# **Group Management Report 2015**

# 1. Overview Of The Economic Environment and the Past Financial Year

The global semiconductor sector showed a muted development in 2015 and was influenced by an increasingly volatile macroeconomic environment in key regions. Total sales of the global semiconductor industry remained almost unchanged in 2015, increasing slightly by 0.2% to USD 336.4bn while market volume in 2014 had increased by 9.9% to USD 335.8bn. The relevant market segment for ams, analog semiconductors, showed a higher growth of 2.5% to USD 45.5bn in 2015 (previous year: USD 44.4bn)<sup>1)</sup>.

More than 30 years of experience in the analog segment, high performance IC solutions, and continuous innovation give ams a competitive edge. The company's clear focus within the analog semiconductor market and significant investments in research and development strengthened ams' position as a leading supplier of advanced sensor and analog IC solutions in 2015. ams' strongly positive business development last year was driven by the market success of high volume products at major OEMs which resulted in full year revenues growing by 34% to EUR 623.1m.

ams is regarded as a valued technology partner with strong competence in sensors, sensor interfaces, power management- and wireless solutions offering ultra-low energy consumption and excellent analog performance. Through its worldwide sales and support network ams has a strong presence in the relevant markets in Europe, Asia, and North America as more than 8,000 customers globally rely on ams' expertise and innovation to solve their technological challenges.

ams' business segment Products comprises the markets Consumer & Communications and Automotive, Industrial, Medical.

The company's Consumer & Communications business recorded significant growth in 2015 which was predominantly driven by ams' market position as a major supplier of advanced sensor and analog solutions for smartphones, tablet PCs and mobile devices.

ams' light sensor product area recorded the largest share of group revenues again last year as ams remained the worldwide market leader in advanced light sensors. ams holds a particularly strong position in light sensor solutions for mobile devices and supplies a broad range of leading smartphone and tablet PC vendors given its technological edge. As a result, ams once again shipped substantial volumes of its high value ambient light and proximity sensors for a wide variety of smartphones and other devices in 2015. The company's compact gesture sensor module combining gesture sensing with RGB color sensing, proximity sensing, and additional functions also continued to ship in high volumes to leading smartphone OEMs last year.

ams sees strong growth opportunities in the coming years based on more advanced uses of its light sensor technology such as True Color Sensing and Spectral Sensing. These include biosensors to capture personal health data and innovative light sensor applications. In biosensors, ams launched its first product generation last year and expects the market launch of its second product generation offering additional features in the coming months.

ams' wireless product area (RFID and NFC) developed very strongly in the first half of 2015 as high volume shipments of ams' NFC antenna booster solution contributed significantly to the growth of the company. The wireless business was, however, impacted by significantly lower shipments of NFC products in the second half of 2015 due to customer-specific developments. Implementing its strategic NFC roadmap, ams concluded a license agreement for its NFC boost technology last year and presented its combined NFC analog front-end solution. Against this background, ams continues to expect its wireless business to contribute meaningfully to the company's business development over the next years.

In audio solutions, MEMS microphone interface products showed another good performance in 2015 with very high shipments of around 1.6 billion units. As the clear market leader in a dynamic market environment ams focuses on high value applications for mobile devices. In the recent market for active noise cancellation (ANC) ams saw increasing market traction for its low power solution targeting in-box bundled earphones for smartphones. ams expects further growth for this product area in the current and coming years.

ams' industrial, medical and automotive businesses also recorded positive results in 2015 leveraging their wide range of end markets, product lines, and customers for better market penetration.

ams' industrial business showed attractive growth in 2015 mainly driven by an overall positive demand environment in the company's industrial markets. ams strengthened its position as a leading supplier of sensors and sensor interfaces for industrial and factory automation, building control, and industrial sensing last year. ams benefits from

a broad portfolio of advanced sensor technologies and solutions for high performance applications and is driving innovation to support Industry 4.0 and the Internet of Awareness. ams launched the first generation of its integrated sensor-driven lighting manager into the emerging market for smart industrial LED lighting last year. ams sees strong market dynamics in lighting and expects this area to unfold into a volume opportunity in the coming years.

ams added the CMOS environmental sensor business for integrated temperature, pressure and relative humidity sensors in 2015. Together with ams' gas sensor capabilities, this complete range of technologies offers very attractive growth potential in new sensor applications for industrial, home automation, and other end markets over the next years. ams expects to sample first generation CMOS environmental sensors to identified customers in the near future.

The acquisition of CMOSIS was another milestone in the past financial year adding a leading high value industrial and medical image sensor business with a sound revenue base. ams expects the use of multiple sensors in industrial applications to accelerate offering good growth potential for vendors with a broad-based sensor portfolio. At the same time, CMOSIS' strong IP creates significant future growth opportunities in new markets and innovative applications.

ams' medical business performed well in 2015 demonstrating ams' know-how in advanced sensors and sensor interfaces. In the core area of Medical Imaging (computed tomography (CT), digital X-ray, and mammography) the company's high resolution imaging solutions lead the market and create significant diagnostic and patient benefits for higher

quality healthcare. ams was able to build on this strong position and its partnerships with leading medical systems OEMs last year and sees a good pipeline of projects including new customers.

The company's automotive business recorded solid growth in 2015 given a positive demand environment in the global automotive market. ams' high performance sensor and position measurement solutions, battery management, and solutions for safety systems such as LIDAR collision avoidance continued to be successful in an increasing number of platforms. Focusing on its sensor strengths, ams is well positioned to benefit from rising semiconductor and sensor content in vehicles over the coming years.

ams' business segment Foundry which manufactures analog and mixed-signal ICs for customers using specialty processes performed well in 2015 and contributed attractively to the company's results. The business segment is positioned as a

full service provider offering a broad spectrum of services from design support to final test and holds a leading market position as an analog foundry for specialty processes.

ams made further significant investments last year to expand its wafer fabrication facility at the company's headquarters. The two-stage project for capacity expansion that ams had started in the previous year was successfully completed in 2015. In addition, ams was able to conclude an attractive agreement with the State of New York (USA) covering the construction of a new analog wafer fab in the U.S. which ams will lease on a long-term basis. The start of operation as well as production ramp of the new facility which is expected to offer significant cost benefits is planned for the first half of 2018. As a result, ams can follow a flexible longterm manufacturing strategy to support the future growth and further development of the company in the best possible manner.

## 2. Business Results

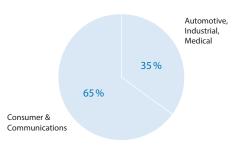
#### 2.1 Development of Revenues

Consolidated group revenues for the financial year 2015 increased by 34% to a record high of EUR 623.1m compared to EUR 464.4m in 2014. This very positive development was primarily due to robust demand in the target market Consumer & Communications (C&C) (+37%) as well as good overall demand for ams' solutions in the Automotive, Industry and Medical markets (AIM). The strong revenue growth in the company's Consumer &

Communications business was driven by the market success of major smartphone OEMs relying on innovative ams solutions. The positive trend in ams' Automotive, Industry and Medical business, on the other hand, resulted primarily from an attractive industrywide development of demand. The revenue breakdown by markets is shown below:

in millions of EUR	2015	% of revenues	2014	% of revenues	Change in %
C&C	407.9	65%	298.1	64%	+37%
AIM	215.2	35%	166.3	36%	+29%
	623.1		464.4		

## Revenue breakdown by markets



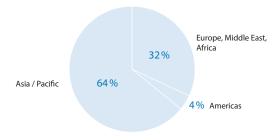
The distribution of revenues by region does not reflect the demand situation in ams' target markets but the geographic billing location of the company's customers. Business in the Asia/Pacific region developed very positively in 2015 with revenues growing considerably compared to the previous year. This development was particularly due to a major customer in Asia.

The expansion of the company's sales and distribution network continued last year enabling the addition of new customers and a higher market presence in all regions. Against this backdrop, ams expects all regions to continue to contribute to the overall growth of the company.

The revenue breakdown by region (based on billing location) is shown below:

in millions of EUR	2015	% of revenues	2014	% of revenues	Change in %
EMEA	197.7	32%	182.9	39%	+8%
Americas	22.9	4%	18.7	4%	+22%
Asia / Pacific	402.4	64%	262.8	57%	+53%
	623.1		464.4		

#### Revenue breakdown by region



## 2.2 Orders Received and Order Backlog

Given robust order patterns in key markets, orders received increased significantly over the course of the year growing by 13% from EUR 504.6m in the previous year to EUR 569.4m in 2015.

ams' year-end order backlog decreased by 9% to a solid level of EUR 119.4m on December 31, 2015 (EUR 131.3m at year-end 2014) creating an appropriate starting point for 2016.

Revenues and orders developed as follows:

in millions of EUR	2015	2014	Change in %
Revenues	623.1	464.4	+34%
Orders received	569.4	504.6	+13%
Total order backlog	119.4	131.3	-9%

#### 2.3 Earnings

Gross profit increased substantially to EUR 339.2m in 2015 compared to EUR 253.2m in the previous year.

The company's full year gross margin excluding acquisition-related amortization remained unchanged at 56% (2014: 56%) while gross margin including acquisition-related amortization decreased slightly to 54% compared to 55% in the previous year. This positive result was mainly due to the full utilization of the company's production capacity in 2015, an attractive product mix, economics of scale, and efficiency improvements. At the same time, selling prices for the company's products showed a slight overall decline during the year.

Research and development costs as well as marketing and sales expenses showed an increase in 2015 compared to the previous year which was due to significant product development efforts, the strengthening of the sales network and a further increase in personnel cost. Administrative costs were also higher compared to the year before due to an increase in personnel costs.

Given the strong revenue growth in relation to a comparatively lower increase in fixed costs, the operating result (EBIT) including acquisition-related amortization for the year 2015 increased strongly by EUR 41.9m to the record level of EUR 147.3m. In parallel to the increase in EBIT, EBITDA (earnings before interest and taxes plus depreciation and amortization) increased by EUR 52.5m to EUR 195.2m.

Net income for 2015 increased to EUR 148.7m compared to EUR 97.5m in 2014. The return on equity rose to 22% compared to 18% for 2014 while the return on revenues grew by 3 percentage points to 24% (2014: 21%).

in millions of EUR	2015	2014	Change in %
Gross profit on revenues	339.2	253.2	+34%
Gross margin	54%	55%	
Gross margin (including acquisition-related amortization)	56%	56%	
EBITDA	195.2	142.7	+37%
Operating result (EBIT)	147.3	105.4	+40%
EBIT margin	24%	23%	
Financial result	11.7	-1.2	+1.034%
Result before tax	158.9	104.1	+53%
Net result	148.7	97.5	+52%
Return on equity	22%	18%	
Return on revenues	24%	21%	

#### 2.4 Assets and Financial Position

The balance sheet structure shows a high ratio of fixed to total assets which is common to the semi-conductor industry. The share of intangibles and property, plant and equipment in the total assets increased from 54% in the year 2014 to 69% in the reporting period.

The investments in fixed assets affecting cash (capital expenditures) of EUR 80.1m were higher than the current depreciation and amortization of EUR 47.9m and amounted to 13% of full year revenues (2014: 15%). The ratio of equity to fixed assets reached 80% in 2015 compared to 104% in the previous year, thus reflecting the investments in fixed assets, acquisitions and strategic investments.

In the past financial year ams acquired a majority share in the CMOSIS group as well as the CMOS sensor activities of NXP Semiconductors in a strategic transaction.

The fixed assets include a deferred tax asset of EUR 34.8m (previous year: EUR 34.1m). Under the current tax legislation, this tax asset can be carried

forward indefinitely but is expected to be used to offset profit taxes within the next five years.

Inventories amounted to EUR 79.8m at the end of 2015 (2014: EUR 59.9m). This increase was particularly driven by the strong increase in revenues at a continuing high level of capacity utilization and a comparable level of inventory turnover.

Trade receivables at balance sheet date increased to EUR 88.7m due to the impact of fourth quarter revenues (2014: EUR 79.0m). The average period of outstanding receivables showed a slight increase compared to the previous year.

Financial liabilities increased by EUR 90.6m to EUR 275.2m from EUR 184.6m in 2014, as a result of drawn long-term credit lines (exploiting the historically low interest rate levels) for acquisitions and strategic investments. For the same reason, net debt increased to EUR 131.3m in 2015 compared to a net cash position of EUR 45.0m in 2014. Group equity increased by 22% to EUR 678.9m due to the positive development of the net result.

in millions of EUR	2015	2014		2015	2014
Assets			Equity and liabilities		
Inventories	79.8	59.9	Financial liabilities	275.2	184.6
Trade receivables	88.7	79.0	Trade liabilities	58.6	51.0
Other current assets	172.6	247.9	Other liabilities	127.3	98.8
Fixed assets	847.5	534.1	Provisions	81.1	64.7
Deferred tax asset	34.8	34.1	Shareholders' equity	681.2	555.8
Total assets	1,223.4	955.0	Total equity and liabilities	1,223.4	955.0

Given the higher gross debt the company's debtto-equity ratio increased to 40% compared to 33% in the previous year. At the same time, the equity ratio decreased to 56% (2014: 58%).

	2015	2014
Equity ratio	56%	58%
Debt to equity ratio	40%	33%
Equity to fixed assets ratio	80%	104%

These key figures are directly derivable from the group financial statements.

#### 2.5 Cash Flow

The operating cash flow increased to EUR 155.6m in 2015 compared to EUR 124.1m in the previous year. This improvement was primarily due to the strong growth of the company's operating result. The cash flow from investing activities was EUR -287.2m (2014: EUR -108.9m) including EUR 80.1m of expenditures for intangible assets, property, plant and equipment (2014: EUR 70.1m)

and EUR 201.5m for company acquisitions (2014: EUR 35.8m). Free cash flow amounted to EUR -131.6m (2014: 15.1m). The company's available liquidity decreased by EUR 100.1m to EUR 103.6m at the end of 2015. The cash flow from financing activities amounted to EUR 21.7m in 2015 compared to EUR 101.0m in the previous year.

in millions of EUR	2015	2014	Change in %
Operating cash flow	155,6	124,1	25%
Cash flow from investing activities	-287,2	-108,9	-164%
Free cash flow	-131,6	15,1	-969%
Cash flow from financing activities	21,7	101,0	-79%
Effects of changes in foreign exchange rates on cash and cash equivalents	9,8	4,2	133%
Cash and cash equivalents	103,6	203,7	-49%

# 3 Research and development

ams' technological leadership in the design and manufacture of high performance sensors and analog ICs is based on more than 30 years of intensive research and development activities. In order to secure and strengthen its leading position, the company makes significant investments in research and development on a continuous basis. Research and development expenses amounted to EUR 107.8m last year (17% of revenues) compared to EUR 77.0m in the year before (17% of revenues). Research and development activities mainly comprised the areas Sensors and Sensor Interfaces, Power Management

and Wireless for product development as well as the development of specialty variants of CMOS and SiGe processes for high-voltage and high-frequency applications. The average number of employees in research and development was 548 in 2015 (2014: 390).

ams' R&D activities again allowed the filing of a large number of international patents and the publication of numerous papers in international specialist journals and at trade conferences last year.

# 4 Purchasing and manufacturing

In purchasing, ams was able to reduce the cost of raw materials and assembly services slightly last year which had a positive effect on the gross profit margin. Given continuously rising personnel costs the cost pressures in manufacturing nevertheless remain high.

Internal production capacity was fully utilized throughout the year 2015. As a consequence, the average capacity utilization across all manufacturing areas was 100% over the reporting period. Any unabsorbed fixed costs have been recorded in the income statement.

Gross margin excluding acquisition-related amortization remained unchanged at 56% compared to 2014 while gross margin including acquisition-related amortization decreased slightly to 54% from 55% in the previous year. This stable development was mainly due to a favorable product mix, high capacity utilization in manufacturing and economics of scale.

Given the positive demand environment for its products ams expects another year of very high capacity utilization for 2016.

# **5 Employees**

On average, ams had 1,921 employees in 2015 (2014: 1,636) of which 1,040 worked at the company headquarters in Premstätten (2014: 922). The increase of 285 employees comprises the addition of 159 employees in research and development, 68 employees in production and 58 employees in General and Administration.

ams recognizes its responsibility as an important employer in the region. The company again offered a wide range of internal and external training and development opportunities for all employees last year and provided training positions for apprentices.

ams attempts to retain its employees with the help of a long-term remuneration model. A profit sharing program for all ams employees augments the existing employee stock option and incentive programs by way of an attractive direct component. The profit sharing program expresses ams' belief that the company's employees are its most important success factor and honors every employee's contribution to ams' success.

Owing to the attractive increase in earnings in 2015, the total amount for distribution which depends on the operating profit before taxes in relation to full year revenues (EBT margin) increased significantly and totals EUR 15.7m for 2015 (2014: EUR 13.9m).

Moreover, active internal and employee communications as well as regular employee events which form a company tradition serve to ensure the employees' identification with the company.

## **6 Environment**

Acting responsibly towards the environment is a basic principle for ams in all business operations. ams is dedicated to meeting the highest environmental standards as well as using resources and the environment conservatively. ams has therefore been certified to ISO 14001:2004 for a number of years.

Sustainability as well as efforts to preserve environmental resources and reduce energy costs and carbon dioxide emissions are major concerns for ams which have been supported by a range of activities for many years. Based on a thorough

analysis of ams' carbon dioxide emission sources in 2009, measures to achieve further reductions in carbon dioxide emissions are being defined each subsequent year.

ams also submits information on its carbon dioxide emissions to the Carbon Disclosure Project, a global transparency initiative which has created the world's largest freely available database of corporate carbon dioxide emissions.

## 7 Subsidiaries and branch facilities

ams currently has subsidiaries in Switzerland, Italy, Germany, France, Belgium, the United Kingdom, Spain, Portugal, Sweden, the U.S., the Cayman Islands, the Philippines, China, Japan, Korea, Slovenia and India. The subsidiaries in the USA, Switzerland, Italy, Belgium, Spain, Portugal, the United Kingdom, Slovenia, Germany and India carry out development, marketing and sales activities, while the subsidiaries in France, China and Japan are active in marketing and sales and technical support. The subsidiary in the Philippines is responsible for

production activities in testing, while the subsidiary in Korea is responsible for sales and assembly in the region. Branch facilities exist in Hong Kong, Singapore and Taiwan.

Principal shareholdings: The investment in New Scale Technologies, Inc., Victor, New York (USA), remained unchanged at 34.5%. New Scale Technologies develops piezo-based miniature motor technologies and licenses products and technologies to industrial partners.

# 8 Risk management

Operating on a global basis, the ams Group is exposed to a variety of risks that are inextricably linked to business activities. In order to identify, evaluate and counteract these risks in a timely manner, ams has developed and implemented tight internal risk management systems. This risk management system was implemented and benchmarked against best practices in conjunction with the company's auditors. The risk management process in place requires the business units to constantly monitor and

evaluate risks. Regular risk reports are prepared for the management board and supervisory board. This ensures that major risks are identified and counteraction can be taken at an early stage.

The internal audit function complements the risk management process. In close alignment with the supervisory board's audit committee it aims to analyze internal processes and if necessary propose improvements.

#### **Business Interruption Risk**

The company's state-of-the-art 200mm manufacturing facility went into operation in 2002. Although 14 years old the facility is regarded as comparatively new by semiconductor industry standards. Therefore the risk of breakdowns or prolonged downtime is relatively low. In addition, this risk is being minimized further by preventive maintenance activities. The business interruption risk is

additionally insured for the replacement price and against loss of earnings for 18 months. ams' insurer, FM Global, has awarded the company – as one of a select number of semiconductor manufacturers – the HPR (highly protected risk) status.

#### **Financial Risks**

Risk management is handled centrally by the treasury department in accordance with guidelines issued by the management board. These detailed internal guidelines regulate responsibility and acti-

on parameters for the areas affected. The treasury department evaluates and hedges financial risks in close cooperation with the business units.

#### Receivables And Credit Risk

ams operates a strict credit policy. The creditworthiness of existing customers is constantly checked and new customers undergo a credit evaluation. Under ams' treasury and risk management policy, investments in liquid securities and transactions involving derivative financial instruments are only carried out with financial institutions that have high credit ratings. As of the balance sheet date there were no significant concentrations of credit risk.

#### **Interest Rate Risk**

Interest rate risk – the possible fluctuation in value of financial instruments due to changes in market interest rates – arises in relation to medium and long-term receivables and payables (especially borrowings). ams' treasury policy ensures that part of the interest rate risk is reduced by fixed-interest borrowings. On the liability side, 45% of all amounts owed to financial institutions are at fixed

rates. Of the remaining borrowings on a floating rate basis (55%), 67% will be repaid over the next two years. The remaining floating rate borrowings undergo continual checks with regard to the interest rate risk. On the asset side, the interest rate risks are primarily attached to time deposits and securities in current assets that are tied to the market interest rate.

#### Foreign Exchange Risk

Financial transactions in the semiconductor industry are predominantly carried out in US dollars. To hedge the currency risk, all transaction and conversion risks are constantly monitored. Within the group, cash flow streams in the same currency are offset (netting). Currency fluctuations during

foreign currency transactions mainly concern the US dollar. From the company's point of view, due to the extreme volatility in the currency markets, it is not possible to engage in economically feasible, efficient, and low risk currency hedges.

#### Product liability and quality risk

The products manufactured by ams are integrated into complex electronic systems. Faults or functional defects in the products produced by ams may

have a direct or indirect effect on the property, health or life of third parties. The company is not in a position to reduce or exclude its liability towards consumers or third parties in sales agreements. Every product that leaves the company undergoes several qualified checks regarding quality and function. In spite of quality control systems certified to ISO/TS 16949, ISO/TS 13485, ISO 9001 und ISO

14001, product defects may occur and possibly only show up after installation and use of the finished products. Although this risk has been appropriately insured, quality problems could negatively impact ams' assets, financial and earnings position.

## Patent Infringement Risk

ams manufactures complex ICs using various process technologies, line widths and production facilities. Like industry competitors, the company constantly has to develop these technologies further. Should ams infringe any existing patents while consistently monitoring processes, pro-

duction methods, and design blocks protected under patent law as well as related comprehensive licensing, this may negatively impact the assets, financial and earnings position of the company as well as the ams share price.

## 9 Events after the Balance Sheet Date

No transactions had a significant effect on ams' financial position, assets or earnings after the closing of the fiscal year.

## 10 Outlook

Despite the prevailing uncertainties about the development of the world economy, global industrial production and private consumption in the current year, ams expects its business to continue to grow in 2016 based on the market launch of new advanced sensor and analog solutions and the implementation of various design-wins.

For the analog segment of the worldwide semiconductor industry market researchers assume market volume to expand further in 2016 and currently expect year-on-year growth in the low single-digit percentage range (WSTS, February 2016). In

contrast, ams is confident at this time to achieve a revenue growth rate above the expected market growth rate for the current year. Moreover, ams expects gross profit margin for the year 2016 to remain high and foresees a commensurate development of the operating and net result in the current year given further increases in R&D and sales and marketing expenses.

However, should global semiconductor demand and the macroeconomic environment develop unfavorably in 2016 and/or the US dollar show notable weakness, ams would experience a meaningful impact on the development of its business and earnings.

ams' outstanding expertise in sensor and analog solutions offers significant growth opportunities for the company given a wide range of applications in smartphones, tablet PCs and other mobile devices, the integration of innovative sensor

functions into wearables and smartphones, and the rapidly increasing use of advanced sensor technologies in automotive, industrial, and medical applications. In this context, the expansion of the company's business with key accounts in all markets, the broadening of its worldwide customer base and a growing penetration of target markets remain mid-term strategic priorities for ams.

# 11 Other Information

Regarding information concerning equity and investments please refer to the notes of the financial statements.

Premstätten, February 3, 2016

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Dr. Thomas Stockmeier COO

Michael Wachsler-Markowitsch

CFO