij Ingebel BV in liquidatie	Almere, the Netherlands	100%	100%
ASM Ion Implant BV	Almere, the Netherlands	100%	liquidated
Hamilcar Investments BV	Almere, the Netherlands	100%	100%
CVTR Development BV	Almere, the Netherlands	100%	100%
Rembrandt Lease and Finance BV	Almere, the Netherlands	100%	100%
ASM Wafer Process Equipment Ltd	Hong Kong, People's Republic of China	100%	100%

<sup>1)</sup> For these subsidiaries ASM International NV has filed statements at the Dutch Chamber of Commerce assuming joint and several liability in accordance with Article 403 of Book 2, Part 9 of the Netherlands Civil Code.

<sup>2)</sup> ASM Pacific Holding BV holds 39.19% of the shares in ASM Pacific Technology Ltd.

**NOTE 3. PROPERTY, PLANT AND EQUIPMENT**

The changes in the amount of property, plant and equipment are as follows:

	LAND, BUILDINGS AND LEASEHOLD IMPROVEMENTS	MACHINERY, EQUIPMENT	FURNITURE AND FIXTURES AND OTHER EQUIPMENT	ASSETS UNDER CONSTRUCTION	TOTAL
<b>At cost</b>					
<b>BALANCE JANUARY 1, 2015</b>	<b>39,896</b>	<b>119,942</b>	<b>18,757</b>	<b>17,743</b>	<b>196,338</b>
Capital expenditures	123	707	821	31,925	33,576
Retirements and sales	-	(5,563)	(1,773)	-	(7,336)
Transfer from assets under construction	230	31,132	30	(31,392)	-
Reclassification to other intangible assets	117	(44)	3	(441)	(365)
Reclassification to evaluation tools	-	-	-	(4,659)	(4,659)
Foreign currency translation effect	2,928	12,727	1,652	1,559	18,866
<b>BALANCE DECEMBER 31, 2015</b>	<b>43,294</b>	<b>158,901</b>	<b>19,490</b>	<b>14,735</b>	<b>236,420</b>
Capital expenditures	-	7,181	427	19,282	26,890
Retirements and sales	(48)	(6,734)	(595)	(360)	(7,737)
Transfer from assets under construction	1,370	14,453	1,732	(17,555)	-
Reclassification to other intangible assets	-	-	-	(21)	(21)
Reclassification to evaluation tools	-	-	-	(1,633)	(1,633)
Foreign currency translation effect	1,556	4,907	917	841	8,221
<b>BALANCE DECEMBER 31, 2016</b>	<b>46,172</b>	<b>178,708</b>	<b>21,971</b>	<b>15,289</b>	<b>262,140</b>
<b>Accumulated depreciation and impairment</b>					
<b>BALANCE JANUARY 1, 2015</b>	<b>22,022</b>	<b>78,912</b>	<b>16,168</b>		<b>117,102</b>
Depreciation for the year	1,830	16,692	1,226		19,748
Impairment charges	-	2,378	-		2,378
Retirements and sales	-	(5,274)	(1,741)		(7,015)
Foreign currency translation effect	1,549	9,406	1,458		12,413
<b>BALANCE DECEMBER 31, 2015</b>	<b>25,401</b>	<b>102,114</b>	<b>17,111</b>		<b>144,626</b>
Depreciation for the year	1,811	19,413	1,019		22,243
Impairment charges	-	1,745	-		1,745
Retirements and sales	(2)	(6,270)	(595)		(6,867)
Foreign currency translation effect	820	3,778	791		5,389
<b>BALANCE DECEMBER 31, 2016</b>	<b>28,030</b>	<b>120,780</b>	<b>18,326</b>		<b>167,136</b>
<b>Carrying amounts</b>					
<b>DECEMBER 31, 2015</b>	<b>17,893</b>	<b>56,787</b>	<b>2,379</b>	<b>14,735</b>	<b>91,794</b>
<b>DECEMBER 31, 2016</b>	<b>18,142</b>	<b>57,928</b>	<b>3,645</b>	<b>15,289</b>	<b>95,004</b>
Useful lives in years	10-25	2-10	2-10		

The impairment charges in 2015 related to machinery and equipment and were a write-off of remaining 450mm assets and were reported in the Consolidated Statement of Profit or Loss in research and development expenses.

The impairment charges in 2016 relate to demo equipment and is reported in the Consolidated Statement of Profit or Loss in cost of sales.

**NOTE 4. GOODWILL**

The carrying amount of the goodwill is related to the acquisitions operations in the following business units:

	DECEMBER 31,	
	2015	2016
Thermal products business unit	2,611	2,611
Plasma products business unit	8,659	8,659
<b>TOTAL</b>	<b>11,270</b>	<b>11,270</b>

We perform an annual impairment test at December 31 of each year or if events or changes in circumstances indicate that the carrying amount of goodwill exceeds its recoverable amount. For the Front-end impairment test and the determination of the recoverable amount, a discounted future cash flow approach is used which makes use of our estimates of future revenues, driven by assumed market growth and estimated costs as well as appropriate discount rates.

The material assumptions used for the discounted future cash flows of the cash generating units (CGUs) are:

- › an average discount rate of 11.2% (2015: 11.2%) representing the pre-tax weighted average cost of capital;
- › external market segment data, historical data and strategic plans to estimate cash flow growth per product line; and
- › cash flow calculations are limited to four years of cash flow; after these four years perpetuity growth rates are set based on the market maturity of the products. For a maturing product, the perpetuity growth rates used are 1% or less and for enabling technology products the rate used is 3% or less.

These estimates are consistent with the plans and estimated costs we use to manage the underlying business. Based on this analysis, management concluded that as per December 31, 2016 the recoverable amount of the CGUs exceeded the carrying value. The excess was over 100% for each of the CGUs. Sensitivity analysis demonstrated that no reasonable possible change in estimated cash flows or the discount rate used in calculating the fair value would cause the carrying value of goodwill to exceed the fair value.

For Back-end, goodwill is included in the investment value of ASMPT. For the impairment test, reference is made to Note 6.



## NOTE 5. 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:

	DEVELOPMENT COSTS	SOFTWARE	PURCHASED TECHNOLOGY AND OTHER INTANGIBLE ASSETS	TOTAL
<b>At cost</b>				
<b>BALANCE JANUARY 1, 2015</b>	<b>103,646</b>	<b>16,901</b>	<b>8,789</b>	<b>129,336</b>
Additions	30,178	3,826	3,300	37,304
Reclassification	-	365	-	365
Disposals	(24,900)	(50)	(888)	(25,838)
Foreign currency translation effect	9,059	161	503	9,723
<b>BALANCE DECEMBER 31, 2015</b>	<b>117,983</b>	<b>21,203</b>	<b>11,704</b>	<b>150,890</b>
Additions	27,327	7,024	-	34,351
Reclassification	-	21	-	21
Disposals	-	(1)	-	(1)
Foreign currency translation effect	4,384	191	125	4,700
<b>BALANCE DECEMBER 31, 2016</b>	<b>149,694</b>	<b>28,438</b>	<b>11,829</b>	<b>189,961</b>
<b>Accumulated amortization and impairment losses</b>				
<b>BALANCE JANUARY 1, 2015</b>	<b>42,392</b>	<b>15,082</b>	<b>6,648</b>	<b>64,122</b>
Amortization for the year	11,794	446	2,067	14,307
Impairments	12,854	-	-	12,854
Disposals	(24,900)	(50)	(888)	(25,838)
Foreign currency translation effect	3,365	136	409	3,910
<b>BALANCE DECEMBER 31, 2015</b>	<b>45,505</b>	<b>15,614</b>	<b>8,236</b>	<b>69,355</b>
Amortization for the year	13,345	655	1,204	15,204
Impairments	3,575	-	-	3,575
Disposals	-	(1)	-	(1)
Foreign currency translation effect	1,343	181	125	1,649
<b>BALANCE DECEMBER 31, 2016</b>	<b>63,768</b>	<b>16,449</b>	<b>9,565</b>	<b>89,782</b>
<b>Carrying amounts</b>				
<b>DECEMBER 31, 2015</b>	<b>72,478</b>	<b>5,589</b>	<b>3,468</b>	<b>81,535</b>
<b>DECEMBER 31, 2016</b>	<b>85,926</b>	<b>11,989</b>	<b>2,264</b>	<b>100,179</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 customer demand has shifted out in time, and purchased technology which became obsolete. The impairment charge for 2015 related for an amount of €10.1 million to the impairment of capitalized development expenditures related to the 450mm technology and for an amount of €2.8 million to the capitalized development expenditures of other projects. As a result of these impairments, the carrying value of these projects was reduced to zero. For 2016, impairment charges of €3.6 million related to a customer specific project.

The purchased technology in 2015 amounted to €3.3 million related to patents acquired from our equity investment Levitech BV.

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.

Estimated amortization expenses relating to other intangible assets are as follows:

	DEVELOPMENT COSTS	SOFTWARE	PURCHASED TECHNOLOGY AND OTHER INTANGIBLE ASSETS	TOTAL
2017	17,415	1,155	669	19,239
2018	20,046	3,973	660	24,679
2019	17,355	3,754	660	21,769
2020	14,883	3,084	275	18,242
2021	10,579	23	-	10,602
Years thereafter	5,648	-	-	5,648
<b>TOTAL</b>	<b>85,926</b>	<b>11,989</b>	<b>2,264</b>	<b>100,179</b>

## NOTE 6. INVESTMENTS IN ASSOCIATES

NAME	LOCATION	% OWNERSHIP DECEMBER 31,	
		2015	2016
<b>Associates (non-consolidated)</b>			
Levitech BV	Almere, the Netherlands	24.0%	24.0%
ASM Pacific Technology Ltd <sup>1)</sup>	Kwai Chung, Hong Kong, People's Republic of China	39.55%	39.19%

<sup>1)</sup> This shareholding diluted in December 2016 as a result of the issuance of shares to 39.19%.

The changes in the investment and associates are as follows:

	LEVITECH <sup>1)</sup>	ASMPT				TOTAL
		NET EQUITY SHARE	OTHER (IN)TANGIBLE ASSETS	GOODWILL	TOTAL ASMPT	
<b>BALANCE JANUARY 1, 2015</b>	-	346,563	158,844	587,541	1,092,948	1,092,948
Increase of interest	900	-	-	-	-	900
Share in net earnings of investments in associates	-	44,158	-	-	44,158	44,158
Other comprehensive income of investments in associates	-	567	-	-	567	567
Amortization recognized (in)tangible assets	-	-	(27,151)	-	(27,151)	(27,151)
Value reduction as resulting from start-up costs	(900)	-	-	-	-	(900)
Dividends	-	(42,865)	-	-	(42,865)	(42,865)
Dilution ASMPT share to 39.55%	-	5,535	-	-	5,535	5,535
Foreign currency translation effect	-	21,214	18,169	68,264	107,647	107,647
<b>BALANCE DECEMBER 31, 2015</b>	-	375,172	149,862	655,805	1,180,839	1,180,839
Share in net earnings of investments in associates	-	67,711	-	-	67,711	67,711
Other comprehensive income of investments in associates	-	(1,344)	-	-	(1,344)	(1,344)
Amortization recognized (in)tangible assets	-	-	(27,223)	-	(27,223)	(27,223)
Dividends	-	(22,083)	-	-	(22,083)	(22,083)
Dilution ASMPT share to 39.19%	-	9,336	-	-	9,336	9,336
Foreign currency translation effect	-	3,740	3,724	21,038	28,502	28,502
<b>BALANCE DECEMBER 31, 2016</b>	-	432,532	126,363	676,843	1,235,738	1,235,738

<sup>1)</sup> Reflects the net equity value of the interest in Levitech BV resulting from the management buy-out in 2009 of the RTP business. ASM International NV obtained a 20% interest in Levitech BV. In 2015 ASMI increased its interest to 24%. The value has been reduced in 2015 due to (start-up) losses of Levitech caused by the introduction of their advanced products in the market.

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, 2016 under equity accounting amounts to HKD63.14, whereas the level 1 fair value per share (being the market price of a share on the Hong Kong Stock Exchange) was HKD82.15 as per December 31, 2016. Management concluded that based on quantitative analysis no impairment of its share in ASMPT existed as per December 31, 2016.

In June 2016, 1,575,133 common shares of ASMPT (par value of HKD0.10 per share) were issued as a consequence of the conversion of HKD 150 million of debt. The shares issued have diluted ASMI's ownership in ASMPT to 39.40% as of June 30, 2016.

In December 2016, 2,139,100 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 2016 have diluted ASMI's ownership in ASMPT further to 39.19% as of December 31, 2016.

At December 31, 2016, the book value of our equity method investment in ASMPT was €1,236 million. The historical cost basis of our 39.19% share of net assets on the books of ASMPT under IFRS was €433 million as of December 31, 2016, resulting in a basis difference of €803 million. €126 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. 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 2016 was after-tax expense of €27 million, representing the depreciation and amortization of the basis differences.

The market value of our 39.19% investment in ASMPT at December 31, 2016 approximates €1,608 million.

Summarized 100% earnings information for ASMPT equity method investment excluding basis adjustments (foreign currency exchange rate average 2016 1 HKD: €0.11698, for December 31, 2015: 1 HKD: €0.11602).

(HKD million)	2015	2016
Net sales	12,977	14,249
Income before income tax	1,363	1,793
Net earnings	953	1,438
Other comprehensive income	(384)	(237)
Total comprehensive income	569	1,201

Summarized 100% statement of financial position information for ASMPT equity method investment excluding basis adjustments (foreign currency exchange rate per December 31, 2016 was 1 HKD: €0.12232 for December 31, 2015: 1 HKD: €0.11852).

(HKD million)	DECEMBER 31,	
	2015	2016
Current assets	10,094	11,918
Non-current assets	3,774	3,721
Current liabilities	3,133	6,237
Non-current liabilities	2,699	376
Equity	8,036	9,026

Equity of ASMPT per December 31, 2016 translated into euros at a rate of 0.12232 was €1,104 million (our 39.19% share: €433 million).

The ASMPT Board is responsible for ongoing monitoring of the performance of the Back-end activities. The actual results of the Back-end operating unit are discussed with the ASMPT Audit Committee, which includes the representative of ASMI. The ASMI representative reports to the ASMI Management Board and the Audit Committee of ASMI on a quarterly basis.

Our share of income taxes incurred directly by the associates is reported in result from investments in associates and as such is not included in income taxes in our Consolidated financial statements.

## NOTE 7. EVALUATION TOOLS AT CUSTOMERS

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

	DECEMBER 31,	
	2015	2016
<b>BALANCE AT BEGINNING OF YEAR</b>	<b>17,767</b>	<b>28,999</b>
Evaluation tools shipped	15,651	28,490
Depreciation	(5,003)	(8,902)
Evaluation tools sold	(6,313)	(15,433)
Reclassification from assets under construction	4,659	1,633
Foreign currency translation effect	2,238	1,807
<b>BALANCE AT END OF YEAR</b>	<b>28,999</b>	<b>36,594</b>

Useful lives in years:

5

The gross carrying amount of the evaluation tools at customers per December 31, 2016 was €49,040 (2015: €38,631), accumulated depreciation per December 31, 2016 was €12,446 (2015: €9,632).

**NOTE 8. INVENTORIES**

Inventories consist of the following:

	DECEMBER 31,	
	2015	2016
Components and raw materials	74,362	84,634
Work in process	30,627	30,614
Finished goods	27,863	12,618
<b>TOTAL INVENTORIES, GROSS</b>	<b>132,852</b>	<b>127,866</b>
Allowance for obsolescence	(19,350)	(15,527)
<b>TOTAL INVENTORIES, NET</b>	<b>113,502</b>	<b>112,339</b>

The changes in the allowance for obsolescence are as follows:

	DECEMBER 31,	
	2015	2016
<b>BALANCE AT BEGINNING OF YEAR</b>	<b>(18,883)</b>	<b>(19,350)</b>
Charged to cost of sales	(5,204)	(6,120)
Reversals	3,859	5,012
Utilization of the provision	2,167	5,178
Foreign currency translation effect	(1,289)	(247)
<b>BALANCE AT END OF YEAR</b>	<b>(19,350)</b>	<b>(15,527)</b>

On December 31, 2016, our allowance for inventory obsolescence amounted to €15,527, which is 12.1% of total inventory. The major part of the allowance is related to components and raw materials. The addition for the years 2015 and 2016 mainly relate to inventory items which were ceased to be used due to technological developments and design changes which resulted in obsolescence of certain parts.

The cost of inventories recognized as costs and included in cost of sales amounted to €243.4 million (2015: €288.7 million).

**NOTE 9. ACCOUNTS RECEIVABLE**

A significant percentage of our accounts receivable is derived from sales to a limited number of large multinational semiconductor device manufacturers located throughout the world. In order to monitor potential credit losses, we perform ongoing credit evaluations of our customers' financial condition.

The carrying amount of accounts receivable is as follows:

	DECEMBER 31,	
	2015	2016
Current	80,569	104,954
Overdue <30 days	3,046	7,152
Overdue 31-60 days	1,117	6,330
Overdue 61-120 days	3,443	12,531
Overdue >120 days	2,015	6,053
<b>TOTAL</b>	<b>90,190</b>	<b>137,020</b>

An allowance for doubtful accounts receivable is maintained for potential credit losses based upon management's assessment of the expected collectability of all accounts receivable. The allowance for doubtful accounts is reviewed periodically to assess the adequacy of the allowance. In making this assessment, management takes into consideration any circumstances of which we are aware regarding a customer's inability to meet its financial obligations, and our judgments as to potential prevailing economic conditions in the industry and their potential impact on the Company's customers.

The changes in the allowance for doubtful accounts receivable are as follows:

	DECEMBER 31,	
	2015	2016
<b>BALANCE AT BEGINNING OF YEAR</b>	<b>(19)</b>	<b>(44)</b>
Charged to selling, general and administrative expenses	(22)	(52)
Utilization of the provision	-	-
Foreign currency translation effect	(3)	2
<b>BALANCE AT END OF YEAR</b>	<b>(44)</b>	<b>(94)</b>

Accounts receivable are impaired and provided for on an individual basis. As of December 31, 2016, accounts receivable of €32 million were past due but not impaired. These balances are still considered to be recoverable because they relate to customers for whom there is neither recent history of default nor expectation that this will incur.

For further information on credit risk see Note 16.

## NOTE 10. CASH AND CASH EQUIVALENTS

Cash and cash equivalents at December 31, 2016 include deposits with financial institutions that have good credit ratings of €99 million (2015: €101 million), investments in money market funds that invest in debt securities of financial institutions that have good credit rating and governments of €24 million and interest-bearing bank accounts of €255 million (2015: €346 million). Our cash and cash equivalents are predominantly denominated in US dollars and partly in euros, Singapore dollars, Korean won, and Japanese Yen.

Bank guarantees exist for an amount of €827 at December 31, 2016 (€700 as per December 31, 2015).

Cash and cash equivalents have insignificant interest rate risk and remaining maturities of three months or less at the date of acquisition. Except for an amount of €3.7 million (2015: €3.7 million), no restrictions on usage of cash and cash equivalents exist. The carrying amount of these assets approximates to their fair value.

## NOTE 11. EQUITY

Our Management Board has the power to issue ordinary shares and (financing) preference shares insofar as the Management Board has been authorized to do so by the General Meeting of Shareholders. The Management Board requires the approval of the Supervisory Board for such an issue. The authorization by the General Meeting of Shareholders can only be granted for a certain period. In the case that the General Meeting of Shareholders has not authorized the Management Board to issue shares, the General Meeting of Shareholders shall have the power to issue shares.

### COMMON SHARES, PREFERRED AND FINANCING PREFERRED SHARES

The authorized capital of the Company amounts to 110,000,000 common shares of €0.04 par value, 118,000 preferred shares of €40 par value and 8,000 financing preferred shares of €40 par value.

As at December 31, 2016, 63,797,394 ordinary shares with a nominal value of €0.04 each were issued and fully paid up, of which 3,981,551 ordinary shares are held by us in treasury. All shares have one vote per €0.04 par value. Treasury shares held by the Company cannot be voted on. Of our 59,815,843 outstanding common shares at December 31, 2016, 3,039 are registered with us in the Netherlands, 59,409,659 are registered with our transfer agent in the Netherlands, ABN AMRO Bank NV, and 403,145 are registered with our transfer agent in the United States, Citibank, NA, New York.

Financing preferred shares are designed to allow ASMI to finance equity with an instrument paying a preferred dividend, linked to EURIBOR loans and government loans, without the dilutive effects of issuing additional common shares.

Preferred and financing preferred shares are issued in registered form only and are subject to transfer restrictions. Essentially, a preferred or financing preferred shareholder must obtain the approval of the Company's Supervisory Board to transfer shares. If approval is denied, the Supervisory Board will provide a list of acceptable prospective buyers who are willing to purchase the shares at a cash price to be fixed by consent of the Supervisory Board and seller within two months after the approval is denied. If the transfer is approved, the shareholder must complete the transfer within three months, at which time the approval expires.

Preferred shares are entitled to a cumulative preferred dividend based on the amount paid up on such shares. Financing preferred shares are entitled to a cumulative dividend based on the par value and share premium paid on such shares.

As per December 31, 2016 no preference shares are issued.

## RETAINED EARNINGS

Distributions to common shareholders are limited to the extent the total amount of shareholders' equity exceeds the amounts of nominal paid-in share capital (exclusive any share premium) and any reserves to be formed pursuant to law or the Company's articles of association. The amounts are derived from the Statutory financial statements of ASMI.

ASMI aims to pay a sustainable annual dividend. The Supervisory Board, upon proposal of the Management Board, will annually assess the amount of dividend that will be proposed to the Annual General Meeting of Shareholders. The decision that a dividend be proposed to the Annual General Meeting of Shareholders will be subject to the availability of distributable profits as well as retained earnings and may be affected by our potential future funding requirements. Accordingly, dividend payments may fluctuate and could decline or be omitted in any year.

In 2016, we paid a dividend of €0.70 per common share. We will propose to the forthcoming 2017 Annual General Meeting of Shareholders to declare a dividend of €0.70 per share.

Results on dilution of investments in associates are accounted for directly in equity. For 2016 and 2015, these dilution results were €9,336 and €5,535 respectively.

## TREASURY SHARES

On October 26, 2016, ASMI announced a new €50 million share buyback program to be executed within the 2016-2017 time frame. The program started on December 13, 2016. On December 31, 2016, 12.9% of the program was effectuated.

On October 28, 2015, ASMI announced a share buyback program to purchase up to an amount of €100 million of its own shares within the 2015-2016 time frame. The program started on November 26, 2015, and was

completed on November 11, 2016. Under the 2015-2016 share buyback program, we repurchased 2,772,729 shares at an average price of €35.98.

On October 29, 2014, ASMI announced a share buyback program to purchase up to an amount of €100 million of its own shares within the 2014-2015 time frame. The program started on November 24, 2014, and was completed on May 20, 2015. Under the 2014-2015 share buyback program, we repurchased 2,594,420 shares at an average price of €38.55.

ASMI intends to use part of the shares for commitments under employee share-based compensation schemes.

The share buyback programs were executed by intermediaries through on-exchange purchases or through off-exchange trades. ASMI updated the markets on the progress of the share buyback programs on a weekly basis.

The repurchase programs are part of ASMI's commitment to use excess cash for the benefit of its shareholders.

## OTHER RESERVES

The changes in the amount of other reserves are as follows:

	PROPORTIONATE SHARE IN OTHER COMPREHENSIVE INCOME INVESTMENTS IN ASSOCIATES <sup>1)</sup>	TRANSLATION RESERVE	TOTAL OTHER RESERVES
<b>BALANCE JANUARY 1, 2015</b>	<b>(1,699)</b>	<b>56,469</b>	<b>54,770</b>
Proportionate share in other comprehensive income investments in associates	567	–	567
Foreign currency translation effect on translation of foreign operations	–	136,744	136,744
<b>BALANCE DECEMBER 31, 2015</b>	<b>(1,132)</b>	<b>193,213</b>	<b>192,081</b>
Proportionate share other comprehensive income investments in associates	(1,344)	–	(1,344)
Foreign currency translation effect on translation of foreign operations	–	40,731	40,731
<b>BALANCE DECEMBER 31, 2016</b>	<b>(2,476)</b>	<b>233,944</b>	<b>231,468</b>

<sup>1)</sup> Proportionate share in other comprehensive income investments in associates and translation reserve, items may be subsequently reclassified to profit or loss.

## PURCHASES OF EQUITY SECURITIES BY THE ISSUERS AND AFFILIATED PURCHASERS

On May 25, 2016, the Annual General Meeting of Shareholders authorized the Company, for an 18-month period, to be calculated from the date of the Annual General Meeting, to repurchase its own shares up to 10% of the issued capital, at a price at least equal to the shares' nominal value and at most a price equal to 110% of the shares' average closing price according to the listing on the Euronext Amsterdam stock exchange during the five trading days preceding the purchase date.

On October 29, 2014, ASMI announced a share buyback program to purchase up to an amount of €100 million of its own shares within the 2014-2015 time frame.



The following tables provide a summary of shares repurchased by ASMI under this program:

PERIOD	TOTAL NUMBER OF SHARES PURCHASED	AVERAGE PRICE PAID PER SHARE (EUR)	CUMULATIVE NUMBER OF SHARES PURCHASED	MAXIMUM VALUE OF SHARES THAT MAY YET BE PURCHASED UNDER THE PROGRAM (EUR)
<b>Share buyback program 2014-2015:</b>				
November, 2014	555,671	€33.18	555,671	81,563
December, 2014	397,881	€33.86	953,552	68,092
January, 2015	259,302	€35.12	1,212,854	58,986
February, 2015	200,710	€36.97	1,413,564	51,586
March, 2015	277,253	€42.76	1,690,817	39,731
April, 2015	629,831	€44.36	2,320,648	11,815
May, 2015	273,772	€43.17	2,594,420	-
<b>TOTAL</b>	<b>2,594,420</b>	<b>€38.55</b>		

On October 28, 2015, ASMI announced a share buyback program to purchase up to an amount of €100 million of its own shares within the 2015-2016 time frame.

The following tables provide a summary of shares repurchased by ASMI under this program:

PERIOD	TOTAL NUMBER OF SHARES PURCHASED	AVERAGE PRICE PAID PER SHARE (EUR)	CUMULATIVE NUMBER OF SHARES PURCHASED	MAXIMUM VALUE OF SHARES THAT MAY YET BE PURCHASED UNDER THE PROGRAM (EUR)
<b>Share buyback program 2015-2016:</b>				
November, 2015	23,788	€37.59	23,788	99,105
December, 2015	228,191	€36.16	251,979	90,853
January, 2016	209,682	€34.28	461,661	83,667
February, 2016	407,902	€36.35	869,563	68,839
March, 2016	273,296	€38.70	1,142,859	58,263
April, 2016	272,475	€37.93	1,415,334	47,928
May, 2016	154,101	€34.89	1,569,435	42,551
June, 2016	226,996	€34.73	1,796,431	34,668
July, 2016	273,058	€35.81	2,069,489	24,889
August, 2016	312,157	€33.59	2,381,646	14,404
September, 2016	242,751	€35.10	2,624,397	5,883
October, 2016	106,095	€37.36	2,730,492	1,920
November, 2016	42,237	€38.93	2,772,729	-
<b>TOTAL</b>	<b>2,772,729</b>	<b>€35.98</b>		

On October 26, 2016, ASMI announced a share buyback program, to purchase up to an amount of €50 million of its own shares within the 2016-2017 time frame.

The following tables provide a summary of shares repurchased by ASMI under this program:

PERIOD	TOTAL NUMBER OF SHARES PURCHASED	AVERAGE PRICE PAID PER SHARE (EUR)	CUMULATIVE NUMBER OF SHARES PURCHASED	MAXIMUM VALUE OF SHARES THAT MAY YET BE PURCHASED UNDER THE PROGRAM (EUR)
Share buyback program 2016-2017:				
December, 2016	153,022	€42.31	153,022	43,526
<b>TOTAL</b>	<b>153,022</b>	<b>€42.31</b>		

## NOTE 12. EMPLOYEE BENEFITS

### PENSION PLANS

The Company has retirement plans covering substantially all employees. The principal plans are defined contribution plans, except for the plans of the Company's operations in the Netherlands and Japan.

#### Multi-employer plan

There are 138 eligible employees in the Netherlands. These employees participate in a multi-employer union plan (Pensioenfonds van de Metalektro, PME) determined in accordance with the collective bargaining agreements effective for the industry in which we operate. This collective bargaining agreement has no expiration date. This multi-employer union plan, accounted for as a defined contribution plan, covers approximately 1,300 companies and approximately 147,000 contributing members. Our contribution to the multi-employer union plan was less than five percent of the total contribution to the plan as per the Statutory annual report for the year ended December 31, 2016. The plan monitors its risks on a global basis, not by participating company or employee, and is subject to regulation by Dutch governmental authorities. By law (the Dutch Pension Act), a multi-employer union plan must be monitored against specific criteria, including the coverage ratio of the plan's assets to its obligations. As of January 1, 2015, new pension legislation has been enacted. This legislation results in amongst others, an increase of legally required coverage levels. The coverage percentage is calculated by dividing the funds capital by the total sum of pension liabilities and is based on actual market interest rates. The coverage ratio as per December 31, 2016 of 96.2 percent (December 31, 2015: 97.7 percent) is calculated giving consideration to the new pension legislation and is below the legally required level. We have however no obligation to pay off any deficits the pension fund may incur, nor do we have any claim to any potential surpluses.

Every company participating in the PME contributes a premium calculated as a percentage of its total pensionable salaries, with each company subject to the same contribution rate. The premium can fluctuate yearly based on the coverage ratio of the multi-employer union plan, for 2016 the contribution percentage was 23.6 percent. The pension rights of each employee are based upon the employee's average salary during employment.

Our net periodic pension cost for this multi-employer union plan for any period is the amount of the required employer contribution for that period.

#### Defined benefit plan

The Company's employees in Japan participate in a defined benefit plan. The Company makes contributions to defined benefit plans in Japan that provide pension benefits for employees upon retirement. These are average-pay plans, based on the employees' years of service and compensation near retirement.

The most recent actuarial valuations of plan assets and the present value of the defined benefit obligation were carried out at December 31, 2016. The present value of the defined benefit obligation and the related current

service cost and past service cost were measured using the Projected Unit Credit Method. Significant actuarial assumptions for the determination of the defined obligation are discount rate, future general salary increases and future pension increases.

The net liability of the plan developed as follows:

	DECEMBER 31,	
	2015	2016
Defined benefit obligations	(9,800)	(11,403)
Fair value of plan assets	8,630	9,985
<b>NET LIABILITY FOR DEFINED BENEFIT PLANS</b>	<b>(1,170)</b>	<b>(1,418)</b>

The changes in defined benefit obligations and fair value of plan assets are as follows:

	DECEMBER 31,	
	2015	2016
<b>Defined benefit obligations</b>		
<b>BALANCE JANUARY 1</b>	<b>8,079</b>	<b>9,800</b>
Current service cost	567	702
Interest on obligation	77	84
Remeasurement losses	236	736
Benefits paid	(54)	(497)
Foreign currency translation effect	895	578
<b>BALANCE DECEMBER 31</b>	<b>9,800</b>	<b>11,403</b>
<b>Fair value of plan assets</b>		
<b>BALANCE JANUARY 1</b>	<b>6,297</b>	<b>8,630</b>
Interest income	65	80
Return on plan assets	294	(211)
Company contribution	1,306	1,473
Benefits paid	(54)	(497)
Foreign currency translation effect	722	510
<b>BALANCE DECEMBER 31</b>	<b>8,630</b>	<b>9,985</b>

The defined benefit cost consists of the following:

	DECEMBER 31,	
	2015	2016
Current service cost	567	702
Net interest costs	12	4
<b>NET DEFINED BENEFIT COST</b>	<b>579</b>	<b>706</b>

The assumptions in calculating the actuarial present value of benefit obligations and net periodic benefit cost are as follows:

	2015	2016
Discount rate for obligations	0.80%	0.50%
Expected rate of compensation increase	2.93%	2.93%

Assumptions regarding life expectancy are based on mortality tables published in 2014 by the Ministry of Health, Labour and Welfare of Japan.

The main risk on the pension plan relates to the discount rate. The defined benefit obligation is sensitive to a change in discount rates, a relative change of the discount rate of 25 basis points would have resulted in a change in the defined benefit obligation of 2.75%.

The allocation of plan assets is as follows:

	DECEMBER 31,			
	2015		2016	
Equity	2,390	28%	2,503	25%
Bonds	4,702	54%	5,586	56%
Loans	947	11%	1,179	12%
Real estate	105	1%	118	1%
Other	486	6%	599	6%
<b>TOTAL</b>	<b>8,630</b>	<b>100%</b>	<b>9,985</b>	<b>100%</b>

The investment strategy is determined based on an asset-liability study in consultation with investment advisers and within the boundaries given by regulatory bodies for pension funds. Equity securities consist primarily of publicly traded Japanese companies and common collective funds. Publicly traded equities are valued at the closing prices reported in the active market in which the individual securities are traded (level 1). Common collective funds are valued at the published price (level 1) per share multiplied by the number of shares held as of the measurement date.

Fixed income (bonds and loans) consists of corporate bonds, government securities and common collective funds. Corporate and government securities are valued by third-party pricing sources (level 2). Common collective funds are valued at the net asset value per share (level 2) multiplied by the number of shares held as of the measurement date.

Real estate fund and other values are primarily reported by the fund manager and are based on valuation of the underlying investments (level 3) which include inputs such as cost, discounted cash flows, independent appraisals and market based comparable data.

The plan assets do not include any of the Company's shares.

### Retirement plan costs

ASMI contributed €1,473 to the defined benefit plan in 2016. The Company expects to pay benefits for years subsequent to December 31, 2016 as follows:

	EXPECTED CONTRIBUTION DEFINED BENEFIT PLAN
2017	576
2018	510
2019	600
2020	335
2021	387
Aggregate for the years 2022-2026	3,444
<b>TOTAL</b>	<b>5,852</b>

Retirement plan costs consist of the following:

	DECEMBER 31,	
	2015	2016
Defined contribution plans	3,407	3,395
Multi-employer plans	1,465	1,443
Defined benefit plans	579	706
<b>TOTAL RETIREMENT PLAN COSTS</b>	<b>5,451</b>	<b>5,544</b>

The Company does not provide for any significant post-retirement benefits other than pensions.

### MANAGEMENT BOARD AND EMPLOYEE AND LONG-TERM INCENTIVE PLAN

The Company has adopted various share plans (e.g. stock option plans, a restricted share plan and a performance share plan) and has entered into share agreements with the Management Board and various employees. Under the stock option plans, the Management Board and employees may purchase per the vesting date a specific number of shares of the Company's common stock at a certain price. Options are priced at market value in euros or US dollars on the date of grant. Under the restricted share plan, employees receive per the vesting date a specific number of shares of the Company's common stock. Under the performance share plan, the Management Board receives per the vesting date, and provided the performance criteria have been met, a specific number of shares of the Company's common stock.

### Authority to issue options and shares

By resolution of the Annual General Meeting of Shareholders (AGM) of May 25, 2016, the formal authority to issue options and shares was allocated to the Management Board subject to the approval of the Supervisory Board. This authority is valid for 18 months and needs to be refreshed by the 2017 AGM to allow the continued application of the Long-Term Incentive (LTI) Plans beyond November 20, 2017.

The ASM International NV 2014 Long-Term Incentive Plan for Employees (ELTI) is principally administered by the Management Board and the ASM International NV 2014 Long-Term Incentive Plan for members of the Management Board (MLTI) is principally administered by the Supervisory Board. This complies with applicable corporate governance standards. However, the Supervisory Board has no power to represent the Company. For external purposes the Management Board remains the competent body under both LTI plans. The LTI plans envisage that the Supervisory Board, or in the case of the ELTI the Management Board with the approval of the Supervisory Board, will determine the number of options and shares to be granted to the Management Board members and to employees.

### 2011 Long-Term Incentive Plan

In 2011 a Stock Option Plan was adopted. In this plan to limit potential dilution, the amount of outstanding (vested and non-vested) options granted to the Management Board and to other employees will not exceed 7.5% of the issued ordinary share capital of ASMI. The Stock Option Plan 2011 consists of two sub-plans: the ASMI Stock Option Plan for employees (ESOP) and the ASMI Stock Option for members of the Management Board (MSOP).

For employees and existing Management Board members the grant date for all options granted is December 31 of the relevant year. In each of these situations, the three-year Vesting Period starts at the grant date. The exercise price in euros of all options issued under the ESOP and the MSOP is determined on the basis of the market value of the ASMI shares at (i.e. immediately prior to) the grant date.

The exercise period is four years starting at the third anniversary of the grant date.

The following table is a summary of changes in options outstanding under the 2011 and previous Long-Term Incentive Plan:

	EURO-PLANS		US DOLLAR-PLANS	
	NUMBER OF OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE IN €	NUMBER OF OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE IN US\$
<b>BALANCE JANUARY 1, 2015</b>	<b>2,703,336</b>	<b>20.49</b>	<b>86,225</b>	<b>21.18</b>
Options forfeited	(105,968)	23.30	-	-
Options expired	(19,360)	12.80	(1,887)	19.33
Options exercised	(565,298)	18.08	(62,129)	21.69
<b>BALANCE DECEMBER 31, 2015</b>	<b>2,012,710</b>	<b>21.09</b>	<b>22,209</b>	<b>19.91</b>
Options forfeited	(74,492)	23.73	(4,717)	29.69
Options expired	(4,128)	22.93	-	-
Options exercised	(638,958)	19.70	(16,493)	17.31
<b>BALANCE DECEMBER 31, 2016</b>	<b>1,295,132</b>	<b>21.63</b>	<b>999</b>	<b>16.62</b>

The total intrinsic value of options exercised was €12,882 for the year ended December 31, 2016 (2015: €11,432). In 2016 treasury shares have been sold for the exercise of 720,572 options.

On December 31, 2016, options outstanding and options exercisable classified by range of exercise prices are:

RANGE OF EXERCISE PRICES	OPTIONS OUTSTANDING			OPTIONS EXERCISABLE	
	NUMBER OUTSTANDING	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE	NUMBER EXERCISABLE	WEIGHTED AVERAGE EXERCISE PRICE
US dollar plans		In years	In US\$		In US\$
USD 1.00-20.00	499	2.3	11.58	499	11.58
USD 20.00-30.00	500	1.4	21.67	500	21.67
<b>USD 1.00-30.00</b>	<b>999</b>	<b>1.9</b>	<b>16.62</b>	<b>999</b>	<b>16.62</b>
Euro plans		In years	In EUR		In EUR
€1.00-15.00	135,624	1.0	13.02	135,624	13.02
€15.00-20.00	214,105	2.0	18.93	214,105	18.93
€20.00-25.00	945,403	3.7	23.47	945,403	23.47
<b>€1.00-25.00</b>	<b>1,295,132</b>	<b>3.1</b>	<b>21.63</b>	<b>1,295,132</b>	<b>21.63</b>

At December 31, 2016, the aggregate intrinsic value of all options outstanding and exercisable under these plans is €55,261.

Under these plans, no more options to purchase shares can be issued. Under the various stock option plans a total of 1,296,131 options to purchase common stock were outstanding at December 31, 2016, expiring at various dates through 2020.

### 2014 Long-Term Incentive Plan

In 2014 a new Long-Term Incentive Plan was adopted. In the new plan to limit potential dilution, the amount of outstanding (vested and non-vested) options and shares granted to the Management Board and to other employees will not exceed 5% of the issued ordinary share capital of ASMI. The new Long-Term Incentive Plan 2014 consists of two sub-plans: ELTI and the MLTI.

Options and performance shares are issued to Management Board members and restricted shares are issued to employees once per annum on the date following the publication of the first-quarter results of the relevant year. Possible grant to newly-hired employees can be issued once a quarter, on the date following the publication of the financial results of the relevant quarter. The number of options and shares outstanding under the Long-Term Incentive plans or under any other plan or arrangement in aggregate may never exceed 5% of ASMI's share capital. In accordance with the ASMI Remuneration Policy, an exception is made for a transition period of four years, during which the dilution may exceed 5% but will not exceed 7.5%.

## Performance and restricted shares outstanding

The following table is a summary of changes in performance shares and restricted shares outstanding under the 2014 Long-Term Incentive Plan.

	NUMBER OF PERFORMANCE SHARES	NUMBER OF RESTRICTED SHARES	STATUS	FAIR VALUE AT GRANT DATE (WEIGHTED AVERAGE)
<b>BALANCE JANUARY 1, 2015</b>	-	<b>10,215</b>		
Shares granted, employees	-	165,519	Unconditional	€43.79
Shares granted, Management Board	12,994	-	Conditional	€43.21
Shares vested	-	(3,173)		
Shares forfeited	-	(6,224)		
<b>BALANCE DECEMBER 31, 2015</b>	<b>12,994</b>	<b>166,337</b>		
Shares granted, employees	-	206,726	Unconditional	€35.36
Shares granted, Management Board	16,651	-	Conditional	€34.67
Shares vested	-	(55,041)		
Shares forfeited	-	(10,517)		
<b>BALANCE DECEMBER 31, 2016</b>	<b>29,645</b>	<b>307,505</b>		

The fair value for the shares granted in 2016 in 2016 was determined using the share price at the grant date adjusted for the present value of expected future dividends.

In 2016 treasury shares have been sold for the vesting of 55,041 restricted shares.

## Options outstanding

The following table is a summary of changes in options outstanding under the 2014 Long-Term Incentive Plan.

	NUMBER OF OPTIONS	EXERCISE PRICE IN €	FAIR VALUE AT GRANT DATE
<b>BALANCE JANUARY 1, 2015</b>	-	-	
Options granted, April 24, 2015	42,659	44.24	€17.33
<b>BALANCE DECEMBER 31, 2015</b>	<b>42,659</b>		
Options granted, April 22, 2016	62,555	37.09	€12.64
<b>BALANCE DECEMBER 31, 2016</b>	<b>105,214</b>		

The cost relating to stock options is measured at fair value on the grant date. The fair value for the stock options granted in 2016 was determined using the Black-Scholes option valuation model with the following weighted average assumptions:

	2016
Expected life (years)	7
Risk-free interest rate	1.77%
Dividend yield	1.61%
Expected volatility	37.26%
Exercise price	€37.09
Fair value per grant date	€12.64

The expected volatility measured at the standard deviation of continuously compounded share returns is based on statistical analysis of daily share prices over the last seven years.



At December 31, 2016, the aggregate intrinsic value of all options outstanding under the 2014 Long-Term Incentive Plan is €4,486.

### Share-based payments expenses

The grant date fair value of the stock options, the restricted shares and the performance shares is expensed on a straight-line basis over the vesting period, based on the Company's estimate of stock options, restricted shares and performance shares that will eventually vest. The impact of the true up of the estimates is recognized in the Consolidated statement of profit or loss in the period in which the revision is determined. We recorded compensation expenses of €8,387 for 2016 (2015: €8,213). The compensation expenses for 2016 include a true up for a lower non-vesting assessment of €214.

### NOTE 13. PROVISION FOR WARRANTY

The changes in the amount of provision for warranty are as follows:

	DECEMBER 31,	
	2015	2016
<b>BALANCE JANUARY 1</b>	<b>9,910</b>	<b>9,023</b>
Charged to cost of sales	6,323	3,576
Deductions	(5,403)	(4,065)
Releases	(2,571)	(2,906)
Foreign currency translation effect	764	172
<b>BALANCE DECEMBER 31</b>	<b>9,023</b>	<b>5,800</b>

Costs of warranty include the cost of labor and materials to repair a product during the warranty period. The main term of the warranty period is one year. The Company accrues for the estimated cost of the warranty on its products shipped in the provision for warranty, upon recognition of the sale of the product. The costs are estimated based on actual historical expenses incurred and on estimated future expenses related to current sales, and are updated periodically. Actual warranty costs are charged against the provision for warranty.

### NOTE 14. ACCRUED EXPENSES AND OTHER PAYABLES

Accrued expenses and other payables consist of the following:

	DECEMBER 31,	
	2015	2016
Personnel-related items	23,657	24,051
Deferred revenue	6,198	9,389
Financing related items	1,059	1,175
Other	13,877	14,079
<b>TOTAL ACCRUED EXPENSES AND OTHER PAYABLES</b>	<b>44,791</b>	<b>48,694</b>

Personnel-related items comprise accrued management bonuses, accrued vacation days, accrued wage tax, social securities and pension premiums. Deferred revenue consists of the revenue relating to the undelivered elements of the arrangements. This part of revenue is deferred at their relative selling prices until delivery of these elements. Financing related items comprises the accrual for settlement of shares repurchased. Other includes accruals for VAT and other taxes and down payments from customers.

## NOTE 15. CREDIT FACILITY

As per December 31, 2016, ASMI is debt-free. ASMI may borrow under separate short-term lines of credit with banks under an unsecured €150 million standby credit facility with a consortium of banks.

Total short-term lines of credit amounted to €150 million at December 31, 2016. The amount outstanding at December 31, 2016 was nil, so the undrawn portion totaled €150 million. The undrawn portion represents the Company's standby revolving credit facility of €150 million with a consortium of banks. The facility will be available through December 16, 2021, with an extension option for up to two years.

The credit facility of €150 million includes two financial covenants:

- › minimum consolidated tangible net worth; and
- › consolidated total net debt/total equity ratio.

These financial covenants are measured twice each year, at June 30 and December 31.

The minimum level of consolidated tangible net worth for the year ended December 31, 2016 required was €450 million, the consolidated tangible net worth as per that date was €1,101 million.

Consolidated tangible net worth is defined as the net assets, deducting any amount shown in respect of goodwill or other intangible assets (including any value arising from any valuation of ASMPT).

Total equity is defined as the aggregate of:

- › the amounts paid up on the issued common shares;
- › share capital in excess of par value;
- › retained earnings;
- › accumulated other comprehensive income and loss; and
- › deducting any amount shown in respect of goodwill or other intangible assets .

The net debt/total equity ratio should not exceed 1.5. For the year ended December 31, 2016, net cash was €378 million and total equity amounted to €2,016 million. The Company is in compliance with these financial covenants as of December 31, 2016.

ASMI does not provide guarantees for borrowings of ASMPT and there are no guarantees from ASMPT to secure indebtedness of ASMI. Under the rules of the Stock Exchange of Hong Kong, ASMPT is precluded from providing loans and advances other than trade receivables in the normal course of business, to ASMI or its non-ASMPT subsidiaries.

**NOTE 16. FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT****FINANCIAL INSTRUMENTS**

Financial instruments include:

	DECEMBER 31,	
	2015	2016
<b>Financial assets:</b>		
Cash and cash equivalents	446,915	378,157
Accounts receivable	90,190	137,020
<b>Financial liabilities:</b>		
Accounts payable	54,441	60,910

The carrying amounts of cash and cash equivalents, accounts receivable and accounts payable equal their fair values because of the short-term nature of these instruments.

Gains or losses related to financial instruments are as follows:

	2015	2016
Interest income	1,112	3,095
Interest expense	(1,620)	(1,096)
Result from foreign currency exchange	25,264	13,032
Addition to allowance for doubtful accounts receivable	(22)	(52)

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASMI uses the following fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

**Level 1**

Quoted prices in active markets that are accessible at the measurement date for identical assets and liabilities.

**Level 2**

Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

**Level 3**

Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

There were no transfers between levels during the years ended December 31, 2016 and December 31, 2015.

## FINANCIAL RISK FACTORS

ASMI is exposed to a number of risk factors: market risks (including foreign exchange risk), credit risk, liquidity risk and equity price risk. The Company may use forward exchange contracts to hedge its foreign exchange risk. The Company does not enter into financial instrument transactions for trading or speculative purposes.

### Foreign exchange risk

ASMI and its subsidiaries conduct business in a number of foreign countries, with certain transactions denominated in currencies other than the functional currency of the Company (euros) or one of its subsidiaries conducting the business. The purpose of the Company's foreign currency management is to manage the effect of exchange rate fluctuations on income, expenses, cash flows and assets and liabilities denominated in selected foreign currencies, in particular denominated in US dollars.

We may use forward exchange contracts to hedge our foreign exchange risk of anticipated sales or purchase transactions in the normal course of business, which occur within the next twelve months, for which we have a firm commitment from a customer or to a supplier. The terms of these contracts are consistent with the timing of the transactions being hedged. The hedges related to forecasted transactions are designated and documented at the inception of the hedge as cash flow hedges, and are evaluated for effectiveness on a quarterly basis. The effective portion of the gain or loss on these hedges is reported as a component of accumulated other comprehensive income (loss) net of taxes in equity, and is reclassified into earnings when the hedged transaction affects earnings.

Changes in the fair value of derivatives that do not qualify for hedge treatment, as well as the ineffective portion of any hedges, are recognized in earnings. We record all derivatives, including forward exchange contracts, on the statement of financial position at fair value in accrued expenses and payables. Should contracts extend beyond one year, these are classified as long-term.

Furthermore, we might manage the currency exposure of certain receivables and payables using derivative instruments, such as forward exchange contracts (fair value hedges) and currency swaps, and non-derivative instruments, such as debt borrowings in foreign currencies. The gains or losses on these instruments provide an offset to the gains or losses recorded on receivables and payables denominated in foreign currencies. The derivative instruments are recorded at fair value and changes in fair value are recorded in earnings under foreign currency exchange gains (losses) in the Consolidated statement of profit or loss. Receivables and payables denominated in foreign currencies are recorded at the exchange rate at the balance sheet date and gains and losses as a result of changes in exchange rates are recorded in earnings under foreign currency exchange gains (losses) in the Consolidated statement of profit or loss.

We do not use forward exchange contracts for trading or speculative purposes. Financial assets and financial liabilities are recognized on the Company's Consolidated statement of financial position when the Company becomes a party to the contractual provisions of the instrument.

To the extent that exchange rate fluctuations impact the value of the Company's investments in its foreign subsidiaries, they are not hedged. The cumulative effect of these fluctuations is separately reported in Consolidated Equity. Reference is made to Note 11.

Per December 31, 2015 and December 31, 2016, there were no forward exchange contracts outstanding.

The following table analyzes the Company's sensitivity to a hypothetical 10% strengthening and 10% weakening of the US dollar, Singapore dollar, Korean won and Japanese yen against the euro as of December 31, 2015 and December 31, 2016. This analysis includes foreign currency-denominated monetary items and adjusts their translation at year-end for a 10% increase and 10% decrease against the euro.

	IMPACT ON FINANCIAL INSTRUMENTS	
	2015	2016
10% increase of US dollar versus euro	34,797	<b>36,166</b>
10% decrease of US dollar versus euro	(34,797)	<b>(36,166)</b>
10% increase of Singapore dollar versus euro	(259)	<b>276</b>
10% decrease of Singapore dollar versus euro	259	<b>(276)</b>
10% increase of Korean won versus euro	2,754	<b>1,409</b>
10% decrease of Korean won versus euro	(2,754)	<b>(1,409)</b>
10% increase of Japanese yen versus euro	6,539	<b>676</b>
10% decrease of Japanese yen versus euro	(6,539)	<b>(676)</b>

A hypothetical 10% strengthening or 10% weakening of any other currency against the euro as of December 31, 2015 and December 31, 2016 would not result in a material impact.

### Interest risk

We are not exposed to interest rate risk through our borrowing activities. The Company does not enter into financial instrument transactions for trading or speculative purposes or to manage interest rate exposure. As per December 31, 2016, the Company had no debt.

### Credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, accounts receivable and derivative instruments. These instruments contain a risk of counterparties failing to discharge their obligations. We monitor credit risk and manage credit risk exposure by type of financial instrument by assessing the creditworthiness of counterparties. We do not anticipate non-performance by counterparties given their high creditworthiness.

Our customers are semiconductor device manufacturers located throughout the world. We perform ongoing credit evaluations of our customers' financial condition. We take additional measures to mitigate credit risk when considered appropriate by means of down payments or letters of credit. We generally do not require collateral or other security to support financial instruments with credit risk.

Concentrations of credit risk (whether on- or off-balance sheet) that arise from financial instruments exist for groups of customers or counterparties when they have similar economic characteristics that would cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions.

We derive a significant percentage of our revenue from a small number of large customers. Our three largest customers accounted each for more than 7.5% of net sales in 2016. The ten largest customers accounted for approximately 78.5% of net sales in 2016 (2015: 81.0%). Sales to these large customers also may fluctuate significantly from time to time depending on the timing and level of purchases by these customers. Significant orders from such customers may expose the Company to a concentration of credit risk and difficulties in collecting amounts due, which could harm the Company's financial results. At December 31, 2016, one customer accounted for 30.0% of total accounts receivable.

We invest our cash and cash equivalents in short-term deposits, money market funds and derivative instruments with high-rated financial institutions. We only enter into transactions with a limited number of major financial institutions that have high credit ratings and we closely monitor the creditworthiness of our counterparties. Concentration risk is mitigated by not limiting the exposure to a single counter party.

The maximum credit exposure is equal to the carrying values of cash and cash equivalent, and accounts receivable.

### Liquidity risk

Our policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business.

Our liquidity needs are affected by many factors, some of which are based on the normal on-going operations of the business, and others that relate to the uncertainties of the global economy and the semiconductor industry. Although our cash requirements fluctuate based on the timing and extent of these factors, we believe that cash generated from operations, together with our principal sources of liquidity are sufficient to satisfy our current requirements, including our expected capital expenditures in 2017.

We intend to return cash to our shareholders on a regular basis in the form of dividend payments and, subject to our actual and anticipated liquidity requirements and other relevant factors, share buybacks.

The following table summarizes the Company's contractual and other obligations as at December 31, 2016.

	TOTAL	LESS THAN 1 YEAR	1-3 YEARS	3-5 YEARS	MORE THAN 5 YEARS
Accounts payable	60,910	60,910	-	-	-
Income tax payable	2,467	2,467	-	-	-
Accrued expenses and other payables	48,694	48,694	-	-	-
Operating leases	16,523	6,365	6,670	3,162	326
Pension liabilities	5,852	576	1,110	722	3,444
<b>Purchase obligations:</b>					
Purchase commitments to suppliers	87,078	86,885	175	18	-
Capital expenditure and other commitments	10,556	9,569	987	-	-
<b>TOTAL CONTRACTUAL OBLIGATIONS</b>	<b>232,080</b>	<b>215,466</b>	<b>8,942</b>	<b>3,902</b>	<b>3,770</b>

Total short-term lines of credit amounted to €150,000 at December 31, 2016. The amount outstanding at December 31, 2016 was nil and the undrawn portion totaled €150,000. The standby revolving credit facility of €150,000 with a consortium of banks will be available through December 16, 2021.

For the majority of purchase commitments, the Company has flexible delivery schedules depending on the market conditions, which allows the Company, to a certain extent, to delay delivery beyond originally planned delivery schedules.

### Equity price risk

The shares of ASMPT, our 39.19% equity investment, are listed on the Hong Kong Stock Exchange. 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, 2016 under equity accounting amounts to HKD63.14, whereas the level 1 fair value per share (being the market price of a share on the Hong Kong Stock Exchange) was HKD82.15. Management concluded that, based on quantitative analysis no impairment of its share in ASMPT existed as per December 31, 2016.

## NOTE 17. COMMITMENTS AND CONTINGENCIES

At December 31, 2016, operating leases having initial or remaining non-cancelable terms in excess of one year are as follows:

2017	6,365
2018	4,474
2019	2,196
2020	2,001
2021	1,161
Years thereafter	326
<b>TOTAL</b>	<b>16,523</b>

Operating lease obligations include leases of equipment and facilities. Lease payments recognized as an expense were €6,913 for the year ended December 31, 2016 (2015: €6,886). Per December 31, 2016, the Company had entered into purchase commitments with suppliers in the amount of €86,885 for purchases within the next 12 months. Commitments for capital expenditures and other commitments per December 31, 2016 were €10,556.

### CHANGE OF CONTROL TRANSACTION

Pursuant to our 1997 settlement agreement with Applied Materials, as amended and restated in 1998, if we desire to effect a change of control transaction, as defined in the settlement agreement which generally involves our operations and not our investment in ASMPT, with a competitor of Applied Materials, we must first offer the change of control transaction to Applied Materials on the same terms as we would be willing to accept from that competitor pursuant to a bona fide arm's-length offer made by that competitor.

## NOTE 18. LITIGATION

ASMI is 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, it is the opinion of the Company's management that the outcome of any claim which is 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 19. 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, 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 39.19% 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.

	YEAR ENDED DECEMBER 31, 2015			TOTAL
	FRONT-END	BACK-END 100%	DECONSOLIDATED	
Net sales	669,621	1,505,625	(1,505,625)	<b>669,621</b>
Gross profit	295,527	547,079	(547,079)	<b>295,527</b>
Result from operations	111,063	176,360	(176,360)	<b>111,063</b>
Interest income	1,112	-	-	<b>1,112</b>
Interest expense	(1,620)	(18,181)	18,181	<b>(1,620)</b>
Foreign currency exchange gains (losses), net	25,264	-	-	<b>25,264</b>
Result on investments in associates	(900)	-	17,008	<b>16,108</b>
Income tax expense	5,350	(47,622)	47,622	<b>5,350</b>
Net earnings (loss)	140,269	110,557	(93,549)	<b>157,277</b>
Cash flows from operating activities	174,817	137,991	(137,991)	<b>174,817</b>
Cash flows from investing activities	(71,458)	(34,470)	77,335	<b>(28,593)</b>
Cash flows from financing activities	(104,911)	(112,571)	112,571	<b>(104,911)</b>
Cash and cash equivalents	446,915	239,428	(239,428)	<b>446,915</b>
Goodwill	11,270	50,697	(50,697)	<b>11,270</b>
Other intangible assets	81,535	71,691	(71,691)	<b>81,535</b>
Investments in associates	-	-	1,180,839	<b>1,180,839</b>
Other identifiable assets	355,418	1,281,777	(1,281,777)	<b>355,418</b>
Total assets	895,138	1,643,593	(462,754)	<b>2,075,977</b>
Total debt	-	304,775	(304,775)	<b>-</b>
Headcount <sup>1)</sup>	1,597	14,348	(14,348)	<b>1,597</b>

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



	YEAR ENDED DECEMBER 31, 2016			
	FRONT-END	BACK-END 100%	DECONSOLIDATED	TOTAL
Net sales	597,930	1,666,859	(1,666,859)	597,930
Gross profit	264,500	626,717	(626,717)	264,500
Result from operations	82,241	231,794	(231,794)	82,241
Interest income	3,095	-	-	3,095
Interest expense	(1,096)	(22,055)	22,055	(1,096)
Foreign currency exchange gains (losses), net	13,032	-	-	13,032
Result on investments in associates	-	-	40,488	40,488
Income tax expense	(2,289)	(41,477)	41,477	(2,289)
Net earnings (loss)	94,983	168,262	(127,774)	135,471
Cash flows from operating activities	91,412	229,000	(229,000)	91,412
Cash flows from investing activities	(60,094)	(123,336)	145,419	(38,011)
Cash flows from financing activities	(125,798)	(65,054)	65,054	(125,798)
Cash and cash equivalents	378,157	261,629	(261,629)	378,157
Goodwill	11,270	52,359	(52,359)	11,270
Other intangible assets	100,179	69,909	(69,909)	100,179
Investments in associates	-	-	1,235,738	1,235,738
Other identifiable assets	422,919	1,529,060	(1,529,060)	422,919
Total assets	912,525	1,912,957	(677,219)	2,148,264
Total debt	-	315,590	(315,590)	-
Headcount <sup>1)</sup>	1,670	14,360	(14,360)	1,670

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

There are no inter-segment transactions, other than charges for corporate 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:

	EUROPE	UNITED STATES OF AMERICA	JAPAN	SOUTH KOREA	TAIWAN	OTHER ASIA	CORPORATE	CONSOLIDATED
								<b>Year ended December 31, 2015</b>
Net sales	99,326	123,859	179,595	109,919	106,833	50,089	-	669,621
Property, plant and equipment	7,467	37,091	19,776	16,008	139	11,272	41	91,794
								<b>Year ended December 31, 2016</b>
Net sales	113,833	145,119	60,219	46,789	182,808	49,162	-	597,930
Property, plant and equipment	6,957	38,648	25,239	13,210	132	10,627	191	95,004

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

**NOTE 20. INCOME TAXES**

The components of income before income taxes consist of:

	YEAR ENDED DECEMBER 31,	
	2015	2016
The Netherlands	95,760	77,645
Other countries	56,167	60,115
<b>INCOME BEFORE INCOME TAXES</b>	<b>151,927</b>	<b>137,760</b>

The income tax expense consists of:

	YEAR ENDED DECEMBER 31,	
	2015	2016
<b>Current:</b>		
The Netherlands	736	(959)
Other countries	(2,850)	(2,221)
	<b>(2,114)</b>	<b>(3,180)</b>
<b>Deferred:</b>		
The Netherlands	5,000	-
Other countries	2,464	891
<b>INCOME TAX (EXPENSE) BENEFIT</b>	<b>5,350</b>	<b>(2,289)</b>

The provisions for income taxes as shown in the Consolidated Statements of Profit or Loss differ from the amounts computed by applying the Dutch statutory income tax rate to earnings before taxes. A reconciliation of the provisions for income taxes and the amounts that would be computed using the Dutch statutory income tax rate is set forth as follows:

	2015		2016	
<b>EARNINGS BEFORE INCOME TAXES FROM CONTINUING OPERATIONS</b>	<b>151,927</b>	<b>100.0%</b>	<b>137,760</b>	<b>100.0%</b>
Income tax provision based on Dutch statutory income tax rate	(37,982)	25.0%	(34,440)	25.0%
Non-deductible expenses	(3,027)	2.0%	(3,044)	2.2%
Foreign taxes at a rate other than the Dutch statutory rate	255	(0.2%)	(315)	0.2%
Recognition of net operating losses	6,619	(4.4%)	692	(0.5%)
Utilization of net operating losses, previously not recognized	17,805	(11.7%)	12,192	(8.9%)
Non-taxable income <sup>1)</sup>	5,514	(3.6%)	11,819	(8.6%)
Adjustments in respect of prior years' current taxes	9,470	(6.2%)	1,935	(1.4%)
Other <sup>2)</sup>	6,696	(4.4%)	8,872	(6.4%)
<b>TAX INCOME / (EXPENSE)</b>	<b>5,350</b>	<b>(3.5%)</b>	<b>(2,289)</b>	<b>1.7%</b>

<sup>1</sup> Non-taxable income mainly consists of revenues deriving from the share in income of investments and associates which are exempted under the Dutch participation exemption.

<sup>2</sup> Other mainly consists of tax credits, withholding taxes, changes in (enacted) tax laws and revaluation of certain assets.

Included in Other for 2016 is €3,612 regarding the Company's manufacturing operations in Singapore and other countries where income covering certain products is subject to concessional tax rates under tax incentive schemes granted by the local tax authority. The majority of these tax incentive schemes have terms ending by July 1, 2018.

On June 8, 2009, the Singapore Economic Development Board (EDB) granted a Pioneer Certificate to ASM Front-end Manufacturing Singapore Pte Ltd (FEMS), a principal subsidiary of the Group, to the effect that profits arising from certain manufacturing activities by FEMS of Front-end equipment will in principle be exempted from tax for a period of 10 years effective from July 1, 2008, subject to fulfillment of certain criteria during the period.

In Korea, a High Technology Tax Exemption has been granted to the effect that profits arising from certain equipment sales will in principle be partly exempted from tax in the period ending by 2016, subject to fulfillment of certain criteria during the period.

Since 2011, the Dutch statutory tax rate is 25%. Taxation for other jurisdictions is calculated at the rates prevailing in the relevant jurisdictions. The Company's deferred tax assets and liabilities have been determined in accordance with these statutory income tax rates.

Deferred income taxes consist of the following:

	JANUARY 1, 2015	CONSOLIDATED STATEMENT OF PROFIT OR LOSS	EQUITY	EXCHANGE DIFFERENCES	DECEMBER 31, 2015
<b>Deferred tax assets:</b>					
Reserves and allowances	2,109	(502)	(4)	308	1,911
Depreciation	627	1,630	-	96	2,353
Recognition net operating losses	-	6,619	-	(74)	6,545
Other	481	230	-	43	754
<b>DEFERRED TAX ASSETS</b>	<b>3,217</b>	<b>7,977</b>	<b>(4)</b>	<b>373</b>	<b>11,563</b>
<b>Deferred tax liabilities:</b>					
Capitalized development expenses	(9,809)	(607)	-	(866)	(11,282)
Other	(143)	93	-	-	(50)
<b>DEFERRED TAX LIABILITIES</b>	<b>(9,952)</b>	<b>(514)</b>	<b>-</b>	<b>(866)</b>	<b>(11,332)</b>
<b>NET DEFERRED INCOME TAXES</b>	<b>(6,735)</b>	<b>7,463</b>	<b>(4)</b>	<b>(493)</b>	<b>231</b>

	JANUARY 1, 2016	CONSOLIDATED STATEMENT OF PROFIT OR LOSS	EQUITY	EXCHANGE DIFFERENCES	DECEMBER 31, 2016
<b>Deferred tax assets:</b>					
Reserves and allowances	1,911	95	-	128	2,134
Depreciation	2,353	386	-	117	2,856
Recognition net operating losses	6,545	692	-	20	7,257
Other	754	925	-	(7)	1,672
<b>DEFERRED TAX ASSETS</b>	<b>11,563</b>	<b>2,098</b>	<b>-</b>	<b>258</b>	<b>13,919</b>
<b>Deferred tax liabilities:</b>					
Capitalized development expenses	(11,282)	(1,207)	-	(581)	(13,070)
Other	(50)	-	-	2	(48)
<b>DEFERRED TAX LIABILITIES</b>	<b>(11,332)</b>	<b>(1,207)</b>	<b>-</b>	<b>(579)</b>	<b>(13,118)</b>
<b>NET DEFERRED INCOME TAXES</b>	<b>231</b>	<b>891</b>	<b>-</b>	<b>(321)</b>	<b>801</b>

Based on tax filings, ASMI and its individual subsidiaries have net operating losses available at December 31, 2016 of €129,045 to reduce future income taxes, mainly in Europe. The Company believes that realization of its net deferred tax assets is dependent on the ability of the Company to generate taxable income in the future. Given the volatile nature of the semiconductor equipment industry, past experience, and the tax jurisdictions where the Company has net operating losses, the Company believes that there is currently sufficient evidence to recognize a deferred tax asset in the amount of €13,919. Deferred tax assets for temporary differences are recognized in Japan and South Korea.

The amounts and expiration dates of the net operating losses for tax purposes are as follows:

EXPIRATION YEAR	TOTAL OF NET OPERATING LOSSES FOR TAX PURPOSES	NET OPERATING LOSSES FOR TAX PURPOSES THE NETHERLANDS	NET OPERATING LOSSES FOR TAX PURPOSES OTHER COUNTRIES
2019	17,499	17,499	-
2020	202	-	202
2021	58,478	58,478	-
2022	26,815	26,815	-
2023	16	-	16
2025	9,328	-	9,328
2029	8,189	-	8,189
2030	4,944	-	4,944
2035	3,574	-	3,574
<b>TOTAL</b>	<b>129,045</b>	<b>102,792</b>	<b>26,253</b>

The Company has not provided for deferred foreign withholding taxes, if any, on undistributed earnings of its foreign subsidiaries. At December 31, 2016, the undistributed earnings of subsidiaries, subject to withholding taxes, were approximately €13,155. These earnings could become subject to foreign withholding taxes if they were remitted as dividends and/or if the Company should sell its interest in the subsidiaries.

A summary of open tax years by major jurisdiction is as follows:

JURISDICTION	
Japan	2011-2016
The Netherlands	2013-2016
Singapore	2013-2016
United States of America	1997-2016
South Korea	2011-2016

The calculation of the Company's tax liabilities involves dealing with uncertainties in the application of complex tax laws. The Company's estimate for the potential outcome of any unrecognized tax benefits is highly judgmental. Settlement of unrecognized tax benefits in a manner inconsistent with the Company's expectations could have a material impact on the Company's financial position, net earnings and cash flows. The Company is subject to tax audits in its major tax jurisdictions, and local tax authorities may challenge the positions taken by the Company.

**NOTE 21. SELECTED OPERATING EXPENSES AND ADDITIONAL INFORMATION**

Personnel expenses for employees were as follows:

	DECEMBER 31,	
	2015	2016
Wages and salaries	115,622	119,438
Social security	14,857	14,239
Pension expenses	5,451	5,544
Share-based payment expenses	8,213	8,387
Restructuring expenses	1,710	3,132
<b>TOTAL</b>	<b>145,853</b>	<b>150,740</b>

The number of employees, exclusive of temporary workers, by geographical area at year-end was as follows:

GEOGRAPHICAL LOCATION	DECEMBER 31,	
	2015	2016
Europe:		
- the Netherlands	146	141
- EMEA	168	162
United States	516	535
Japan	209	212
South Korea	148	157
Singapore	318	340
Asia, other	92	123
<b>TOTAL</b>	<b>1,597</b>	<b>1,670</b>

The number of employees, exclusive of temporary workers, by function at year-end was as follows:

PER FUNCTION	DECEMBER 31,	
	2015	2016
Research and development	420	447
Manufacturing	283	296
Marketing and sales	253	252
Customer service	476	506
Finance and administration	165	169
<b>TOTAL</b>	<b>1,597</b>	<b>1,670</b>

**NOTE 22. RESEARCH AND DEVELOPMENT**

Research and development consists of the following:

	YEAR ENDED DECEMBER 31,	
	2015	2016
Research and development expenses, net of capitalized development expenses	62,772	75,052
Amortization of capitalized development expenses	11,794	13,345
Research and development grants and credits	(985)	(843)
<b>TOTAL RESEARCH AND DEVELOPMENT EXPENSES</b>	<b>73,581</b>	<b>87,554</b>
Impairment of research and development related assets	16,154	3,575
<b>TOTAL</b>	<b>89,735</b>	<b>91,129</b>

The impairment of capitalized development expenses in 2015 are primarily related to development of new hardware for which the customers demand has shifted out in time, and purchased technology which became obsolete. Of the impairment of capitalized development expenses an amount of €13.4 million related to the 450mm development. The impairment expenses in 2016 related to a customer specific project.

The Company's operations in the Netherlands, Belgium and the United States receive research and development grants and credits from various sources.

**NOTE 23. EARNINGS PER SHARE**

Basic net earnings per common share is calculated by dividing net income 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 income 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 exercises (or issuances) would have a dilutive effect. The calculation of diluted net income 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 income per share attributable to common shareholders is based on the following data:

	DECEMBER 31,	
	2015	2016
Net earnings used for purposes of calculating net income per common share		
<b>NET EARNINGS FROM OPERATIONS</b>	<b>157,277</b>	<b>135,471</b>
Basic weighted average number of shares outstanding during the year (thousands)	62,114	60,616
Effect of dilutive potential common shares from stock options and restricted shares	814	637
<b>DILUTIVE WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING</b>	<b>62,928</b>	<b>61,253</b>
Basic net earnings per share:		
from operations	2.53	2.23
Diluted net earnings per share:		
from operations	2.50	2.21

## NOTE 24. BOARD REMUNERATION

The remuneration of members of the Management Board has been determined by the Supervisory Board.

During 2016, the Company considered the members of the Management Board and the Supervisory Board to be the key management personnel. Total remuneration for key management personnel in 2016 amounts to €3,316 (2015: €3,619).

The following table sets information concerning all remuneration from the Company (including its subsidiaries) for services in all capacities to all current members of the Management Board of the Company:

	BASE COMPENSATION	BONUSES	PENSIONS	SHARE-BASED PAYMENT EXPENSES <sup>1)</sup>	FRINGE BENEFITS	TOTAL
<b>Management Board:</b>						
<b>C.D. del Prado</b>						
<b>2016</b>	<b>607</b>	<b>398</b>	<b>97</b>	<b>750</b>	<b>63</b>	<b>1,915</b>
2015	572	631	81	697	67	2,048
<b>P.A.M. van Bommel</b>						
<b>2016</b>	<b>408</b>	<b>204</b>	<b>68</b>	<b>435</b>	<b>40</b>	<b>1,155</b>
2015	397	340	66	446	45	1,294

<sup>1)</sup> These amounts represent the vesting expenses related to the financial year.

### SHORT-TERM INCENTIVE (CASH BONUS)

Each year, a short-term incentive can be earned, based on achieving specific challenging targets. These targets are based for 75% on company financial targets and for 25% on non-financial targets. The on-target bonus percentage for the CEO is 100% of base salary, with a maximum pay-out of 150% of base salary. The on-target bonus percentage for the other members of the Management Board is 75% of base salary, with a maximum pay-out of 125% of base salary. For the year 2016, the Management Board did not meet the company financial targets and met the non-financial targets.

### LONG-TERM INCENTIVE (STOCK OPTIONS/PERFORMANCE SHARES)

The members of the Management Board are eligible to receive stock options and performance shares under the ASM International NV 2014 Long-Term Incentive Plan for members of the Management Board ("plan") in order to focus on the long-term interest of the company. Stock options vest after three years subject to continued employment and expire after seven years. Performance shares vest after three years subject to meeting certain conditions. The members of the Management Board are required to hold the vested performance shares for an additional two years; however, they are allowed to sell a part of the unconditional shares after three years for tax purposes. The next grant of stock options and restricted shares will take place in April 2017.

### PENSION ARRANGEMENT

As of 2015, the members of the Management Board no longer participate in the industry wide pension fund. They are offered participation in a defined contribution plan for their salary up to €101,519. For their salary above €101,519, the members of the Management Board are compensated with an amount equal to the employer pension contribution. The members of the Management Board have the option to participate in a net pension plan offered by the company or to have the compensation paid out in cash.

### FRINGE BENEFITS

Fringe benefits cover compensation related to the use of a (company) car, a representation and expense allowance, social security premium and premium for health and disability insurance.

## OUTSTANDING OPTIONS

The following table shows the outstanding options to purchase ASM International NV common shares held by current members of the Management Board, and changes in such holdings during 2016:

	YEAR OF GRANT	OUTSTANDING JANUARY 1, 2016	GRANTED IN 2016	EXERCISED IN 2016 <sup>4)</sup>	OUTSTANDING DECEMBER 31, 2016	EXERCISE PRICE	END DATE
C.D. del Prado <sup>1)</sup>	2008	147,416	–	(147,416)	–	€10.78	Mar 1, 2016
C.D. del Prado <sup>2)</sup>	2009	58,967	–	–	58,967	€12.79	Nov 30, 2017
C.D. del Prado <sup>3)</sup>	2011	88,450	–	–	88,450	€18.93	Dec 31, 2018
C.D. del Prado <sup>3)</sup>	2012	70,760	–	–	70,760	€22.93	Dec 31, 2019
C.D. del Prado <sup>3)</sup>	2013	75,000	–	–	75,000	€23.73	Dec 31, 2020
C.D. del Prado <sup>3)</sup>	2015	28,050	–	–	28,050	€44.24	Apr 24, 2022
C.D. del Prado <sup>3)</sup>	2016	–	41,589	–	41,589	€37.09	Apr 22, 2023
P.A.M. van Bommel <sup>3)</sup>	2010	29,483	–	–	29,483	€13.80	July 1, 2017
P.A.M. van Bommel <sup>3)</sup>	2011	62,504	–	–	62,504	€18.93	Dec 31, 2018
P.A.M. van Bommel <sup>3)</sup>	2012	47,173	–	–	47,173	€22.93	Dec 31, 2019
P.A.M. van Bommel <sup>3)</sup>	2013	53,000	–	–	53,000	€23.73	Dec 31, 2020
P.A.M. van Bommel <sup>3)</sup>	2015	14,609	–	–	14,609	€44.24	Apr 24, 2022
P.A.M. van Bommel <sup>3)</sup>	2016	–	20,966	–	20,966	€37.09	Apr 22, 2023
<b>TOTAL</b>		<b>675,412</b>	<b>62,555</b>	<b>(147,416)</b>	<b>590,551</b>		

<sup>1)</sup> The vesting of these options was conditional. A percentage, not exceeding 150%, of the options which have been granted conditionally became unconditional after three years, based on the total return of the Company's shares for the three years after the options are granted compared to the average total return of the shares of a relevant number of companies which are similar to the Company during the same three-year period. The options are granted for a term of eight years.

<sup>2)</sup> Options are granted for a term of eight years, and become exercisable after a three year vesting period.

<sup>3)</sup> Options are granted for a term of seven years and become exercisable after a three year vesting period.

<sup>4)</sup> Options were exercised on February 26, 2016 at a share price of €37.64.

The fair value of options granted to current members of the Management Board was €12.64 in 2016.

In 2016, 147,416 options to purchase ASM International NV common shares were exercised and 147,416 treasury shares were sold for the exercise of these options.

## OUTSTANDING PERFORMANCE SHARES

The following table shows the outstanding performance shares granted to members of the Management Board in 2016 and held by members of the Management Board per December 31, 2016:

	GRANT DATE	STATUS	NUMBER OF SHARES AT GRANT DATE	FAIR VALUE AT GRANT DATE	VESTING DATE
C.D. del Prado	April 24, 2015	Conditional	8,544	€43.21	April 24, 2018
P.A.M. van Bommel	April 24, 2015	Conditional	4,450	€43.21	April 24, 2018
C.D. del Prado	April 22, 2016	Conditional	11,070	€34.67	April 22, 2019
P.A.M. van Bommel	April 22, 2016	Conditional	5,581	€34.67	April 22, 2019

The shares will become unconditional after three years, depending on the achievement of predetermined targets. The financial targets to be achieved are measured over a three-year performance period and relate to a sales growth compared to market and an average EBIT percentage performance measure. The Management Board members will hold the unconditional shares for at least an additional two years; however, they are allowed to sell a part of the unconditional shares after three years for tax purposes.



The following table sets forth information concerning all remuneration (base compensation, no bonuses or pensions were paid) from the Company (including its subsidiaries) for services in all capacities to all current and former members of the Supervisory Board of the Company:

	YEAR ENDED DECEMBER 31,	
	2015	2016
<b>Supervisory Board:</b>		
J.C. Lobbezoo	70	70
J.M.R. Danneels <sup>1)</sup>	50	20
H.W. Kreutzer	53	53
M.C.J. van Pernis	53	53
U.H.R. Schumacher	50	50
<b>TOTAL</b>	<b>275</b>	<b>245</b>

<sup>1)</sup> Period January 1 to May 25, 2016

The remuneration of members of the Supervisory Board has been determined by the General Meeting of Shareholders.

No stock options or performance shares have been granted to members of the Supervisory Board.

## NOTE 25. SHARE OWNERSHIP AND RELATED PARTY TRANSACTIONS

The ownership or controlling interest of outstanding common shares of ASM International NV by members of the Management Board and Supervisory Board or members of their immediate family are as follows:

	DECEMBER 31, 2015		DECEMBER 31, 2016	
	SHARES OWNED	PERCENTAGE OF COMMON SHARES OUTSTANDING	SHARES OWNED	PERCENTAGE OF COMMON SHARES OUTSTANDING
A.H. del Prado	9,204,284	14.92%	-	-
C.D. del Prado (member of the Management Board)	132,945	0.22%	896,437	1.50%
Stichting Administratiekantoor ASMI	2,142,039	3.47%	-	-

Stichting Administratiekantoor ASMI is a trust that was controlled by Mr A.H. del Prado. The number of shares owned by Stichting Administratiekantoor ASMI included 713,000 common shares which were beneficially owned by Mr C.D. del Prado.

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, if any, are conducted on an arm's length basis with terms comparable to transactions with third parties.

## NOTE 26. PRINCIPLE AUDITOR'S FEES AND SERVICES

KPMG Accountants NV has served as our external auditor for the years 2016 and 2015. The table sets out the aggregate fees for professional audit services and other services rendered by the external auditors and its member firms and/or affiliates in 2015 and 2016. The fees mentioned in the table for the audit of the financial statements 2016 (2015) relate to the total fees for the audit of the financial statements 2016 (2015), irrespective of whether the activities have been performed during the financial year 2016 (2015). The following fees were charged by KPMG Accountants N.V. to the company, its subsidiaries and other consolidated companies, as referred to in Section 2:382a(1) and (2) of the Netherlands Civil Code.

	2015			2016		
	KPMG ACCOUNTANTS NV	KPMG NETWORK	KPMG TOTAL	KPMG ACCOUNTANTS NV	KPMG NETWORK	KPMG TOTAL
Audit fees	345	95	440	370	95	465
Audit-related fees	-	-	-	30	-	30
Tax fees	-	-	-	-	-	-
Other fees	-	-	-	-	-	-
<b>TOTAL</b>	<b>345</b>	<b>95</b>	<b>440</b>	<b>400</b>	<b>95</b>	<b>495</b>

### AUDIT COMMITTEE PRE-APPROVAL POLICIES

The Audit Committee has determined that the provision of services by KPMG described in the preceding paragraphs is compatible with maintaining KPMG's independence. All audit and permitted non-audit services provided by KPMG during 2016 were pre-approved by the Audit Committee.

The Audit Committee has adopted the following policies and procedures for pre-approval of all audit and permitted non-audit services provided by our external auditor:

#### Audit services

Management submits to the Audit Committee for pre-approval the scope and estimated fees for specific services directly related to performing the independent audit of our Consolidated financial statements for the current year.

#### Audit-related services

The Audit Committee may pre-approve expenditures up to a specified amount for services included in identified service categories that are related extensions of audit services and are logically performed by the auditors. Additional services exceeding the specified pre-approved limits require specific Audit Committee approval.

#### Tax services

The Audit Committee may pre-approve expenditures up to a specified amount per engagement and in total for identified services related to tax matters. Additional services exceeding the specified pre-approved limits, or involving service types not included in the pre-approved list, require specific Audit Committee approval.

#### Other services

In the case of specified services for which utilizing our external auditor creates efficiencies, minimizes disruption, or preserves confidentiality, or for which management has determined that our external auditor possesses unique or superior qualifications to provide such services, the Audit Committee may pre-approve expenditures up to a specified amount per engagement and in total. Additional services exceeding the specified pre-approved limits, or involving service types not included in the pre-approved list, require specific Audit Committee approval.



## NOTE 27. SUBSEQUENT EVENTS

Subsequent events were evaluated up to March 9, 2017, which is the issuance date of this Statutory annual report 2016. There are no subsequent events to report.

### SIGNING

Almere

March 9, 2017

### SUPERVISORY BOARD

J.C. Lobbezoo

H.W. Kreutzer

M.C.J. van Pernis

U.H.R. Schumacher

### MANAGEMENT BOARD

C.D. del Prado

P.A.M. van Bommel

# COMPANY BALANCE SHEET

(before proposed appropriation of net earnings for the year)

(EUR thousand except per share data)	NOTES	DECEMBER 31,	
		2015	2016
<b>Non-current assets</b>			
Property, plant and equipment, net	5	41	191
Goodwill, net	4	11,270	11,270
Other intangible assets, net	3	8,628	13,584
Investments in subsidiaries	2	1,684,752	1,823,526
Loans to subsidiaries	2	48,958	50,565
Other non-current assets		–	809
Deferred tax assets	6	5,000	5,000
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,758,649</b>	<b>1,904,945</b>
<b>Current assets</b>			
Accounts receivable, net		–	–
Amounts due from subsidiaries		6,692	6,196
Other current assets		297	755
Cash and cash equivalents		189,234	111,984
<b>TOTAL CURRENT ASSETS</b>		<b>196,223</b>	<b>118,935</b>
<b>TOTAL ASSETS</b>		<b>1,954,872</b>	<b>2,023,880</b>
<b>Equity</b>			
Common shares		2,553	2,553
Capital in excess of par value		221,868	225,837
Treasury shares		(84,000)	(151,477)
<b>Legal reserves</b>			
Translation reserve		192,081	231,468
Other legal reserves		1,228,688	1,291,444
Accumulated net earnings		229,912	280,560
Net earnings current year		157,277	135,471
<b>TOTAL EQUITY</b>	7	<b>1,948,379</b>	<b>2,015,856</b>
<b>Current liabilities</b>			
Amounts due to subsidiaries		654	2,104
Accrued expenses and other payables	8	5,665	5,743
Taxes and social securities		174	177
<b>TOTAL CURRENT LIABILITIES</b>		<b>6,493</b>	<b>8,024</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>1,954,872</b>	<b>2,023,880</b>



# COMPANY STATEMENT OF PROFIT OR LOSS

(EUR thousand)	YEAR ENDED DECEMBER 31,	
	2015	2016
<b>Operating expenses:</b>		
Selling, general and administrative	(24,658)	(24,911)
Research and development	(1,706)	(1,056)
<b>TOTAL OPERATING EXPENSES</b>	<b>(26,364)</b>	<b>(25,967)</b>
<b>RESULT FROM OPERATIONS</b>	<b>(26,364)</b>	<b>(25,967)</b>
Finance income	290	2,894
Finance expense	(968)	(958)
Foreign currency exchange gain, net	21,776	2,294
Intercompany charging operating expenses	24,331	23,255
Share in income of investments in associates	(900)	—
<b>RESULT BEFORE INCOME TAXES</b>	<b>18,165</b>	<b>1,518</b>
Income taxes	4,292	(225)
<b>NET EARNINGS FROM HOLDING ACTIVITIES</b>	<b>22,457</b>	<b>1,293</b>
Net earnings from subsidiaries	134,820	134,178
<b>TOTAL NET EARNINGS</b>	<b>157,277</b>	<b>135,471</b>

# NOTES TO THE COMPANY FINANCIAL STATEMENTS

## NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

ASM International NV ('ASMI' or 'the Company') is a Dutch public liability company. Statutory seat: Versterkerstraat 8, 1322 AP Almere, the Netherlands.

The description of our activities and our structure, as included in the Notes to the Consolidated financial statements, also apply to the Company financial statements.

The accompanying Company financial statements are stated in thousands of euro unless otherwise indicated.

### ACCOUNTING POLICIES APPLIED

The financial statements of the Company included in this section are prepared in accordance with Part 9 of Book 2 of the Dutch Civil Code. Section 362 (8), Book 2, Dutch Civil Code, allows companies that apply IFRS as endorsed by the European Union in their Consolidated financial statements to use the same measurement principles in their Company financial statements. The Company has prepared these Company financial statements using this provision.

### Participating interests in group companies

Investments in subsidiaries are stated at net asset value as we effectively exercise influence of significance over the operational and financial activities of these investments. For a list of all significant subsidiaries see Note 2 of the Consolidated financial statements.

### Correction of errors

During 2016, the Company discovered that personnel related costs had been erroneously reported in its statements. As a consequence, operating expenses and intercompany charging operating expenses had been overstated. The errors have been corrected by restating each of the affected financial statement line items for prior periods. The following tables summarize the impacts:

### Company Balance Sheet

	DECEMBER 31, 2015		
	AS PREVIOUSLY REPORTED	ADJUSTMENTS	AS RESTATED
<b>Investments in subsidiaries</b>	<b>1,695,681</b>	<b>(10,929)</b>	<b>1,684,752</b>
Others	270,120	-	270,120
<b>TOTAL ASSETS</b>	<b>1,965,801</b>	<b>(10,929)</b>	<b>1,954,872</b>
<b>EQUITY</b>	<b>1,948,379</b>	<b>-</b>	<b>1,948,379</b>
Accrued expenses	16,594	(10,929)	5,665
Others	828	-	828
<b>TOTAL EQUITY &amp; LIABILITIES</b>	<b>1,965,801</b>	<b>(10,929)</b>	<b>1,954,872</b>

## Company Statement of Profit or Loss

	YEAR ENDED DECEMBER 31, 2015		
	AS PREVIOUSLY REPORTED	ADJUSTMENTS	AS RESTATED
Selling, general and administrative	(35,587)	10,929	(24,658)
Intercompany charging operating expenses	35,576	(11,245)	24,331
Others	22,784	0	22,784
<b>NET EARNING FROM HOLDING ACTIVITIES</b>	<b>22,773</b>	<b>(316)</b>	<b>22,457</b>
Net earnings from subsidiaries	134,504	316	134,820
<b>TOTAL NET EARNINGS</b>	<b>157,277</b>	<b>0</b>	<b>157,277</b>

## NOTE 2. INVESTMENTS AND LOAN ADVANCES DUE FROM SUBSIDIARIES

	INVESTMENTS IN SUBSIDIARIES	LOAN ADVANCES SUBSIDIARIES	TOTAL
<b>BALANCE JANUARY 1, 2015 (AS REPORTED PREVIOUSLY)</b>	<b>1,467,921</b>	<b>45,934</b>	<b>1,513,855</b>
Correction of an error related to previous years	(11,245)	-	(11,245)
<b>BALANCE JANUARY 1, 2015 (RESTATED)</b>	<b>1,456,676</b>	<b>45,934</b>	<b>1,502,610</b>
Net result of subsidiaries	134,820	-	134,820
Other comprehensive income investments	567	-	567
Dividend received	(94,322)	-	(94,322)
Capitalizations	48,556	-	48,556
Repayments of loans	-	(2,223)	(2,223)
Dilution	5,535	-	5,535
Foreign currency translation effect	132,920	5,247	138,167
<b>BALANCE DECEMBER 31, 2015</b>	<b>1,684,752</b>	<b>48,958</b>	<b>1,733,710</b>
Net result of subsidiaries	134,178	-	134,178
Other comprehensive income investments	(1,344)	-	(1,344)
Dividend received	(45,982)	-	(45,982)
Capitalizations	3,400	-	3,400
Dilution	9,336	-	9,336
Foreign currency translation effect	39,186	1,607	40,793
<b>BALANCE DECEMBER 31, 2016</b>	<b>1,823,526</b>	<b>50,565</b>	<b>1,874,091</b>

The interest on the loan to subsidiaries is based on the Bank of America's prime rate with a rise of two percent points. The repayment schedule of the loan is as follows: 24 annual installments of USD2 million, starting December 31, 2018, followed by a final installment of USD5.3 million on December 31, 2043.

ASMI's share in the negative equity of an equity investment as per December 31, 2016 amounts to €(1,353). The investment is valued at nil since there are no liabilities for ASMI.

**NOTE 3. OTHER INTANGIBLE ASSETS**

The changes in the carrying amount of other intangible assets are as follows:

	SOFTWARE	PURCHASED TECHNOLOGY AND OTHER INTANGIBLE ASSETS	TOTAL
<b>At cost:</b>			
<b>BALANCE JANUARY 1, 2015</b>	<b>14,054</b>	<b>3,097</b>	<b>17,151</b>
Additions	3,904	3,300	7,204
<b>BALANCE DECEMBER 31, 2015</b>	<b>17,958</b>	<b>6,397</b>	<b>24,355</b>
Additions	6,603	–	6,603
<b>BALANCE DECEMBER 31, 2016</b>	<b>24,561</b>	<b>6,397</b>	<b>30,958</b>
<b>Accumulated amortization:</b>			
<b>BALANCE JANUARY 1, 2015</b>	<b>12,549</b>	<b>2,000</b>	<b>14,549</b>
Amortization for the year	249	929	1,178
<b>BALANCE DECEMBER 31, 2015</b>	<b>12,798</b>	<b>2,929</b>	<b>15,727</b>
Amortization for the year	443	1,204	1,647
<b>BALANCE DECEMBER 31, 2016</b>	<b>13,241</b>	<b>4,133</b>	<b>17,374</b>
<b>Other intangible assets net:</b>			
<b>DECEMBER 31, 2015</b>	<b>5,160</b>	<b>3,468</b>	<b>8,628</b>
<b>DECEMBER 31, 2016</b>	<b>11,320</b>	<b>2,264</b>	<b>13,584</b>

Other intangible assets are amortized over their useful lives of three to seven years. Estimated amortization expenses relating to other intangible assets are as follows:

	SOFTWARE	PURCHASED TECHNOLOGY AND OTHER INTANGIBLE ASSETS	TOTAL
2017	902	669	1,571
2018	3,791	660	4,451
2019	3,596	660	4,256
2020	3,031	275	3,306
2021	–	–	–
Years thereafter	–	–	–
<b>TOTAL</b>	<b>11,320</b>	<b>2,264</b>	<b>13,584</b>

**NOTE 4. GOODWILL**

The carrying amount of the goodwill is related to the acquisitions operations in the following business units:

	DECEMBER 31,	
	2015	2016
Thermal products business unit	2,611	2,611
Plasma products business unit	8,659	8,659
<b>TOTAL</b>	<b>11,270</b>	<b>11,270</b>



**NOTE 5. PROPERTY, PLANT AND EQUIPMENT**

The changes in the amount of property, plant and equipment are as follows:

	LAND, BUILDINGS AND LEASEHOLD IMPROVEMENTS	FURNITURE AND FIXTURES	TOTAL
<b>At cost:</b>			
<b>BALANCE JANUARY 1, 2015</b>	<b>47</b>	<b>246</b>	<b>293</b>
Additions	-	30	30
<b>BALANCE DECEMBER 31, 2015</b>	<b>47</b>	<b>276</b>	<b>323</b>
Disposals	-	-	-
Additions	-	176	176
<b>BALANCE DECEMBER 31, 2016</b>	<b>47</b>	<b>452</b>	<b>499</b>
<b>Accumulated depreciation:</b>			
<b>BALANCE JANUARY 1, 2015</b>	<b>47</b>	<b>223</b>	<b>270</b>
Depreciation for the year	-	12	12
<b>BALANCE DECEMBER 31, 2015</b>	<b>47</b>	<b>235</b>	<b>282</b>
Disposal	-	-	-
Depreciation for the year	-	26	26
<b>BALANCE DECEMBER 31, 2016</b>	<b>47</b>	<b>261</b>	<b>308</b>
<b>Property, plant and equipment, net:</b>			
<b>DECEMBER 31, 2015</b>	<b>-</b>	<b>41</b>	<b>41</b>
<b>DECEMBER 31, 2016</b>	<b>-</b>	<b>191</b>	<b>191</b>
<b>USEFUL LIVES IN YEARS:</b>			
Land, buildings and leasehold improvements			10-25
Furniture and fixtures			2-10

**NOTE 6. DEFERRED TAX ASSETS**

Based on tax filings, ASMI has net operating losses available at December 31, 2016 of €129,045 to reduce future income taxes. The Company believes that realization of its net deferred tax assets is dependent on the ability of the Company to generate taxable income in the future. Given the volatile nature of the semiconductor equipment industry and past experience, the Company believes that there is currently sufficient evidence to recognize a deferred tax asset in the amount of €5,000.

**NOTE 7. EQUITY**

The changes in equity are as follows:

(EUR thousand except for share data)	COMMON SHARES	CAPITAL IN EXCESS OF PAR VALUE	TREASURY SHARES	ACCUMULATED NET EARNINGS	NET EARNINGS CURRENT YEAR	LEGAL RESERVES		TOTAL EQUITY
						TRANSLATION RESERVE	OTHER LEGAL RESERVES	
<b>BALANCE AS OF JANUARY 1, 2015</b>	<b>2,553</b>	<b>216,322</b>	<b>(27,733)</b>	<b>246,792</b>	<b>141,317</b>	<b>54,770</b>	<b>1,109,000</b>	<b>1,743,021</b>
Appropriation of net earnings	-	-	-	141,317	(141,317)	-	-	-
Components of comprehensive income								
Net earnings	-	-	-	-	157,277	-	-	<b>157,277</b>
Other comprehensive income	-	-	-	-	-	137,311	-	<b>137,311</b>
<b>TOTAL COMPREHENSIVE INCOME (LOSS)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>157,277</b>	<b>137,311</b>	<b>-</b>	<b>294,588</b>
Compensation expense stock options	-	8,213	-	-	-	-	-	<b>8,213</b>
Exercise stock options out of treasury shares	-	(2,667)	20,985	(6,886)	-	-	-	<b>11,432</b>
Repurchase shares	-	-	(77,252)	-	-	-	-	<b>(77,252)</b>
Dividend paid to common shareholders	-	-	-	(37,158)	-	-	-	<b>(37,158)</b>
Increased retained earnings subsidiaries	-	-	-	(46,893)	-	-	46,893	-
Fair value accounting investments	-	-	-	(61,571)	-	-	61,571	-
Capitalized development expenses subsidiaries	-	-	-	(11,224)	-	-	11,224	-
<b>Other movements in investments in associates:</b>								
Dilution	-	-	-	5,535	-	-	-	<b>5,535</b>
<b>BALANCE AS OF DECEMBER 31, 2015</b>	<b>2,553</b>	<b>221,868</b>	<b>(84,000)</b>	<b>229,912</b>	<b>157,277</b>	<b>192,081</b>	<b>1,228,688</b>	<b>1,948,379</b>
Appropriation of net earnings	-	-	-	157,277	(157,277)	-	-	-
Components of comprehensive income								
Net earnings	-	-	-	-	135,471	-	-	<b>135,471</b>
Other comprehensive income	-	-	-	-	-	39,387	-	<b>39,387</b>
<b>TOTAL COMPREHENSIVE INCOME (LOSS)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>135,471</b>	<b>39,387</b>	<b>-</b>	<b>174,858</b>
Compensation expense stock options	-	8,387	-	-	-	-	-	<b>8,387</b>
Exercise stock options out of treasury shares	-	(2,591)	27,836	(10,536)	-	-	-	<b>14,709</b>
Vesting restricted shares out of treasury shares	-	(1,827)	1,827	-	-	-	-	-
Repurchase shares	-	-	(97,140)	-	-	-	-	<b>(97,140)</b>
Dividend paid to common shareholders	-	-	-	(42,673)	-	-	-	<b>(42,673)</b>
Increased retained earnings subsidiaries	-	-	-	(51,323)	-	-	51,323	-
Fair value accounting investments	-	-	-	2,015	-	-	(2,015)	-
Capitalized development expenses subsidiaries	-	-	-	(13,448)	-	-	13,448	-
<b>Other movements in investments in associates:</b>								
Dilution	-	-	-	9,336	-	-	-	<b>9,336</b>
<b>BALANCE AS OF DECEMBER 31, 2016</b>	<b>2,553</b>	<b>225,837</b>	<b>(151,477)</b>	<b>280,560</b>	<b>135,471</b>	<b>231,468</b>	<b>1,291,444</b>	<b>2,015,856</b>

## COMMON SHARES, PREFERRED AND FINANCING PREFERRED SHARES

The authorized capital of the Company amounts to 110,000,000 common shares of €0.04 par value, 118,000 preferred shares of €40 par value and 8,000 financing preferred shares of €40 par value.

As at December 31, 2016, 63,797,394 ordinary shares with a nominal value of €0.04 each were issued and fully paid up, of which 3,981,551 ordinary shares are held by us in treasury. All shares have one vote per €0.04 par value. Treasury shares held by the Company cannot be voted on.

As at December 31, 2016 no preferred shares are issued.

## TREASURY SHARES

On October 26, 2016, ASMI announced a new €50 million share buyback program to be executed within the 2016-2017 time frame. The program started on December 13, 2016. On December 31, 2016, 12.9% of the program was effectuated.

On October 28, 2015, ASMI announced a share buyback program to purchase up to an amount of €100 million of its own shares within the 2015-2016 time frame. The program started on November 26, 2015, and was completed on November 11, 2016. Under the 2015-2016 share buyback program we repurchased 2,772,729 shares at an average price of €35.98.

On October 29, 2014, ASMI announced a share buyback program to purchase up to an amount of €100 million of its own shares within the 2014-2015 time frame. The program started on November 24, 2014, and was completed on May 20, 2015. Under the 2014-2015 share buyback program we repurchased 2,594,420 shares at an average price of €38.55.

ASMI intends to use part of the shares for commitments under employee share-based compensation schemes.

The share buyback programs were executed by intermediaries through on-exchange purchases or through off-exchange trades. ASMI updates the markets on the progress of the share buyback programs on a weekly basis.

The repurchase programs are part of ASMI's commitment to use excess cash for the benefit of its shareholders.

## OTHER LEGAL RESERVES

Legal reserves include reserves regarding participating interests, capitalized development expenses and the cumulative foreign currency translation effect on translation of foreign operations, and is included in the accumulated other comprehensive income (loss).

The legal reserve for participating interests regarding retained earnings, which amounts to €1,205,518 (2015: €1,156,210), pertains to participating interests that are accounted for according to the equity accounting method. The reserve represents the difference between the participating interest' retained profit and direct changes in equity, as determined on the basis of the Company's accounting policies, and the share thereof that the Company may distribute. As to the latter share, this takes into account any profits that may not be distributable by participating interests that are Dutch limited companies based on the distribution tests to be performed by the management of those companies. The legal reserve is determined on an individual basis.

In accordance with applicable legal provisions, a legal reserve for the carrying amount of €85,926 (2015: €72,478) has been recognized for capitalized development and start-up costs.

Changes in legal reserves in 2015 and 2016 were as follows:

	RESERVE FOR PARTICIPATING INTERESTS, REGARDING RETAINED EARNINGS	RESERVE FOR PARTICIPATING INTERESTS, REGARDING CAPITALIZED DEVELOPMENT EXPENSES	OTHER LEGAL RESERVES
<b>BALANCE AS OF JANUARY 1, 2015</b>	<b>1,047,746</b>	<b>61,254</b>	<b>1,109,000</b>
Retained earnings subsidiaries and investments	46,893	-	46,893
Fair value accounting investments	61,571	-	61,571
Development expenditures	-	11,224	11,224
<b>BALANCE AS OF DECEMBER 31, 2015</b>	<b>1,156,210</b>	<b>72,478</b>	<b>1,228,688</b>
Retained earnings subsidiaries and investments	51,323	-	51,323
Fair value accounting investments	(2,015)	-	(2,015)
Development expenditures	-	13,448	13,448
<b>BALANCE AS OF DECEMBER 31, 2016</b>	<b>1,205,518</b>	<b>85,926</b>	<b>1,291,444</b>

For more detailed information, reference is made to Note 11 to the Consolidated financial statements.

#### EMPLOYEE STOCK PLAN OPTION PLAN AND EMPLOYEE RESTRICTED SHARES PLAN

The Company has adopted various stock option plans and restricted share plans and has entered into related agreements with various employees. For detailed information, reference is made to Note 12 to the Consolidated financial statements.

#### NOTE 8. ACCRUED EXPENSES AND OTHER PAYABLES

Accrued expenses and other payables consist of personnel related items €1,861, financing related items €949 and other €2,933 for 2016 (2015: €1,988, €833 and €2,844 respectively).

#### NOTE 9. SHARE OWNERSHIP OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD

With respect to share ownership of the Management Board and Supervisory Board, reference is made to Note 24 and 25 to the Consolidated financial statements.

#### NOTE 10. PERSONNEL

The average number of employees of ASMI during 2016 was 21.2 (2015: 22.7). Salaries, social security charges and pension expenses amounted to €5,370, €134 and €532, respectively, for 2016 (2015: expenses of €5,589, €77 and €476, respectively). Further information concerning the number of employees can be found in Note 21 of the Consolidated financial statements.

For information on the parent company's defined benefit pension plan, the remuneration of the Corporate Executive Board and the Supervisory Board and the parent company's share-based compensation plans, see Notes 12 and 24, to the Consolidated financial statements.

## NOTE 11. COMMITMENTS AND CONTINGENCIES

At December 31, 2016, operating leases having initial or remaining non-cancelable terms in excess of one year are as follows:

2017	170
2018	159
2019	95
2020	51
<b>TOTAL</b>	<b>475</b>

Lease payments recognized as an expense were €200 for the year ended December 31, 2016 (2015: €208).

With respect to certain Dutch subsidiaries, ASMI has assumed joint and several liability in accordance with Article 403, Part 9 of Book 2 of the Dutch Civil Code.

ASMI forms a fiscal unity (tax group for Corporate Income Tax purposes) together with its Dutch subsidiaries for purposes of Dutch tax laws and is as such jointly and severally liable for the tax debts of the unity. The tax unity consists of ASM International NV and the following subsidiaries:

- › ASM Europe BV (operational company)
- › ASM UK Sales BV (operational company)
- › ASM Germany Sales BV (operational company)
- › ASM Pacific Holding BV (holding company)
- › CVTR Development BV
- › Beheer- en Beleggingsmaatschappij Ingebel BV in liquidatie
- › Hamilcar Investments BV
- › Rembrandt Lease and Finance BV
- › ASM IP Holding BV (operational company)
- › ASM Netherlands Holding BV (holding company)
- › ASM Europe Holding BV(holding company)

## NOTE 12. AUDITOR'S FEES AND SERVICES

For information regarding auditor's fees and services we refer to Note 26 of the Consolidated financial statements.

## NOTE 13. RELATED PARTY TRANSACTIONS

In 2016 corporate services of €19,558 (2015: €19,929) were charged to subsidiaries.

### SIGNING

Almere

March 9, 2017

### SUPERVISORY BOARD

J.C. Lobbezoo  
 H.W. Kreutzer  
 M.C.J. van Pernis  
 U.H.R. Schumacher

### MANAGEMENT BOARD

C.D. del Prado  
 P.A.M. van Bommel

# INDEPENDENT AUDITOR'S REPORT

To: the General Meeting of Shareholders and the Supervisory Board of ASM International N.V.

## REPORT ON THE ACCOMPANYING FINANCIAL STATEMENTS 2016

### OUR OPINION

In our opinion:

- › the accompanying consolidated financial statements give a true and fair view of the financial position of ASM International N.V. as at December 31, 2016, and of its result and its cash flows for 2016 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Netherlands Civil Code;
- › the accompanying company financial statements give a true and fair view of the financial position of ASM International N.V. as at December 31, 2016, and of its result for 2016 in accordance with Part 9 of Book 2 of the Netherlands Civil Code.

### WHAT WE HAVE AUDITED

We have audited the financial statements 2016 of ASM International N.V. (ASMI), based in Almere. The financial statements include the consolidated financial statements and the company financial statements.

The consolidated financial statements comprise:

- › the consolidated statement of financial position as at December 31, 2016;
- › the following consolidated statements for 2016: the statement of profit or loss, the statements of comprehensive income, changes in equity and cash flows; and
- › the notes comprising a summary of the significant accounting policies and other explanatory information.

The company financial statements comprise:

- › the company balance sheet as at December 31, 2016;
- › the company statement of profit or loss for 2016; and
- › the notes comprising a summary of the significant accounting policies and other explanatory information.

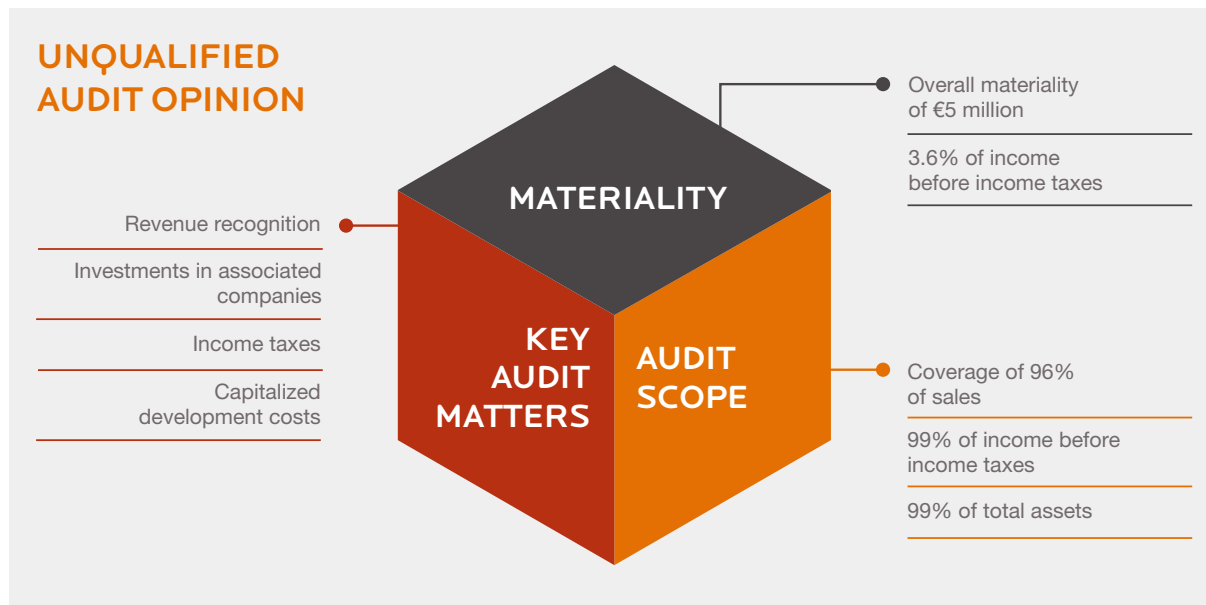
### BASIS FOR OUR OPINION

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the financial statements' section of our report.

We are independent of ASM International N.V. in accordance with the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

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

## AUDIT APPROACH SUMMARY



### Materiality

Based on our professional judgment we determined the materiality for the financial statements as a whole at EUR 5 million (2015: EUR 5 million). The materiality is determined with reference to income before income taxes (3.6%). We consider income before income taxes as the most appropriate benchmark as the company is a profit oriented company and the key users of the financial statements are focused on profit. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for qualitative reasons for the users of the financial statements, such as possible misstatements in the information on remuneration disclosures.

We agreed with the Supervisory Board that misstatements in excess of EUR 250,000, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.



## Scope of the group audit

ASM International N.V. is the parent company of a group of entities. The financial information of this group is included in the financial statements of ASM International N.V.

Considering our ultimate responsibility for the opinion, we are also responsible for directing, supervising and performing the group audit. In this context, we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive factors were the significance and / or the risk profile of the group entities or operations (components). On this basis, we selected components for which an audit of account balance or specified procedures had to be performed. Furthermore, we have determined the nature and extent of the audit procedures that we perform at group level and at the Shared Services Center (SSC).

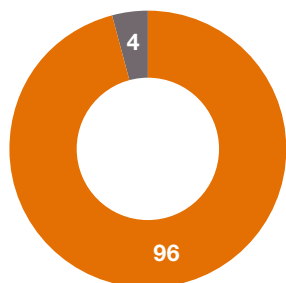
Our group audit mainly focused on significant group entities where account balances are of significant size, have significant risks of material misstatement to the Group associated with them or are considered significant for other reasons.

Our procedures cover the significant operations in Japan, Korea, the Netherlands, Singapore and the United States of America, all mainly through our audit procedures at the SSC, supplemented with local audit procedures for audits of account balances. Furthermore, our procedures cover the (results from) investment in associates, including the work performed by the non-KPMG member firm auditors of ASM Pacific Technology Ltd (ASMPT). We performed limited procedures on the remaining balances, including desktop reviews and audit procedures on specific transactions.

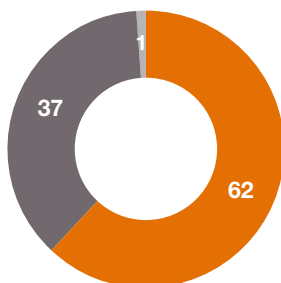
We sent detailed instructions to all component auditors, covering the significant areas that should be covered (which included the relevant risks of material misstatement detailed below) and set out the information required to be reported to the group auditor. We visited Singapore and ASMPT in Hong Kong for site visits and file reviews and held various telephone calls with the auditors of the components, to discuss the group audit, significant risks, audit approach and instructions, as well as the audit findings and observations reported to the group auditor.

By performing the procedures mentioned above at group entities, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the financial statements.

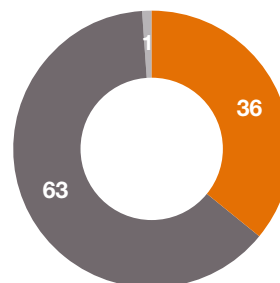
### NET SALES



### INCOME BEFORE INCOME TAXES



### TOTAL ASSETS



Group audit and SSC procedures

Combined group audit and local audit procedures for audits of account balances

Limited procedures





## Our key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our audit of the financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

### REVENUE RECOGNITION

#### Description

Net sales is measured taking into account multiple element arrangements, for example a single sales transaction that combines the delivery of goods and rendering of (installation) services, as contracts with customers typically include separately identifiable components that are recognized based on the relative selling price. Furthermore, net sales is recognized when the risk and rewards of products and services have been transferred to the customer. Due to the multitude and variety of contractual terms, the different pricing elements and the risk of management override of controls, revenue recognition is considered to be complex and involves management judgement as it relates to the allocation of revenue to the various elements in sales contracts.

#### Our response

Our audit procedures included, among other things, assessing the appropriateness of ASMI's revenue recognition accounting policy in line with IFRS. We tested the effectiveness of controls over the recognition of net sales. We also assessed the existence and accuracy of the sales recorded, based, among other things, on inspection of sales contracts, final acceptances, the allocation of revenue to the various elements in the sales contracts, reconciliation of cash received throughout the year for revenue recognized and sales transactions taking place before and after year-end to ensure that net sales was recognized in the correct period. We further assessed the adequacy of the net sales disclosures contained in Note 19, Segment disclosure.

### ACCOUNTING FOR INVESTMENTS IN ASSOCIATED COMPANIES

#### Description

ASM International N.V. holds 39.19% of the shares in ASM Pacific Technology Ltd, an entity listed on the Hong Kong Stock Exchange. The investments in associated companies are accounted for under the equity method and considered for impairment in case of a significant or prolonged decline in value. The accounting for the results of and investment in ASMPT is significant to our audit due to the share in ASMI's net income, the book value of the investment, the fluctuating share price of ASMPT and judgment applied in determining if a decline in value is significant and temporary or prolonged.

As at December 31, 2016, the Investments and associates amounted to EUR 1,236 million whilst the share in income from investments and associates amounted to EUR 40 million.

#### Our response

Our audit procedures included, among other things, instructing the statutory auditor of ASMPT to perform an audit on the relevant financial information of ASMPT for the purpose of the consolidated financial statements of ASMI. During the year we discussed the risk assessment and audit strategy of the statutory auditor, as well as any significant developments. Subsequently we have performed a file review at the statutory auditor's office. We have further evaluated management's considerations of the impairment indicators of the investment in ASMPT, including goodwill and other intangibles. In such consideration, the fair value of the listed shares of ASMPT is used as a starting point to assess whether any significant or prolonged and other than temporary decline in value exists, next to a qualitative assessment. We have, among other things, analyzed the trend in the share price of ASMPT to the Hong Kong Stock Exchange, compared the share price with external data used by analysts expectations, and evaluated the results of ASMPT for potential valuation issues for the investment in ASMPT. We also assessed the adequacy of the company's disclosure in Note 6, Investments in associates.

## ACCOUNTING FOR INCOME TAX POSITIONS

### Description

Income tax positions are significant to our audit because the assessment process is complex, includes a certain level of estimation uncertainty and the amounts involved are material to the financial statements as a whole. ASMI's operations are subject to income taxes in various jurisdictions which results in complexities of transfer pricing and the applicability of various tax legislation. Furthermore, the Company has significant unrecognized net operating losses.

As at December 31, 2016, the deferred tax assets amounted to EUR 14 million and the unrecognized net operating losses amounted to EUR 129 million.

### Our response

We have, among other things, performed audit procedures on the completeness, existence and accuracy of the amounts recognized as current and deferred tax, including the assessment of correspondence with tax authorities and the evaluation of tax exposures. In addition, in respect of deferred tax assets, we reviewed and tested management's assumptions that substantiate the probability that deferred tax assets (un)recognized in the balance sheet will be recovered through taxable income in future years and available tax planning strategies. During our procedures, we challenged, among other things, budgets, forecasts and tax laws. In addition, we assessed the historical accuracy of management's assumptions. In those components determined to be part of jurisdictions with significant tax risk, we involved tax specialists to analyze the tax positions and to challenge the assumptions used to determine the tax positions. We also assessed the adequacy of the company's disclosure in Note 20, Income taxes.

## ACCOUNTING FOR CAPITALIZED DEVELOPMENT COSTS

### Description

Capitalized development costs of EUR 86 million is deemed significant to our audit, given the significance of the position per December 31, 2016, the rapid technological change in the industry, as well as the specific criteria that have to be met for capitalization. This involves management judgment, such as with respect to technical feasibility, intention and ability to complete the intangible asset, ability to use or sell the asset, generation of future economic benefits and the ability to measure the costs reliably. In addition, determining whether there is any indication of impairment of the carrying value of assets, requires management judgment and assumptions which are affected by future market or economic developments.

### Our response

We have performed audit procedures over the accuracy and valuation of amounts recognized. Our audit procedures included, among other things, assessing the recognition criteria for intangible assets, challenging the key assumptions used or estimates made in capitalizing development costs, the accuracy of costs included and the useful economic life attributed to the asset.

In addition, we considered whether any indicators of impairment were present by understanding the business rationale and by challenging management judgements and assumptions on future market or economic developments. We also assessed the adequacy of the company's disclosure in Note 5, Other intangible assets.

## REPORT ON THE OTHER INFORMATION INCLUDED IN THE ANNUAL REPORT

In addition to the financial statements and our auditor's report thereon, the annual report contains other information that consists of:

- › the Management Board's report;
- › the Supervisory Board's report;
- › other information pursuant to Part 9 of Book 2 of the Netherlands Civil Code.

Based on the below procedures performed, we conclude that the other information:

- › is consistent with the financial statements and does not contain material misstatements;
- › contains the information as required by Part 9 of Book 2 of the Netherlands Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Netherlands Civil Code and the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements.

Management is responsible for the preparation of the other information, including the management board's report in accordance with Part 9 of Book 2 of the Netherlands Civil Code and other Information pursuant to Part 9 of Book 2 of the Netherlands Civil Code.

## REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

### ENGAGEMENT

We were engaged by the Annual General Meeting of Shareholders as auditor of ASM International N.V. on May 21, 2014, as of the audit for year 2015 and have operated as statutory auditor since then.

## DESCRIPTION OF THE RESPONSIBILITIES FOR THE FINANCIAL STATEMENTS

### RESPONSIBILITIES OF MANAGEMENT BOARD AND SUPERVISORY BOARD FOR THE FINANCIAL STATEMENTS

The Management Board is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and with Part 9 of Book 2 of the Netherlands Civil Code. Furthermore, the Management Board is responsible for such internal control as the Management Board determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to errors or fraud.

As part of the preparation of the financial statements, the Management Board is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting framework mentioned, the Management Board should prepare the financial statements using the going concern basis of accounting unless the Management Board either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so. The Management Board should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the company's financial reporting process.



## OUR RESPONSIBILITIES FOR THE AUDIT OF FINANCIAL STATEMENTS

Our objective is to plan and perform the audit to obtain sufficient and appropriate audit evidence for our opinion. Our audit has been performed with a high, but not absolute, level of assurance, which means we may not have detected all material errors and fraud during the audit.

Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

For a further description of our responsibilities in respect of an audit of financial statements we refer to the appendix.

Amstelveen, March 9, 2017

KPMG Accountants N.V.  
R.P. Kreukniet RA

## APPENDIX

We have exercised professional judgment and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included e.g.:

- › Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- › Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control;
- › Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Management Board;
- › Concluding on the appropriateness of the Management Board's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company to cease to continue as a going concern;
- › Evaluating the overall presentation, structure and content of the financial statements, including the disclosures; and
- › Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

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

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

From the matters communicated with the Supervisory Board, we determine key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

## OTHER INFORMATION

The additional information below includes a brief summary of the most significant provisions of our Articles of Association.

### INFORMATION ON THE PROVISIONS IN THE ARTICLE OF ASSOCIATION RELATING TO THE APPROPRIATION OF PROFIT

The Articles of Association of ASM International NV (the Company) provides the following with regard to distribution of profit and can be summarized as follows:

- › From the profits, distributions shall in the first place, if possible, be made on the preferred shares equal to the EURIBOR-rate for six months' loans, increased by one and a half, on the paid-up amount which had to be paid on the preferred shares, weighted to the number of days to which this was applicable. If profits are insufficient, the dividend will be paid from the reserves with priority over any dividends. If the reserves are insufficient, the dividend deficit has to be made up in future years;
- › Second, a dividend, if possible, is distributed on financing preferred shares. The dividend is a percentage of the par value, plus share premium paid, on the financing preferred shares. The percentage is determined by the Management Board, subject to approval of the Supervisory Board. The percentage is related to the average effective yield on government loans with a weighted average remaining term of no more than ten years, if necessary increased or decreased by no more than three percent, subject to the then prevailing market conditions. If profits are insufficient, the dividend shall be paid from the reserves. If the reserves are insufficient, the dividend deficit has to be made up in future years;
- › With the approval of the Supervisory Board, the Management Board will determine which part of the profit remaining after adoption of the provisions of the previous paragraphs will be reserved. The profit after reserving will be at the disposal of the General Meeting of Shareholders;
- › The Company may only make distributions to the shareholders and other persons entitled to profit insofar as its equity exceeds the amount of the paid-up and called amounts of the share capital increased with the reserves that must be kept by virtue of law;

Article 33, para 3 of the Articles of Association provides that dividend claims expire after the lapse of five years.

### THE PROPOSED APPROPRIATION OF THE RESULT

It is proposed that net earnings for the year 2016 are carried to the accumulated deficit/net earnings.

### SPECIAL STATUTORY CONTROL RIGHTS

Article 27 of the Articles of Association provides that each common share gives the right to cast one vote, each preferred financing share to cast one thousand votes, and each preferred share to cast one thousand votes.

Article 29 of the Articles of Association provides that meetings of holders of preferred shares or of financing preferred shares shall be convened as often and insofar as a decision of the meeting of holders of preferred shares or financing shares desires this, and furthermore as often as the Management Board and or the Supervisory Board shall decide to hold such a meeting. At the meeting, resolutions will be passed with an absolute majority of the votes. In the event that there is a tie of votes, no resolution will take effect.

The following resolutions and actions can only be taken on a proposal by the Management Board and the Supervisory Board:

- › the amendment of the Articles of the Company; and
- › the dissolution of the Company.

## STICHTING CONTINUÏTEIT ASM INTERNATIONAL

The objective of Stichting Continuïteit ASM International (Stichting) is to serve the interests of the Company. To that objective Stichting may, amongst others, acquire, own and vote on our preferred shares in order to maintain our independence and/or continuity and/or identity.

The members of the board of Stichting are:

- › Dick Bouma, retired Chairman Board Pels Rijcken & Droogleeveer Fortuijn;
- › Rob Ruijter, Chairman Supervisory Board Delta Lloyd;
- › Rinze Veenenga Kingma, President Archeus Consulting BV.

## LIST OF SUBSIDIARIES AND OFFICES

The subsidiaries and offices of the Company are listed on page 176 of the Statutory annual report.

## SUBSEQUENT EVENTS

Subsequent events were evaluated up to March 9, 2017, which is the issuance date of this Statutory annual report 2016. There are no subsequent events to report.

## STATUTORY ANNUAL REPORT

The Statutory annual report, prepared in accordance with International Financial Reporting Standards (IFRS), is available free of charge by writing to our corporate offices, sending an email to [investor.relations@asm.com](mailto:investor.relations@asm.com) or downloading the file through our website.



# LOCATIONS WORLDWIDE

## EUROPE

### THE NETHERLANDS ASM International NV (HEADQUARTERS)

Versterkerstraat 8  
1322 AP Almere  
T: +31 88 100 8810  
F: +31 88 100 8830

### ASM Europe BV

Versterkerstraat 8  
1322 AP Almere  
T: +31 36 540 6711  
F: +31 36 540 6710

### ASM IP Holding BV

Versterkerstraat 8  
1322 AP Almere  
T: +31 88 100 8810  
F: +31 88 100 8830

## BELGIUM

### ASM Belgium NV

Kapeldreef 75  
3001 Leuven  
T: +32 16 28 1639

## FINLAND

### ASM Microchemistry Oy

Pietari Kalmin katu 1 F 2  
00560 Helsinki  
T: +358 9 525 540  
F: +358 9 525 54600

## FRANCE

### ASM France SARL

223 Rue des Bécasses  
38920 Crolles  
T: +33 4 7692 2824  
F: +33 4 3892 0472

## GERMANY

### ASM Germany Sales BV

Bretonischer Ring 16  
85630 Grasbrunn  
T: +49 89 462 3650  
F: +49 89 462 36566

## IRELAND

### ASM Services & Support Ireland Ltd

Unit 23, Hills Industrial Estate  
Lucan, Co Dublin  
T: +353 1 621 9100  
F: +353 1 628 0206

## ISRAEL

### ASM Services & Support Israel Ltd

C/o 2 Hazaron St  
Kiryat-Gat 82109  
T: +972 8 6123077

## NORTH AMERICA

## UNITED STATES

### ASM America, Inc

3440 East University Drive  
Phoenix, AZ 85034-7200  
T: +1 602 470 5700

### Regional Sales/Service Office

97 East Brokaw Road  
Suite 100  
San Jose, CA 95112-4209  
T: +1 408 451 0830

### Regional Service Office

2500 NW 229th Avenue  
Suite 100  
Hillsboro, OR 97124-7114  
T: +1 503 629 1360

## ASIA

## CHINA

### ASM China Ltd

A/N, 15F, No 720 Pudong Avenue  
Shanghai 200120  
T: +86 21 50 368588  
F: +86 21 50 368878

## JAPAN

### ASM Japan KK

23-1, 6-chome Nagayama  
Tama-shi  
Tokyo 206-0025  
T: +81 42 337 6311  
F: +81 42 389 7555

### Daini Technology Center

7-2, 2-chome, Kurigi  
Asao-ku, Kawasaki-shi  
Kanagawa 215-0033  
T: +81 44 712 3681  
F: +81 44 712 3682

### Kumamoto Service Center

3F, Mayfair-Suizenji  
21-30, 1-chome, Suizenji  
Chuo-ku, Kumamoto-shi  
Kumamoto, 862-0950  
T: +81 96 387 7300

### Nagaoka Factory

392-1 Mishimashimbo  
Nagaoka-shi  
Niigata 940-2311  
T: +81 258 42 2400  
F: +81 258 41 2490

### Yokkaichi Service Center

3F, Kosco-Yokkaichi-Nishiura  
Building  
5-10, 1-chome, Yasujima,  
Yokkaichi-shi  
Mie 510-0075  
T: +81 59 340 6100  
F: +81 59 340 6099

## MALAYSIA

### ASM Services & Support Malaysia Sdn Bhd

Suite 17 and 18, First Floor  
Incubator Block, Kulim Techno  
Centre  
Kulim Hi-Tech Park  
09000, Kulim  
Kedah Darul Aman  
T: +604 403 9330  
F: +604 403 9330





**SINGAPORE**

**ASM Front-End Manufacturing Singapore Pte Ltd**

543 Yishun Industrial Park A  
Singapore 768765  
T: +65 6512 2922  
F: +65 6512 2966

**ASM Wafer Process**

**Equipment Singapore Pte Ltd**

543 Yishun Industrial Park A  
Singapore 768765  
T: +65 6512 2962  
F: +65 6512 2961

**SOUTH KOREA**

**ASM Korea Ltd**

Head Office  
SungKong-kwan 1 Dong  
Cheonan Valley, ChungNam  
Techno Park  
136, Jiksan-ro, Jiksan-eup  
Seobuk-ku, Cheonan-si,  
Chungcheongnam-do, 31035  
T: +82 70 7596 7800  
F: +82 41 5890 201

**ASM Korea Ltd**

BunDang Branch Office  
10F, 1-Dong, 17, 228 St  
Pankyo-ro Bundang-ku,  
Sungnam-si  
Gyeonggi-do, 13487  
T: +82 70 7596 7788  
F: +82 31 8016 9970

**TAIWAN**

**ASM Front-End Sales & Services Taiwan Co, Ltd**

Hsin-Chu Office  
2F-5, No 1, Jinshan 8th St  
East Dist, Hsinchu City 300  
T: +886 3 666 7722  
F: +886 3 564 8899

**ASM Front-End Sales & Services Taiwan Co, Ltd**

Lin-Kuo Office  
2F, No 50, Fuxing 3rd Rd  
Guishan Dist, Taoyuan City 333  
T: +886 3 211 5279  
F: +886 3 328 5358

**ASM Front-End Sales & Services Taiwan Co, Ltd**

Tai-Chung Office  
No 20-2, Ln 1230, Sec 4, Taiwan  
Blvd  
Xitun Dist, Taichung City 407  
T: +886 4 2465 1086  
F: +886 4 2463 3707

**ASM Front-End Sales & Services Taiwan Co, Ltd**

Tai-Nan Office  
Rm 612, 6F, No 13, Guoji Rd  
Xinshi Dist, Tainan City 744  
T: +886 6 589 2368  
F: +886 6 589 2710



## 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 Statutory 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.

**ASM International NV**

Versterkerstraat 8

1322 AP Almere

The Netherlands