



STMicroelectronics N.V.
Semi Annual Report 2019

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1. Corporate overview

1.1. History and development of STMicroelectronics

STMicroelectronics N.V. was formed and incorporated in 1987 as a result of the combination of the semiconductor business of SGS Microelettronica (then owned by Società Finanziaria Telefonica (S.T.E.T.), an Italian corporation) and the non-military business of Thomson Semiconducteurs (then owned by the former Thomson-CSF, now Thales, a French corporation). We completed our initial public offering in December 1994 with simultaneous listings on the Bourse de Paris (now known as “Euronext Paris”) and the New York Stock Exchange (“NYSE”). In 1998, we also listed our shares on the Borsa Italiana S.p.A. (“Borsa Italiana”).

We operated as SGS-Thomson Microelectronics N.V. until May 1998, when we changed our name to STMicroelectronics N.V. We are organized under the laws of the Netherlands, with our corporate legal seat in Amsterdam, the Netherlands, and our head offices at WTC Schiphol Airport, Schiphol Boulevard 265, 1118 BH Schiphol, the Netherlands. Our telephone number there is +31-20-654-3210. Our headquarters and operational offices are managed through our wholly owned subsidiary, STMicroelectronics International N.V., and are located at 39 Chemin du Champ des Filles, 1228 Plan-Les-Ouates, Geneva, Switzerland. Our main telephone number there is +41-22-929-2929. Our agent for service of process in the United States related to our registration under the U.S. Securities Exchange Act of 1934, as amended, is Corporation Service Company (CSC), 80 State Street, Albany, New York, 12207. Our operations are also conducted through our various subsidiaries, which are organized and operated according to the laws of their country of incorporation, and consolidated by STMicroelectronics N.V.

1.2. Strategy and objectives

We are a global leader in the semiconductor market, serving a broad range of customers across different areas. Our strategy focuses on long-term value creation for the Company and its affiliated enterprises and takes into account the evolution of the markets we serve and the environment and opportunities we see for the years to come. We focus on developing industry-leading products and solutions for the application areas which are expected to experience solid growth rates driven by long-term trends. Trends include the evolution of population demographics, urbanization, workplace transformation, health and wellness, environmental awareness and increasing connectedness. These trends require enablers such as autonomous systems, robotics, securely connected machines and personal devices, electrification of automobiles and infrastructure, Internet of Things (“IoT”) and more power efficient systems, which in turn drive the demand for the electronic components we develop and manufacture.

Our products are used in a wide variety of applications, which address four end markets: automotive, industrial, personal electronics and communications equipment, computers and peripherals. We enable smarter driving by making vehicles safer, more environmentally friendly and more connected. We help make smarter homes, cities, workplaces and factories in which things can be done more efficiently and flexibly, in a more sustainable manner, safer and with a better experience for the people at the center. We enable creators of smart connected consumer devices to develop and take to market their devices quicker and more efficiently. In doing this we ensure that ST is found everywhere microelectronics make a positive and innovative contribution to people’s lives. By getting more from technology to get more from life, ST stands for life.augmented.

1.3. Organizational structure

We are organized in a matrix structure with geographic regions interacting with product lines, both supported by shared technology and manufacturing operations and by central functions, designed to enable us to be closer to our customers and to facilitate communication among the R&D, production, marketing and sales organizations.

While STMicroelectronics N.V. is our parent company, we conduct our global business through STMicroelectronics International N.V. and also conduct our operations through service activities from our subsidiaries. We provide certain

administrative, human resources, legal, treasury, strategy, manufacturing, marketing and other overhead services to our consolidated subsidiaries pursuant to service agreements for which we recover the cost.

1.4. Products and activities

We are a global independent semiconductor company that designs, develops, manufactures and markets a broad range of products, including discrete and standard components, application-specific integrated circuits (“ASICs”), full-custom devices and semi-custom devices and application-specific standard products (“ASSPs”) for analog, digital and mixed-signal applications.

Our diverse product portfolio benefits from a unique, strong foundation of proprietary and differentiated leading-edge technologies. We use all of the prevalent function-oriented process technologies, including complementary metal-on silicon oxide semiconductors (“CMOS”), bipolar and non-volatile memory technologies. In addition, by combining basic processes, we have developed advanced systems-oriented technologies that enable us to produce differentiated and application-specific products, including our pioneering fully depleted silicon-on-insulator (“FD-SOI”) technology offering superior performance and power efficiency compared to bulk CMOS, bipolar CMOS technologies (“Bi-CMOS”) and radio frequency silicon-on-insulator (“RF-SOI”) for mixed-signal and high-frequency applications, as well as a combination of Bipolar, CMOS and DMOS (“BCD”) and vertically integrated power (“VIPower”) technologies for smart power applications, silicon carbide (“SiC”) and gallium-nitride (“GaN”) for high-efficiency systems, Micro-Electro-Mechanical Systems (“MEMS”) technologies for sensors and Actuators, embedded memory technologies for our microcontrollers and differentiated Imaging Technologies for our imaging solutions.

Our reportable segments are as follows:

- Automotive and Discrete Group (ADG), comprised of dedicated automotive ICs (both digital and analog), and discrete and power transistor products for all market segments.
- Analog, MEMS and Sensors Group (AMS), comprised of low-power high-end analog ICs (both custom and general purpose) for all markets, smart power products for Industrial, Computer and Consumer markets, Touch Screen Controllers, Low Power Connectivity solutions (both wireline and wireless) for IoT, power conversion products, metering solutions for Smart Grid and all MEMS products for sensors or actuators, subsystems, as well as the Imaging Products division (including the sensors and modules utilizing the Group’s Time-of-Flight technology).
- Microcontrollers and Digital ICs Group (MDG), comprised of general purpose and secure microcontrollers, EEPROM memories, Digital ASICs, Aerospace and Defense products including components for microwave and millimeter wave.

For the computation of the segments’ internal financial measurements, we use certain internal rules of allocation for the costs not directly chargeable to the segments, including cost of sales, selling, general and administrative expenses and a part of research and development expenses. In compliance with our internal policies, certain costs are not allocated to the segments, but reported in “Others”. Those include impairment, restructuring charges and other related closure costs, management reorganization expenses, unused capacity charges, phase-out and start-up costs of certain manufacturing facilities, certain one-time corporate items, strategic and special research and development programs or other corporate-sponsored initiatives, including certain corporate-level operating expenses, patent claims and litigations and certain other miscellaneous charges. In addition, depreciation and amortization expense is part of the manufacturing costs allocated to the segments and is neither identified as part of the inventory variation nor as part of the unused capacity charges; therefore, it cannot be isolated in the costs of goods sold. Finally, R&D grants are allocated to the segments proportionally to the incurred R&D expenses on the sponsored projects.

1.5. Sales, Marketing and Distribution

Our sales and marketing is organized by a combination of country/area coverage and key accounts coverage with the primary objective of accelerating sales growth and gaining market share, particularly with regards to: strengthening the effectiveness of the development of our global and major local accounts; boosting demand creation through an enhanced focus on geographical coverage with strong technical expertise, supported in the mass market by our distribution channel and local initiatives; and establishing regional sales and marketing teams that are fully aligned with our strategic end markets (automotive, industrial, personal electronics and communications equipment, computers and peripherals) product lines.

We have three regional sales organizations reporting to a global head of Sales & Marketing: Americas; Asia Pacific; and EMEA. Our regional sales organizations have a similar structure to enhance coordination in go-to-market activities and are strongly focused on revenue growth. The sales and marketing activities performed by our regional sales organizations are supported by product marketing organized by product group under the direct supervision of sales, which also includes product development functions. This matrix system reinforces our sales and marketing activities and our broader strategic objectives. An important objective of our regional sales and marketing efforts is expanding our customer base, which we seek to achieve by adding sales representatives, regional competence centers and improved online customer support.

1.6. Research & Development

Since our formation, we have maintained a solid commitment to innovation. About one-sixth of our employees work in R&D on product design/development and technology, and in 2018, we spent approximately 11.7% of our net revenues on R&D. Our innovations in semiconductor technology as well as in hardware and software contribute to the creation of successful products that generate value for us and our customers. Our complete design platforms, including a large selection of IP and silicon-proven models and design rules, enable the fast development of products designed to meet customer expectations in terms of reliability, quality, competitiveness in price and time-to-market. Through our R&D efforts, we contribute to making our customers' products more efficient, more appealing, more reliable and safer. Our technology R&D strategy is based on the development of differentiated technologies, allowing for a unique offer in terms of new products and enabling new applications opportunities.

We draw on a rich pool of chip fabrication technologies, including advanced CMOS, FD-SOI, specialized imaging, embedded non-volatile memories, mixed-signal, analog, MEMS, Smart power SiC and GaN processes. This is well embedded in our strong packaging technologies portfolio such as high pin count BGA, Wafer level packaging, highly integrated sensor packages and leadframe packages power products. We combine both front-end and back-end manufacturing and technology R&D under the same organization to ensure a smooth flow of information between our R&D and manufacturing organizations. We leverage significant synergies and shared activities between our product groups to cross-fertilize them. We also use silicon foundries, especially for advanced CMOS beyond the 28-nm node that we do not plan to manufacture nor develop internally.

We have advanced R&D centers, which offer us a significant advantage in quickly and cost effectively introducing products. Furthermore, we have established a strong culture of partnerships and through the years have created a network of strategic collaborations with key customers, suppliers, competitors, and leading universities and research institutes around the world. We also play leadership roles in numerous projects running under the European Union's IST (Information Society Technologies) programs. We also participate in certain R&D programs established by the EU, individual countries and local authorities in Europe (primarily in France and Italy).

1.7. Sustainability

Sustainability has been a guiding principle for ST for more than 25 years. In line with our vision to be everywhere microelectronics make a positive contribution to people's lives, sustainability is deeply embedded in all of our activities. We believe that sustainability is fundamental to our business, brings new opportunities, improves efficiency, reduces risks

and secures long-term profitability. It also brings benefits to our employees and our external stakeholders. Our approach to sustainability is expressed in our Code of Conduct, our policies and in our sustainability strategy.

Each year we publish a sustainability report, which delivers a comprehensive view of our programs and performance. We are included in some of the main sustainability indices (Dow Jones World and Europe Sustainability Indices, FTSE4Good, Euronext Vigeo, ECPI, Ethibel) and recognized by CDP for its environmental management. In addition, as a member of the Responsible Business Alliance (RBA), formerly the Electronic Industry Citizenship Coalition, we participate in the collective efforts of the industry to find solutions to our global sustainability challenges.

Further information on ST's Sustainability approach can be found at: www.st.com/st-approach-to-sustainability.

2. Report of the Managing Board

2.1. Business overview

The total available market is defined as the “TAM”, while the serviceable available market, the “SAM”, is defined as the market for products produced by us (which consists of the TAM and excludes major devices such as Microprocessors (“MPUs”), Dynamic random-access memories (“DRAMs”), optoelectronics devices, Flash Memories and the Wireless Application Specific market products such as Baseband and Application Processor).

Based on the industry data published by World Semiconductor Trade Statistics (WSTS), semiconductor industry revenues decreased in the first half of 2019 on a year-over-year basis by approximately 14.5% for the TAM and 2.5% for the SAM to reach approximately \$196 billion and \$92 billion, respectively.

Our effective average exchange rate for the first half of 2019 was \$1.15 for €1.00 compared to \$1.19 for €1.00 for the first half of 2018.

During the first half of 2019, we delivered sales and profitability results in line with our quarterly guidance and we continued to advance our strategic investments amid softened market dynamics.

Our first half 2019 revenues amounted to \$4,249 million, a 5.5% decrease on a year-over-year basis. By product group and year-over-year, the first half of 2019 ADG revenues were up 6.0% supported by both Automotive and Power Discrete. AMS revenues decreased 1.7%, with strong growth in Imaging offset by the decline in Analog. MDG revenues decreased 21.2% mainly driven by the decline in Microcontrollers.

Our first half 2019 gross margin reached 33.8% of revenues, representing a decrease of 310 basis points compared to the prior year period mainly due to usual price pressure, higher unloading charges and increased level of amortization and impairment / write-off of capitalized development costs.

Combined selling, general and administrative (SG&A) and research and development (R&D) expenses decreased to \$1,141 million for the first half of 2019, compared to \$1,149 million in the prior year period, positively impacted by favorable currency effects, partially offset by salary dynamic, higher costs of the share based compensation plans and increased R&D activities.

In the first half of 2019, our other income and expenses increased to a net income of \$43 million, compared to a net income of \$8 million in the prior year period, mainly due to higher income from R&D funding, which included a \$19 million catch-up from year 2018, following the launch of the “Nano2022” program. The first half of 2019 also included start-up costs associated with the acquisition of the remaining production assets from Micron in May 2019 and the resulting progressive ramp-up of technologies as well as our progressive phase out from some 6” activities in Catania.

Operating profit in the first half of 2019 decreased by \$180 million to \$336 million compared to \$516 million in the prior year period.

Combined finance income and costs resulted in a net cost of \$116 million in the first half of 2019, compared to a net cost of \$38 million in the first half of 2018, and reflect in both periods the fair value measurement of convertible bonds. The first half of 2019 amount includes a net loss of \$114 million for the fair value adjustment of outstanding convertible bond embedded options (compared to a net loss of \$32 million in the first half of 2018).

Our Free Cash Flow (non GAAP measure) decreased in the first half of 2019 compared to the year-ago period, mainly due to lower cash from operating activities and higher cash used in investing activities, including the cash outflow of \$76 million, net of cash acquired, for the acquisition of 55% of Norstel’s share capital.

2.2. Segment information

We design, develop, manufacture and market a broad range of products, including discrete and standard commodity components, application-specific integrated circuits, full-custom devices and semi-custom devices and application-specific standard products for analog, digital and mixed-signal applications. In addition, we further participate in the manufacturing value chain of Smartcard products, which includes the production and sale of both silicon chips and Smartcards.

Our reportable segments are as follows:

- *Automotive and Discrete Group (ADG)*, comprised of dedicated automotive ICs (both digital and analog), and discrete and power transistor products for all market segments.
- *Analog, MEMS and Sensors Group (AMS)*, comprised of low-power high-end analog ICs (both custom and general purpose) for all markets, smart power products for Industrial, Computer and Consumer markets, Touch Screen Controllers, Low Power Connectivity solutions (both wireline and wireless) for IoT, power conversion products, metering solutions for Smart Grid and all MEMS products for sensors or actuators, subsystems, as well as the Imaging Products division (including the sensors and modules utilizing the Group's Time-of-Flight technology).
- *Microcontrollers and Digital ICs Group (MDG)*, comprised of general purpose and secure microcontrollers, EEPROM memories, Digital ASICs, Aerospace & Defense products including components for microwave and millimeter wave.

For the computation of the segments' internal financial measurements, we use certain internal rules of allocation for the costs not directly chargeable to the segments, including cost of sales, selling, general and administrative expenses and a part of research and development expenses. In compliance with our internal policies, certain costs are not allocated to the segments, but reported in "Others". Those include impairment, restructuring charges and other related closure costs, management reorganization expenses, unused capacity charges, phase-out and start-up costs of certain manufacturing facilities, certain one-time corporate items, strategic and special research and development programs or other corporate-sponsored initiatives, including certain corporate-level operating expenses, patent claims and litigations and certain other miscellaneous charges. In addition, depreciation and amortization expense is part of the manufacturing costs allocated to the segments and is neither identified as part of the inventory variation nor as part of the unused capacity charges; therefore, it cannot be isolated in the costs of goods sold. Finally, R&D grants are allocated to the segments proportionally to the incurred R&D expenses on the sponsored projects.

Wafer costs are allocated to the segments based on actual cost. From time to time, with respect to specific technologies, wafer costs are allocated to segments based on market price.

Please refer to note 3.6.6 of the Semi Annual Financial Statements for further information.

2.3. Liquidity and financial position

We maintain a significant cash position and a low debt-to-equity ratio, which provide us with adequate financial flexibility. As in the past, our cash management policy is to finance our investment needs mainly with net cash generated from operating activities.

During the first half of 2019, our net cash decreased by \$87 million, due to the net cash used in investing activities exceeding the net cash from operating and financing activities.

The components of our cash flow for the comparable periods are set forth below:

In millions of USD	(unaudited)	
	June 29, 2019	June 30, 2018
Net cash from operating activities	842	953
Net cash used in investing activities	(952)	(917)
Net cash from / (used in) financing activities	26	(110)
Effect of change in exchange rates	(3)	(2)
Net cash increase (decrease)	(87)	(76)

Net cash from operating activities

Net cash from operating activities is the sum of (i) net income (loss) adjusted for non-cash items and (ii) changes in net working capital. The net cash from operating activities for the first half of 2019 was \$842 million, decreasing compared to the prior year period, mainly due to lower net income.

Net cash used in investing activities

Investing activities used \$952 million of net cash in the first half of 2019, mainly due to payments for tangible assets, net of proceeds, for a total of \$694 million, investment in intangible assets for \$180 million of which the largest part is related to the capitalization of development costs, as well as \$76 million for the acquisition of 55% of Norstel's share capital.

Net cash from (used in) financing activities

Net cash from financing activities was \$26 million in the first half of 2019, compared to \$110 million used in the first half of 2018 and consisted mainly of \$281 million proceeds from long-term debt, \$125 million repurchase of common stock and \$107 million dividends paid to stockholders.

Free cash flow (non GAAP measure)

Free Cash Flow, which is a non GAAP measure, is defined as (i) net cash from operating activities plus (ii) net cash used in investing activities, excluding payment for purchases (and proceeds from sale) of marketable securities, and investment in short-term deposits. The result of this definition is ultimately net cash from operating activities plus payment for purchase (and proceeds from sale) of tangible, intangible and financial assets, proceeds received in the sale of businesses and cash paid for business acquisitions. We believe Free Cash Flow, a non GAAP measure, provides useful information for investors and management because it measures our capacity to generate cash from our operating and investing activities to sustain our operations. Free Cash Flow is not a GAAP measure and does not represent total cash flow since it does not include the cash flows generated by or used in financing activities. Free Cash Flow reconciles with the net cash increase (decrease) by including the payment for purchase (and proceeds from the sale) of marketable securities, the change in short-term deposits, the net cash from (used in) financing activities and the effect of changes in exchange rates. In addition, our definition of Free Cash Flow may differ from definitions used by other companies. Our Free Cash Flow is derived from the

US GAAP Consolidated Statement of Cash Flows, which differs from the Consolidated Statement of Cash Flows under IFRS. A reconciliation with the Consolidated Statement of Cash Flows under IFRS is provided in the table below:

In millions of USD	June 29, 2019	June 30, 2018
Net cash from operating activities as reported	842	953
Excluding US GAAP/IFRS differences:		
<i>Payment of withholding tax on vested shares</i>	4	4
<i>Depreciation of lease right-of-use assets⁽¹⁾</i>	(30)	-
<i>Interest paid on lease liabilities⁽¹⁾</i>	2	-
Net cash from operating activities adjusted	818	957
Net cash used in investing activities as reported	(952)	(917)
Excluding:		
<i>Payment for purchase and proceeds from sale of marketable securities, change in short-term deposits and net cash variation for joint ventures deconsolidation</i>	-	16
Payment for purchase and proceeds from sale of tangible, intangible and financial assets, proceeds received from the sale of businesses and payment for business acquisitions⁽²⁾	(952)	(901)
Free Cash Flow (non GAAP measure)	(134)	56

(1) Refer to notes 3.6.3 and 3.6.12 for further details on the impact of the new guidance on leases (IFRS 16), effective January 1, 2019.

(2) Reflects the total of the following line items reconciled with our Consolidated Statement of Cash Flows relating to the investing activities: Payment for purchase of tangible assets, Proceeds from sale of tangible assets, Payment for purchase of intangible assets, Payment for purchase of financial assets, Proceeds from sale of financial assets, Proceeds received in sale of businesses, Payment for business acquisitions, net of cash and cash equivalents acquired.

Our free cash flow was negative \$134 million for the first half of 2019, compared to positive \$56 million for the first half of 2018.

Net Financial Position (non GAAP measure)

Our Net Financial Position represents the difference between our total liquidity and our total financial debt. Our total liquidity includes cash and cash equivalents, restricted cash, short-term deposits and marketable securities; our total financial debt includes short-term debt, including bank overdrafts, and long-term debt, as represented in our consolidated statement of financial position. Net Financial Position is not a GAAP measure but we believe it provides useful information for investors and management because it gives evidence of our global position either in terms of net indebtedness or net cash by measuring our capital resources based on cash and cash equivalents, restricted cash, short-term deposits and marketable securities and the total level of our financial indebtedness. In addition, our definition of Net Financial Position may differ from definitions used by other companies and therefore comparability may be limited. Our Net Financial Position is derived from our US GAAP Consolidated statement of financial positions, which differs from the Consolidated Statement of Financial Position under IFRS. A reconciliation with the Consolidated Statement of Financial Position under IFRS is provided in the table below:

In millions of USD	June 29, 2019	December 31, 2018
Cash and cash equivalents	2,119	2,266
Restricted cash	60	-

Government bonds issued by the U.S. Treasury	333	330
Total liquidity	2,512	2,596
Funding program loans from European Investment Bank	(854)	(577)
Dual tranche senior unsecured convertible bonds	(1,330)	(1,310)
Other funding programs and other long-term loans	(15)	(17)
Total financial debt as reported	(2,199)	(1,904)
US GAAP/IFRS differences on dual tranche senior unsecured convertible bonds valuation	(5)	(6)
Total financial debt adjusted	(2,204)	(1,910)
Net financial position (non GAAP measure)	308	686

The European Investment Bank ("EIB") Loans are comprised of three long-term amortizing credit facilities as part of our R&D funding programs. The first, signed in 2010, is a €350 million multi-currency loan to support our industrial and R&D programs. It was drawn mainly in U.S. dollars for an amount of \$321 million and only partially in Euros for an amount of €100 million, of which \$109 million remained outstanding as of June 29, 2019. The second, signed in 2013, is a €350 million multi-currency loan which also supports our R&D programs. It was drawn in U.S. dollars for an amount of \$471 million, of which \$176 million is outstanding as of June 29, 2019. The third, signed in August 2017, is a €500 million loan, in relation to R&D and capital expenditure investments in the European Union. It was fully drawn in Euros corresponding to \$569 million outstanding as of June 29, 2019.

Our long term debt contains standard conditions, but does not impose minimum financial ratios.

On July 3, 2017, we issued \$1,500 million in principal amount of dual tranche senior unsecured convertible bonds (Tranche A for \$750 million and Tranche B for \$750 million), due 2022 and 2024, respectively. Tranche A bonds were issued at 101.265% as zero-coupon bonds while Tranche B bonds were issued at par and bear a 0.25% per annum nominal interest, payable semi-annually. The conversion price at issuance was \$20.54, equivalent to a 37.5% premium on both tranches, which corresponds to 9,737 equivalent shares per each \$200,000 bond par value. The bonds are convertible by the bondholders or are callable by the issuer upon certain conditions, on a net-share settlement basis, except if the issuer elects a full-cash or full-share conversion as an alternative settlement. The net proceeds from the bond offering were \$1,502 million, after deducting issuance costs.

On November 5, 2018 we announced the launch of a share buy-back program of up to \$750 million to be executed within a three-year period. Shares repurchased under the buy-back program are disclosed on a weekly basis and are held as treasury shares and will be used to meet our obligations in relation to our employee stock award plans. As of June 29 2019, we held 15.2 million treasury shares.

Our current ratings with the three major rating agencies that report on us on a solicited basis, are as follows: S&P: "BBB" with stable outlook; Moody's: "Baa3" with stable outlook; Fitch: "BBB" with stable outlook.

2.4. Business and financial outlook

We expect net revenues for the full year 2019 to be in the range of about \$9.35 to \$9.65 billion. Our policy is to modulate our capital spending according to the evolution of the semiconductor market. Based on current market visibility and the combination of new products, customer demand in the second half of 2019 and ongoing strategic initiatives, we confirm our capital investment in 2019 in a range of approximately \$1.1 billion to \$1.2 billion.

A portion of this capital expenditure will be devoted to support three strategic initiatives: i) in Agrate, Italy the construction of a new 300mm fab to support next generation mixed signal, IGBT and power products; ii) the expansion of the installed capacity in SiC both in front-end and back-end and the start-up of production of GaN technology in Catania 150mm and Tours 200mm and iii) next generation Image sensor technology.

In addition to our strategic initiatives, our main capital investment in front-end is in i) our 300mm fab in Crolles, expanding capacity and optimizing existing infrastructure to support production ramp up on our main technologies; ii) mix evolution, and a few selected programs of capacity growth and infrastructure preparation, mainly in the area of mixed signal and discrete processes; and iii) capacity increase of Power MOS technology in 200mm in Singapore by the progressive integration of the former Micron fab in Singapore. The most important 2019 capital investment for our back-end facilities are expected to be: (i) capacity growth on certain package families, including the SiC technology, next generation Imaging sensor technologies and new products for Automotive and Industrial, to sustain market demand; (ii) modernization and rationalization of package lines targeting cost savings benefits; and (iii) specific investments in the areas of factory automation, quality, environment and energy savings.

In addition, we will invest in overall capacity adjustment in final testing and wafers probing (EWS) to meet increased demand and a changed product mix as well as invest in quality, safety, maintenance, productivity and cost savings in both 150mm, 200mm front-end fabs and back-end plants.

We will continue to invest to support revenues growth and new products introduction, taking into consideration factors such as trends in the semiconductor industry and capacity utilization. We expect to need significant financial resources in the coming years for capital expenditures and for our investments in manufacturing and R&D. We plan to fund our capital requirements from cash provided by operating activities, available funds and support from third parties, and may have recourse to borrowings under available credit lines and, to the extent necessary or attractive based on market conditions prevailing at the time, the issuance of debt, convertible bonds or additional equity securities. A substantial deterioration of our economic results, and consequently of our profitability, could generate a deterioration of the cash generated by our operating activities. Therefore, there can be no assurance that, in future periods, we will generate the same level of cash as in prior years to fund our capital expenditure plans for expanding/upgrading our production facilities, our working capital requirements, our R&D and manufacturing costs.

As a result of our exit from the ST-Ericsson joint venture, our exposure is limited to covering 50% of ST-Ericsson's needs to complete the wind-down, which are estimated to be negligible, based on our current visibility of the ST-Ericsson liquidation balance.

We believe that we have the financial resources needed to meet our currently projected business requirements for the next twelve months, including capital expenditures for our manufacturing activities, working capital requirements, approved dividend payments and the repayment of our debts in line with their maturity dates.

2.5. Other developments in the First Half of 2019

On March 15, we announced and hosted the official launch of the French "Nano2022" program for the microelectronics industry at our Crolles site. "Nano2022" is part of the European Commission's IPCEI for Microelectronics initiative and is specifically a five-year public-private strategic support program targeting not only research, development, and innovation, but also first industrial deployment. "Nano2022" will support our French R&D and manufacturing sites: Crolles, Grenoble, Rennes, Rousset, and Tours on advances in key technologies: new generations of microcontrollers, microprocessors, and digital integrated circuits; power conversion technologies, including wide-bandgap materials, the optimization of electric system performance; and new specialized imaging and 3D sensors.

On May 22, we announced the publication of our 2019 Sustainability Report.

On May 23, we announced that all of the proposed resolutions were adopted at our Annual General Meeting of Shareholders (AGM), which was held in Amsterdam, the Netherlands. The main resolutions of the AGM were:

- The adoption of our Statutory Annual Accounts for the year ended December 31, 2018, prepared in accordance with International Financial Reporting Standards (IFRS). The 2018 Statutory Annual Accounts were filed with the Netherlands Authority for the Financial Markets (AFM) on March 27, 2019;
- The distribution of a cash dividend of US\$0.24 per outstanding share of the Company's common stock, to be distributed in quarterly instalments of US\$0.06 in each of the second, third and fourth quarters of 2019 and first quarter of 2020;
- The reappointment of Ms. Martine Verluyten, as member of the Supervisory Board, for a one-year term expiring at the 2020 AGM;
- The reappointment of Ms. Janet Davidson, as member of the Supervisory Board, for a three-year term expiring at the 2022 AGM; and
- The appointment of Ms. Lucia Morselli, in replacement of Mr. Salvatore Manzi, as member of the Supervisory Board, for a three-year term expiring at the 2022 AGM.

2.6. Related party transactions

Please refer to note 3.6.20 of the Semi Annual Financial Statements.

2.7. Financial Risk Management

We are exposed to changes in financial market conditions in the normal course of business due to our operations in different foreign currencies and our ongoing investing and financing activities. Market risk is the uncertainty to which future earnings or asset/liability values are exposed due to operating cash flows denominated in foreign currencies and various financial instruments used in the normal course of operations. The major financial risks to which we are exposed are the foreign exchange risks related to the fluctuations of the U.S. dollar exchange rate compared to the Euro and the other major currencies in which costs are incurred, the variation of the interest rates and the risks associated to the investments of our available cash. We have established policies, procedures and internal processes governing our management of market risks and the use of financial instruments to manage our exposure to such risks. See note 3.6.11.4 of the Semi Annual Financial Statements for further information.

Our financial risk management is carried out by a central treasury department (Corporate Treasury). Additionally, a Treasury Committee, chaired by our CFO, steers treasury activities and ensures compliance with our corporate policies. Treasury activities are thus regulated by our policies, which define procedures, objectives and controls. The policies focus on the management of financial risk in terms of exposure to market risk, credit risk and liquidity risk. Treasury controls are subject to internal audits. Most treasury activities are centralized, with any local treasury activities subject to oversight from Corporate Treasury. Corporate Treasury identifies, evaluates and hedges financial risks in close cooperation with our operating units. It provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, price risk, credit risk, use of derivative financial instruments, and investments of excess liquidity. The majority of cash and cash equivalents is held in U.S. dollars and Euros and is placed with financial institutions rated at least a single "A" long-term rating from two of the major rating agencies, meaning at least A3 from Moody's Investor Service and A- from Standard & Poor's and Fitch Ratings, or better. These ratings are closely and continuously monitored in order to manage exposure to the counterparty's risk. Hedging transactions are performed only to hedge exposures deriving from operating, investing and financing activities conducted in the normal course of business.

The Semi Annual Financial Statements do not include all financial risk management information and disclosures required in the annual financial statements; they should be read in conjunction with the group's annual financial statements as at December 31, 2018. There have been no changes in the risk management department or in any risk management policies since year end.

Foreign exchange risk

We conduct our business on a global basis in various major international currencies. As a result, we are exposed to adverse movements in foreign currency exchange rates, primarily with respect to the Euro. Foreign exchange risk mainly arises from recognized assets and liabilities at our subsidiaries and future commercial transactions.

Cash flow and fair value interest rate risk

Our interest rate risk arises from long-term borrowings. Borrowings issued at variable rates expose us to cash flow interest rate risk. Borrowings issued at fixed rates expose us to fair value interest rate risk.

Credit risk

We select banks and/or financial institutions that operate with the group based on the criteria of long-term rating from at least two major rating agencies and keeping a maximum outstanding amount per instrument with each bank not to exceed 20% of the total.

We monitor the creditworthiness of our customers to which we grant credit terms in the normal course of business. If certain customers are independently rated, these ratings are used. Otherwise, if there is no independent rating, risk control assesses the credit quality of the customer, taking into account its financial position, past experience and other factors. Individual risk limits are set based on internal and external ratings in accordance with limits set by management. The utilization of credit limits is regularly monitored.

Liquidity risk

Prudent liquidity risk management includes maintaining sufficient cash equivalents and marketable securities, the availability of funding from committed credit facilities and the ability to close out market positions. Our objective is to maintain a significant cash position and a low debt-to-equity ratio, which ensures adequate financial flexibility. Our liquidity management policy is to finance our investments with net cash provided from operating activities.

2.8. Business risk information

Our risk appetite depends on the nature of risks. We determine, on a regular basis, the amount of risk we are willing to eliminate, mitigate, pursue or retain, depending on associated expected rewards, opportunities and cost of risk optimization.

Below is a list of the main risk factors related to the semiconductor industry and specifically related to our operations, which may affect our result and performance and the ability of management to predict the future:

- Changes in global trade policies, including the adoption and expansion of tariffs and trade barriers, that could affect the macro-economic environment and adversely impact the demand for our products;
- Uncertain macro-economic and industry trends, which may impact end-market demand for our products;
- Customer demand that differs from projections;
- The ability to design, manufacture and sell innovative products in a rapidly changing technological environment;
- Changes in economic, social, labor, political, or infrastructure conditions in the locations where we, our customers, or our suppliers operate, including as a result of macro-economic or regional events, military conflicts, social unrest, labor actions, or terrorist activities;
- Unanticipated events or circumstances, which may impact our ability to execute our plans and/or meet the objectives of our R&D and manufacturing programs, which benefit from public funding;
- The Brexit vote and the perceptions as to the impact of the withdrawal of the U.K. may adversely affect business activity, political stability and economic conditions in the U.K., the Eurozone, the EU and elsewhere. While we do not have material operations in the U.K. and have not experienced any material impact from Brexit on our underlying business to date, we cannot predict its future implications;

- Financial difficulties with any of our major distributors or significant curtailment of purchases by key customers;
- The loading, product mix, and manufacturing performance of our production facilities and/or our required volume to fulfill capacity reserved with suppliers or third party manufacturing providers;
- Availability and costs of equipment, raw materials, utilities, third-party manufacturing services and technology, or other supplies required by our operations;
- The functionalities and performance of our IT systems, which are subject to cybersecurity threats and which support our critical operational activities including manufacturing, finance and sales, and any breaches of our IT systems or those of our customers or suppliers;
- Theft, loss, or misuse of personal data about our employees, customers, or other third parties, and breaches of global and local privacy legislation, including the EU's General Data Protection Regulation ("GDPR");
- The impact of intellectual property ("IP") claims by our competitors or other third parties, and our ability to obtain required licenses on reasonable terms and conditions;
- Changes in our overall tax position as a result of changes in tax rules, new or revised legislation, the outcome of tax audits or changes in international tax treaties which may impact our results of operations as well as our ability to accurately estimate tax credits, benefits, deductions and provisions and to realize deferred tax assets;
- Variations in the foreign exchange markets and, more particularly, the U.S. dollar exchange rate as compared to the Euro and the other major currencies we use for our operations;
- The outcome of ongoing litigation as well as the impact of any new litigation to which we may become a defendant;
- Product liability or warranty claims, claims based on epidemic or delivery failure, or other claims relating to our products, or recalls by our customers for products containing our parts;
- Natural events such as severe weather, earthquakes, tsunamis, volcano eruptions or other acts of nature, health risks and epidemics in locations where we, our customers or our suppliers operate;
- Industry changes resulting from vertical and horizontal consolidation among our suppliers, competitors, and customers; and
- The ability to successfully ramp up new programs that could be impacted by factors beyond our control, including the availability of critical third party components and performance of subcontractors in line with our expectations.

2.9. Auditor's involvement

The Interim Condensed Consolidated Financial Statements and Interim Report of the Managing Board have not been audited or reviewed by an external auditor.

This report of the Managing Board is dated August 21, 2019.

3. Interim Condensed Consolidated Financial Statements (“Semi Annual Financial Statements”)

The Semi Annual Financial Statements of the Group for the six months ended June 29, 2019, as presented by the Managing Board, have not been audited nor reviewed by an external auditor.

3.1. Consolidated income statement

In millions of USD, except per share amounts	Notes	(unaudited)	
		Six-month period ended	
		June 29, 2019	June 30, 2018
Sales		4,232	4,463
Other revenues		17	31
Total revenues	3.6.5	4,249	4,494
Cost of sales	3.6.17	(2,815)	(2,837)
Gross profit		1,434	1,657
Selling, general and administrative	3.6.17	(548)	(565)
Research and development	3.6.17	(593)	(584)
Other income	3.6.18	58	32
Other expenses	3.6.18	(15)	(24)
Operating profit		336	516
Finance income		45	25
Finance costs		(161)	(63)
Share of profit of joint ventures		1	-
Profit before income tax		221	478
Income tax expense		(40)	(28)
Net profit		181	450
Attributable to:			
The equity holders of the parent		180	446
Non-controlling interests		1	4
Net profit		181	450
Earnings per share attributable to the equity holders of the parent			
Earnings per share (Basic)	3.6.19	0.20	0.50
Earnings per share (Diluted)	3.6.19	0.20	0.49

The accompanying notes are an integral part of these interim consolidated financial statements

3.2. Consolidated statement of comprehensive income

In millions of USD	(unaudited)	
	Six-month period ended	
	June 29, 2019	June 30, 2018
Net result	181	450
Other comprehensive income (loss), net of tax:		
Items that will not be reclassified to profit or loss		
Re-measurements of employee benefit obligations	(36)	-
Income tax effect	6	-
Re-measurements of employee benefit obligations, net of tax	(30)	-
Total items that will not be reclassified to profit or loss	(30)	-
Items that may be subsequently reclassified to profit or loss		
Exchange differences on translation of foreign operations	(14)	(56)
Cash flow hedges	11	(62)
Income tax effect	(2)	-
Net movement on cash flow hedges	9	(62)
Changes in fair value of debt instruments at FVOCI	3	(4)
Income tax effect	-	-
Net changes in fair value of debt instruments at FVOCI	3	(4)
Total items that may be reclassified subsequently to profit or loss	(2)	(122)
Other comprehensive income (loss), net of tax	(32)	(122)
Total comprehensive income (loss), net of tax	149	328
Attributable to:		
The equity holders of the parent	148	324
Non-controlling interests	1	4
Total comprehensive income (loss), net of tax	149	328

The accompanying notes are an integral part of these interim consolidated financial statements

3.3. Consolidated statement of financial position

In millions of USD	Notes	June 29, 2019 (unaudited)	December 31, 2018
Assets			
Non-current assets			
Property, plant and equipment	3.6.8	4,151	3,715
Goodwill	3.6.10	145	103
Intangible assets	3.6.8	1,263	1,220
Investments in joint ventures	3.6.7	51	49
Other non-current financial assets	3.6.11.1	59	43
Deferred tax assets		392	367
Other non-current assets		369	434
Total non-current assets		6,430	5,931
Current assets			
Inventories	3.6.13	1,893	1,567
Trade accounts receivable		1,162	1,277
Other current financial assets	3.6.11.1	338	335
Other receivable and assets		431	414
Restricted cash		60	-
Cash and cash equivalents	3.6.14	2,119	2,266
Total current assets		6,003	5,859
Total assets		12,433	11,790
Equity			
Equity attributable to the equity holders of the parent		6,946	7,062
Non-controlling interests		134	65
Total equity	3.6.15	7,080	7,127
Non-current liabilities			
Interest-bearing loans and borrowings	3.6.11.3	2,025	1,758
Other non-current financial liabilities	3.6.11.2	453	166
Employee benefits		543	496
Deferred tax liabilities		25	15
Non-current provisions		4	37
Other non-current liabilities		117	64
Total non-current liabilities		3,167	2,536
Current liabilities			
Interest-bearing loans and borrowings – current portion	3.6.11.3	174	146
Trade accounts payable		895	981
Other payables and accrued liabilities		476	328
Employee benefits – current portion		500	554
Current provisions		18	25
Other current financial liabilities	3.6.11.2	75	34
Income tax payable		48	59
Total current liabilities		2,186	2,127
Total equity and liabilities		12,433	11,790

The accompanying notes are an integral part of these interim consolidated financial statements

3.4. Consolidated statement of changes in equity

For the six-month period ended June 29, 2019

In millions of USD	Ordinary shares	Capital surplus	Treasury shares	Other reserves	Retained earnings	Equity attributable to the equity holders of the parent	Non-controlling interests	Total equity
As at January 1, 2019	1,157	2,185	(141)	1,221	2,640	7,062	65	7,127
Net profit					180	180	1	181
Other comprehensive income, net of tax				(32)	-	(32)	-	(32)
Total comprehensive income	-	-	-	(32)	180	148	1	149
Contribution of noncontrolling interest	-	-	-	-	-	-	7	7
Business combination	-	-	-	-	-	-	61	61
Transfer of cash flow hedge reserve to inventories	-	-	-	3	-	3	-	3
Repurchase of common stock	-	-	(125)	-	-	(125)	-	(125)
Employee share award scheme, net of tax	-	-	50	72	(50)	72	-	72
Dividends	-	-	-	-	(214)	(214)	-	(214)
As at June 29, 2019 (unaudited)	1,157	2,185	(216)	1,264	2,556	6,946	134	7,080

The accompanying notes are an integral part of these interim consolidated financial statements

For the six-month period ended June 30, 2018

	Ordinary shares	Capital surplus	Treasury shares	Other reserves	Retained earnings	Equity attributable to the equity holders of the parent	Non- controlling interests	Total equity
As at January 1, 2018	1,157	2,185	(132)	1,269	1,280	5,759	63	5,822
Net profit	-	-	-	-	446	446	4	450
Other comprehensive income, net of tax	-	-	-	(122)	-	(122)	-	(122)
Total comprehensive income	-	-	-	(122)	446	324	4	328
Transfer of cash flow hedge reserve to inventories	-	-	-	4	-	4	-	4
Employee share award scheme, net of tax	-	-	43	51	(43)	51	-	51
Dividends	-	-	-	-	(216)	(216)	-	(216)
As at June 30, 2018 (unaudited)	1,157	2,185	(89)	1,202	1,467	5,922	67	5,989

The accompanying notes are an integral part of these interim consolidated financial statements

3.5. Consolidated statement of cash flows

In millions of USD	Note	(unaudited)	
		Six-month period ended	
		June 29, 2019	June 30, 2018
Cash flows from operating activities			
Net profit		181	450
Items to reconcile net result and cash flows from operating activities:			
Depreciation and amortization		599	510
Interests and amortization of issuance costs on convertible bonds		20	18
Senior convertible bonds and related conversion options adjustments		115	32
Share-based compensation		77	48
Other non-cash items		(68)	(16)
Deferred income tax		(11)	(3)
Share of profit of joint ventures, impairments or reversal of impairments on investments in joint ventures		(1)	(1)
Impairment, restructuring and other related closure costs		53	4
Changes in net working capital:			
Movement of trade receivables, net		117	31
Movement of inventories, net		(331)	(242)
Movement of trade payables		(19)	64
Movement of other assets and liabilities, net		129	72
Interests paid		(9)	(5)
Interest received		30	19
Income tax paid		(40)	(28)
Net cash from operating activities		842	953
Cash flows from investing activities			
Payments for purchases of tangible assets		(700)	(742)
Proceeds from sale of tangible assets		6	1
Investment in short-term deposits		-	(18)
Proceeds from matured short-term deposits		-	2
Payments for purchase of intangible assets		(180)	(160)
Payments for purchase of financial assets		(2)	-
Payment for business acquisitions, net of cash and cash equivalents acquired		(76)	-
Net cash used in investing activities		(952)	(917)
Cash flows from financing activities			
Proceeds from interest-bearing loans and borrowing		281	-
Repayment of interest-bearing loans and borrowings		(2)	(2)
Payment of lease liabilities		(28)	-
Repurchase of common stock		(125)	-
Proceeds from noncontrolling interests		7	-
Dividends paid to equity holders of the parent Company		(107)	(108)
Net cash from / (used in) financing activities		26	(110)
Effect of changes in exchange rates		(3)	(2)
Net cash increase (decrease)		(87)	(76)
Cash, cash equivalents and restricted cash at the beginning of the period		2,266	1,759
Cash, cash equivalents and restricted cash at the end of the period	3.6.14	2,179	1,683

The accompanying notes are an integral part of these interim consolidated financial statements

3.6. Notes to the consolidated financial statements

3.6.1. Corporate information

STMicroelectronics N.V. (“the Company”), with Commercial Register No. 33194537 and RSIN 008751171, is organized under the laws of the Netherlands with its corporate legal seat in Amsterdam, the Netherlands, and head offices at WTC Schiphol Airport, Schiphol Boulevard 265, 1118 BH Schiphol, the Netherlands. Headquarters and operational offices are managed through STMicroelectronics International N.V., a wholly owned subsidiary of STMicroelectronics N.V., and are located at 39, Chemin du Champ des Filles, 1228 Plan-les-Ouates, Geneva, Switzerland.

The Company and its subsidiaries (together “the Group”) are a global independent semiconductor group that designs, develops, manufactures and markets a broad range of products, including discrete and standard components, application-specific integrated circuits (“ASICs”), full custom devices and semi-custom devices and application-specific standard products (“ASSPs”) for analog, digital and mixed-signal applications. In addition, the Group participates in the manufacturing value chain of smartcard products, which includes the production and sale of both silicon chips and smartcards.

The Group’s products are used in a wide variety of applications, which can be broadly grouped into three areas: automotive systems, industrial systems and consumer connected devices. The Group enables smarter driving by making vehicles safer, more environmentally friendly and more connected. The Group helps make smarter homes, cities, workplaces and factories in which things can be done more efficiently and flexibly, in a more sustainable manner, safer and with a better experience for the people at the center. The Group enables creators of smart connected consumer devices to develop and take to market their devices quickly and efficiently. In doing this, the Group’s ensures that ST is found everywhere microelectronics make a positive and innovative contribution to people’s lives. By getting more from technology to get more from life, ST stands for [life.augmented](#).

The Company is a publicly traded company, listed on the New York Stock Exchange, on Euronext Paris and on the Borsa Italiana (Italian Stock Exchange).

These unaudited Semi Annual Financial Statements were approved by ST’s Supervisory Board on August 21, 2019.

3.6.2. Basis of preparation

These unaudited Semi Annual Financial Statements for the six-month period ended June 29, 2019 have been prepared in accordance with IAS 34 Interim Financial Reporting, as adopted by the European Union.

The unaudited Semi Annual Financial Statements do not include all the information and disclosures required in the annual financial statements. They should be read in conjunction with the annual financial statements for the year ended December 31, 2018, prepared in accordance with IFRS, as adopted in the European Union, filed with the Autoriteit Financiële Markten (“AFM”) on March 27, 2019 and adopted by our Annual General Meeting of Shareholders on May 23, 2019.

3.6.3. Significant accounting policies

The accounting policies adopted are consistent with those followed in the preparation of the Group’s annual financial statements for the year ended December 31, 2018. New accounting guidance was effective and adopted by the Group on January 1, 2019. This is the first set of the Group’s consolidated financial statements in which IFRS 16 Leases has been applied. The Group has also adopted a number of other new accounting amendments but they do not have a material effect on the Group’s consolidated financial statements. Changes to significant accounting policies are described below:

IFRS 16 Leases: The new standard on lease accounting no longer distinguishes for the lessee between a finance lease and an operating lease. IFRS 16 sets forth a single, on-balance sheet accounting model for lessees and for virtually all lease contracts. As a result, the Group, as a lessee, recognizes lease liabilities representing its obligations to make future lease payments and right-of-use assets representing its rights to use the underlying assets.

The Group has applied IFRS 16 using the modified retrospective approach, with a nil cumulative effect of initial application to be recognized in retained earnings as at January 1, 2019. Accordingly, the comparative information presented for 2018 has not been restated and is presented, as previously reported, under IAS 17 and related interpretations. The details of the changes are disclosed below.

(a) Definition of a lease

Based on previous guidance, the Group determined at contract inception whether an arrangement was or contained a lease under IFRIC 4 Determining Whether an Arrangement Contains a Lease. The Group now assesses whether a contract is or contains a lease based on the new definition set forth in IFRS 16. A contract is, or contains a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration. On transition to IFRS 16, the Group elected to apply the practical expedient to grandfather the assessment of which transactions are leases, and consequently did not reassess whether any expired or existing contracts were or contained leases. IFRS 16 was consequently applied upon transition only to contracts that were previously identified as leases. Contracts that were not identified as leases under previous applicable guidance were not reassessed and IFRS 16 definition has been applied only to contracts entered into or changed on or after January 1, 2019. Additionally, the Group applied upon transition the practical expedient on the assessment of contracts that contained a lease component and has elected not to separate non-lease components from lease components. The lease and non-lease components were instead accounted for as single lease components upon transition.

(b) Lease accounting as a lessee

As a lessee, the Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred substantially all of the risks and rewards of ownership. Under IFRS 16, the Group recognizes right-of-use assets and lease liabilities for most leases and these leases are on-balance sheet elements. However, the Group has elected not to recognize right-of-use assets and lease liabilities for some leases of low-value and for leases whose term ends within 12 months of the date of initial application (primarily for certain office and IT small equipment). The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term. They are reported as "Cost of sales", "Selling, general and administrative", or "Research and development" in the consolidated income statement according to the intended use of the leased asset, which is consistent with prior guidance applicable on lease arrangements determined to be operating leases.

Prior to IFRS 16 adoption, the Group classified as finance leases arrangements in which the Group had substantially all the risks and rewards of ownership. The Group did not report any material finance lease arrangement as at December 31, 2018. Only assets leased under finance leases were included in "Property, plant and equipment" on the consolidated statement of financial position and recorded at the lower of their fair value and the present value of the minimum lease payments.

The Group has elected to present right-of-use assets on the line "Property, plant and equipment" of the consolidated statement of financial position, the same line as it presents underlying assets of the same nature that the Group owns. The Group does not lease any property that meets the definition of investment property. The carrying amounts of right-of-use assets are as follows:

	Land	Buildings	Machinery and equipment	Computer and R&D equipment	Other	Total PP&E
Balance as at January 1, 2019	38	157	3	10	14	222
Balance as at June 29, 2019	38	158	2	7	12	217

The Group recognizes a right-of-use asset and a lease liability at the commencement date. The right-of-use asset is initially measured at cost, and subsequently at cost less accumulated depreciation and any impairment losses, or adjusted for certain re-measurements of the lease liability when deemed necessary. The adoption of IFRS 16 has had no impact on OCI as the Group does not apply the revaluation model on its long lived assets. For income statement purposes, the depreciation charge on right-of-use assets is recorded on a straight-line basis over the lease period and reported as “Cost of sales”, “Selling, general and administrative”, or “Research and development” in the consolidated income statement according to the intended use of the leased asset.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group’s incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate. The lease liability is subsequently increased by the interest cost of the lease liability and decreased by the lease payments. The interest cost is reported on the line “Finance costs” of the consolidated income statement. The Group has applied judgment to determine the lease term for some lease contracts with renewal options. The assessment of whether the Group is reasonably certain to exercise such options impacts the lease term, which affects the amount of reported lease liabilities and corresponding right-of-use assets. The lease liabilities are reported on the line “Other non-current financial liabilities” on the consolidated statement of financial position when payment is expected beyond twelve months, and on the line “Other current financial liabilities” for the current portion of the lease obligations.

For cash flow presentation purposes, cash payments for the principal portion of the lease liabilities are reported as cash flows used in financing activities, consistent with lease payments related to arrangements classified as finance leases under prior IAS 17 guidance. The interest expense recorded on the subsequent measurement of lease liabilities are reported within cash flows from operations, consistent with the Group’s cash flow presentation for interest paid. Short-term lease payments and payments for leases of low-value assets are reported as operating outflows, consistent with lease payments related to arrangements classified as operating leases under prior IAS 17 guidance.

(c) Sales leaseback transactions and lease accounting as a lessor

Lessor accounting is similar to the previous IAS 17 model, but updated to align with certain changes to the lessee model and the new revenue recognition guidance. Existing sales-leaseback guidance has been replaced with a new model applicable to both lessees and lessors. The Group did not report any existing sales-leaseback transaction upon adoption. Moreover, the Group is not involved in any significant lease arrangement in which it acts as a lessor.

(d) Transition to IFRS 16

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

The Group used the following practical expedients when applying IFRS 16 to leases previously classified as operating leases under IAS 17:

- No recognition of right-of-use assets and liabilities for leases with less than 12 months of lease term and amounts below \$5,000;
- No reassessment of initial direct costs for any existing leases;
- Use of hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

Prior to the new guidance adoption, the Group classified as finance leases arrangements in which the Group had substantially all the risks and rewards of ownership. Only assets leased under finance leases were included in “Property, plant and equipment” on the consolidated statement of financial position and recorded at the lower of their fair value and the present value of the minimum lease payments. The Group did not report any material finance lease arrangement upon IFRS 16 adoption. For these arrangements, the carrying amount of the right-of-use asset and the

lease liability as at January 1, 2019 were determined at the carrying amount of the lease asset and the lease liability under IAS 17 immediately before that date.

(e) Impacts on transition

On transition to IFRS 16, the Group recognized additional right-of-use assets and additional lease liabilities, with impacts on transition summarized below:

	January 1, 2019
Right-of-use assets presented in Property, plant and equipment	222
Lease liabilities presented in current and non-current other financial liabilities	222
Deferred tax asset	-
Retained earnings	-

When measuring lease liabilities for leases that were classified as operating leases, the Group discounted lease payments using its incremental borrowing rate as at January 1, 2019. The weighted average discount rate was 2.77% as at January 1, 2019.

A reconciliation between operating lease commitments as at December 31, 2018 as disclosed in the Group's consolidated financial statements prior to IFRS 16 transition and lease liabilities recognized as at January 1, 2019 upon IFRS 16 adoption is presented below:

	January 1, 2019
Operating lease commitments as at December 31, 2018 as disclosed in the Group's consolidated financial statements	214
Operating lease commitments as at December 31, 2018 discounted using the incremental borrowing rate measured as at January 1, 2019	190
- Extension options reasonably certain to be exercised	21
- Capitalization of non-lease components	4
- Other contract modifications/settlements	7
Lease liabilities recognized under IFRS 16 as at January 1, 2019	222

(f) Impacts for the period ended June 29, 2019

As a result of applying IFRS 16, in relation to the leases that were previously classified as operating leases, the Group recognized \$217 million of right-of-use assets and \$219 million lease liabilities as at June 29, 2019. Also in relation to those leases under IFRS 16, the Group has recognized depreciation and interest costs, instead of operating lease expense. During the six months ended June 29, 2019, the Group recognized \$30 million of depreciation charges and \$2 million of interest costs from these leases.

IFRIC Interpretation 23 Uncertainty over Income Tax Treatments: The new interpretation addresses the assessment of the supportability of an uncertain tax treatment based on the merits of the tax position, assuming that the tax authority will have full knowledge of the entity's position. It consequently addresses the accounting for income taxes when tax treatments involve uncertainty that affects the application of IAS 12 Income Taxes. The new guidance does not apply to taxes and levies outside the scope of IAS 12. Upon adoption of IFRIC 23 on January 1, 2019, the Group determined which uncertain tax treatments, if any, were to be considered separately or in conjunction with one or more other uncertain tax treatments. The Group must apply professional judgement to determine the level that better predicts the resolution of the uncertainties, as described in Note 3.6.4. If the Group concludes that it is probable that the taxing authorities will accept an uncertain tax treatment that has been taken or is expected to be taken on a tax

return, the accounting for income taxes is determined consistently with that tax treatment. If the Group concludes it is not probable that the treatment will be accepted, the effect of the uncertainty is reflected in its income tax accounting in the period in which that determination is made. The Group should measure the impact of the uncertainty using the method that best predicts the resolution of the uncertainty; either the most likely amount method or the expected value method. In most cases, the Group applies the most likely amount method to determine the amount of uncertainty to be reflected in the consolidated financial statements, as the assessment generally relies on probabilities of possible outcomes that are either binary or concentrated on one value.

The Group adopted IFRIC 23 on January 1, 2019 using the modified retrospective method, with no restatement of comparative periods. As the new guidance is consistent with the way the Group assessed the amounts of income tax expenses expected to be paid and the amounts of tax benefits expected to be realized on prior reporting periods, no cumulative effect of initially applying IFRIC 23 was reported as an adjustment to Retained earnings upon adoption. As at June 29, 2019 and December 31, 2018, the Group reported liabilities for uncertain tax treatments totaling \$26 million and \$25 million, respectively. As none of these liabilities relate to uncertain tax treatments on deferred taxes, they were reported on the line "Other non-current liabilities" of the consolidated statement of financial position as at June 29, 2019. Prior to IFRIC 23 adoption, the Group reported uncertain tax positions on the line "Non-current provisions" on the consolidated statement of financial position as at December 31, 2018.

The following amendments and improvements to current IFRS guidance were effective on January 1, 2019, with no material impact on the accounting policies, financial position or performance of the Group:

- **Amendments to IFRS 9:** Prepayment Features with Negative Compensation
- **Amendments to IAS 28:** Long-term Interests in Associates and Joint Ventures
- **Amendments to IAS 19:** Plan Amendment, Curtailment or Settlement
- **Improvements to IFRS (2015-2017 cycle)**

Standards and amendments to standards issued but not yet effective

The following new standard and amendments are not expected to have a material impact on the accounting policies, financial position or performance of the Group:

- **IFRS 17:** Insurance Contracts
- **Amendments to References to the Conceptual Framework in IFRS Standards**
- **Amendments to IAS 1 and IAS 8:** Definition of Material
- **Amendments to IFRS 3:** Definition of a Business

3.6.4. Critical accounting estimates and judgements

In preparing these unaudited Semi Annual Financial Statements, management has made estimates and judgements that affect the application of accounting policies and the reported amounts of assets and liabilities, income and expenses. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under circumstances. Actual results may differ from those estimates.

Estimates and assumptions used in these unaudited Semi Annual Financial Statements are consistent with those applied in the preparation of the Group's annual financial statements for the year ended December 31, 2018. However, the new standards and interpretations effective and adopted by the Group on January 1, 2019 have implied the use of critical judgment primarily on the recognition of right-of-use assets and lease liabilities and the assessment of uncertainty over income tax treatments, as described below.

3.6.4.1. Right-of-use assets and lease liabilities

Significant assumptions and judgements may be made in applying the requirements of lease accounting, such as the exercise of extension or renewal options and the determination of applicable discount rates.

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

The Group leases land, buildings, cars and certain equipment (including IT equipment) which have remaining lease terms between less than one year and 38 years. Certain lease contracts contain options to extend the leases by up to 30 years. The Group applies judgement in evaluating if and when it is reasonably certain for the Group to exercise that option. In addition, the Group made an accounting policy election for all the asset classes to not account for short-term leases, as described in Note 3.6.3. The Group considers all relevant factors that create an economic incentive to exercise any existing option to extend or renew a lease arrangement. After the commencement date, the Group reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise or not exercise the option. In most cases, the Group has included the extension or renewal option as part of the lease term of plant, buildings and equipment when the controlled use of the leased assets is significant and critical to its operations. These leases generally include a non-cancellable period and there will be a significant negative effect on the normal course of the Group's business should a replacement not be readily available.

In calculating the present value of lease payments, the rate implicit in the lease should be used whenever that rate is readily determinable. In most cases, this rate is not readily determinable and the Group uses its incremental borrowing rate, which is derived from information available at the lease commencement date. The Group gives consideration to its recent debt issuances as well as publicly available data for instruments with similar characteristics when calculating its incremental borrowing rates. Discount rates upon IFRS 16 transition were established as of January 1, 2019. Going forward, due to immateriality of any intra-quarter discount rate changes, the Group will determine the discount rate based on the mid-quarter date.

Operating lease term and discount rate are as follows:

	As at January 1, 2019	As at June 29, 2019
Weighted average remaining lease term (in years)	9	9
Weighted average discount rate	2.77%	2.71%

3.6.4.2. Uncertainties over Income Tax treatments

The Group is required to make estimates and judgments in determining income tax for the period, comprising current and deferred income tax. The Group needs to assess the income tax expected to be paid or the income tax benefit expected to be received related to the current year income (loss) in each individual tax jurisdiction and recognizes deferred income tax for temporary differences arising between the tax bases of assets and liabilities and their carrying amount in the consolidated financial statements. The Group is required to assess all material open income tax positions in all tax jurisdictions to determine any uncertainties over these income tax treatments.

The Group operates in many jurisdictions with highly complex and varied tax regimes. Management applies professional judgement in assessing whether relevant tax authorities will accept reported tax treatments under tax law. Those uncertainties may arise when tax laws are not clear or not consistently understood, which generates ambiguity in the tax law interpretations and application. Those uncertainties are particularly present in tax jurisdictions or tax regimes where the expected amount to be paid or the expected tax benefit to be recognized arise from complex, lengthy and technical negotiations or require possible settlements involving a high degree of subjectivity and discretion.

Assumptions and estimates used in the assessment of uncertainties over income tax treatments include, but are not limited to: whether certain income tax treatments are considered jointly or separately when assessing their degree of uncertainty; the assumptions the Group makes about the examination of tax treatments by taxing authorities; how the Group determines taxable profits, deductions taken on tax returns, unused tax losses, unused tax credits, applicable tax rates, the probability of acceptance of these income tax treatments by the relevant taxing authorities or on the contrary to what extent the income tax treatments as applied by the Group may be disallowed, including the outcome of unresolved disputes or settlements on existing tax audits and; consideration of changes in facts and circumstances requiring a reassessment of applied judgments and assumptions.

As at June 29, 2019 and December 31, 2018, the Group reported provisions for uncertain tax treatments totalling \$26 million and \$25 million, respectively. It is reasonably possible that certain of these uncertainties over tax treatments could increase within the next 12 months due changes in facts and circumstances, such as ongoing tax audits or taxing authority new decisions. The Group is not able to make an estimate of the range of the reasonably possible change. Accrued interest and penalties amounted to \$5 million and \$5 million as at June 29, 2019 and December 31, 2018, respectively. The tax years that remain open for review in the Group's major tax jurisdictions, including France, Italy, United States and India, are from 1997 to 2018.

3.6.5. Revenues

3.6.5.1. Nature of goods and services

The Group designs, develops, manufactures and markets a broad range of products, including discrete and standard commodity components, application-specific integrated circuits ("ASICs"), full-custom devices and semi-custom devices and application specific standard products ("ASSPs") for analog, digital and mixed-signal applications. In addition, the Group participates in the manufacturing value chain of Smartcard products, which includes the production and sale of both silicon chips and Smartcards.

The principal activities – separated by reportable segments – from which the Group generates its revenues are described in note 3.6.6.

Other revenues consist of license revenue, service revenue related to transferring licenses, patent royalty income, sale of scrap materials and manufacturing by-products.

While the majority of the Group's sales agreements contain standard terms and conditions, the Group may, from time to time, enter into agreements that contain multiple performance obligations or terms and conditions. Those agreements concern principally the revenues from services, where the performance obligation is satisfied over time. The objective when allocating the transaction price is to allocate the transaction price to each performance obligation (or distinct good or service) in an amount that depicts the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

3.6.5.2. Revenue recognition and disaggregation

The Group recognizes revenue from products sold to a customer, including distributors, when it satisfies a performance obligation at a point in time by transferring control over a product to the customer. This usually occurs at the time of shipment. The performance obligations linked to the sale of goods contracts have the original expected lengths of less than one year. The transaction price is determined based on the contract terms, adjusted for price protection if applicable. The revenues from services are usually linked to performance obligations transferred over time and are recognized in line with the contract terms.

The payment terms typically range between 30 and 90 days.

The Group's consolidated net revenues disaggregated by product group are presented in Note 3.6.6. The following tables present the Group's consolidated net revenues disaggregated by geographical region of shipment and nature.

In millions of USD	Six-month period ended	
	June 29, 2019	June 30, 2018
Net revenues by geographical region of shipment⁽¹⁾		
EMEA	1,178	1,248
Americas	665	607
Asia Pacific	2,406	2,639
Total revenues	4,249	4,494
Net revenues by nature		
Revenues from sale of products	4,158	4,393
Revenues from sale of services	74	70

Other revenues	17	31
Total revenues	4,249	4,494
Net revenues by market channel⁽²⁾		
Original Equipment Manufacturers (“OEM”)	2,891	2,780
Distribution	1,358	1,714
Total revenues	4,249	4,494

(1) Net revenues by geographical region of shipment are classified by location of customer invoiced or reclassified by shipment destination in line with customer demand. For example, products ordered by U.S.-based companies to be invoiced to Asia Pacific affiliates are classified as Asia Pacific revenues.

(2) OEM are the end-customers to which the Group provides direct marketing application engineering support, while Distribution customers refers to the distributors and representatives that the Group engages to distribute its products around the world.

3.6.5.3. Practical Expedients and Exemptions

The Group does not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which the Group recognizes revenue at the amount to which the Group has the right to invoice for services performed.

3.6.6. Operating segment information

The Group designs, develops, manufactures and markets a broad range of products, including discrete and standard commodity components, application-specific integrated circuits (“ASICs”), full custom devices and semi-custom devices and application-specific standard products (“ASSPs”) for analog, digital, and mixed-signal applications. In addition, the Group further participates in the manufacturing value chain of Smartcard products, which includes the production and sale of both silicon chips and Smartcards.

The Group’s operating segments are as follows:

- Automotive and Discrete Group (ADG), comprised of dedicated automotive ICs (both digital and analog), and discrete and power transistor products for all market segments.
- Analog, MEMS and Sensors Group (AMS), comprised of low-power high-end analog ICs (both custom and general purpose) for all markets, smart power products for Industrial, Computer and Consumer markets, Touch Screen Controllers, Low Power Connectivity solutions (both wireline and wireless) for IoT, power conversion products, metering solutions for Smart Grid and all MEMS products for sensors or actuators, subsystems, as well as the Imaging Products division (including the sensors and modules utilizing the Group’s Time-of-Flight technology).
- Microcontrollers and Digital ICs Group (MDG), comprised of general purpose and secure microcontrollers, EEPROM memories, Digital ASICs, Aerospace & Defense products including components for microwave and millimeter wave.

For the computation of the segments’ internal financial measurements, the Group uses certain internal rules of allocation for the costs not directly chargeable to the segments, including cost of sales, selling, general and administrative expenses and a part of research and development expenses. In compliance with the Group’s internal policies, certain costs are not allocated to the segments, but reported in “Others”. Those include impairment, restructuring charges and other related closure costs, management reorganization expenses, unused capacity charges, phase-out and start-up costs of certain manufacturing facilities, certain one-time corporate items, strategic and special research and development programs or other corporate-sponsored initiatives, including certain corporate-level operating expenses, patent claims and litigations and certain other miscellaneous charges. In addition, depreciation and amortization expense is part of the manufacturing costs allocated to the segments and is neither identified as part of the inventory variation nor as part of the unused capacity charges; therefore, it cannot be isolated in the costs of goods sold. Finally, R&D grants are allocated to the Group’s segments proportionally to the incurred R&D expenses on the sponsored projects.

Wafer costs are allocated to the segments based on actual cost. From time to time, with respect to specific technologies, wafer costs are allocated to segments based on market price.

The following tables present the Group's consolidated net revenues and consolidated operating profit by operating segment.

Consolidated net revenues by operating segment:

In millions of USD	(unaudited)	
	Six-month period ended	
	June 29, 2019	June 30, 2018
ADG	1,788	1,687
AMS	1,246	1,268
MDG	1,208	1,532
Total net revenues of operating segments	4,242	4,487
Others	7	7
Total consolidated net revenues	4,249	4,494

Consolidated operating profit by operating segment:

In millions of USD	(unaudited)	
	Six-month period ended	
	June 29, 2019	June 30, 2018
ADG	167	173
AMS	117	129
MDG	125	304
Sub-total operating profit of operating segments	409	606
Impairment, restructuring charges and other related closure costs	(2)	(20)
Unallocated manufacturing results ¹	(8)	(5)
Strategic and other research and development programs and other non-allocated provisions ²	2	(28)
IFRS/US GAAP Adjustments:		
Net impact of capitalized development costs	(41)	15
Derivative instruments not designated as hedge instruments under IFRS	8	(32)
IFRIC 21 adjustment on levies	(6)	(6)
IAS 19R adjustment on defined benefit plans	3	-
Asset acquisition tax incentives	(21)	(15)
IFRS 16 adjustment on lease expenses	2	-
Other non-allocated expenses and IFRS adjustments impact	(10)	1
Sub-total Operating profit Others and US GAAP to IFRS adjustments impact on operating profit	(73)	(90)
Total operating profit	336	516

¹ Includes unallocated unused capacity charges associated with the Group's front-end manufacturing facilities.

² Includes unallocated income and expenses such as certain corporate-level operating expenses and other costs/income that are not allocated to the operating segments.

3.6.7. Investments in joint ventures

Investments in joint ventures as at June 29, 2019 and December 31, 2018 were as follows:

In millions of USD	(unaudited) June 29, 2019		December 31, 2018	
	Carrying amount	% of interests	Carrying amount	% of interests
ST-Ericsson SA, in liquidation	51	50.0%	49	50.0%
Total	51		49	

ST-Ericsson SA, in liquidation

On February 3, 2009, the Group announced the closing of a transaction to combine the businesses of Ericsson Mobile Platforms and ST-NXP Wireless into a new venture, named ST-Ericsson. As part of the transaction, the Group received an interest in ST-Ericsson Holding AG in which the Company owned 50% plus a controlling share. In 2010, ST-Ericsson Holding AG was merged in ST-Ericsson SA. The Group used to consolidate ST-Ericsson SA.

On September 9, 2013, the Group sold 1 ST-Ericsson SA share to Ericsson for its nominal value changing the ownership structure of ST-Ericsson SA to bring both partners to an equal ownership proportion. As a result and in combination with the new shareholder agreement, the Group lost control of ST-Ericsson SA and as such ST-Ericsson SA was deconsolidated from the Group's financial statements. The deconsolidation of ST-Ericsson SA did not result in a gain or loss for the Group. The fair value of the Group's retained non-controlling interest was evaluated at \$55 million. In addition, the Group and its partner signed funding commitment letters, capped at \$149 million for each partner, to the residual joint wind-down operations to ensure solvency. These were not drawn as of June 29, 2019.

Before the deconsolidation of ST-Ericsson SA, certain assets and companies of the ST-Ericsson SA group of companies were transferred to both partners for their net book value which was representative of their fair value. The transactions did not result in cash exchange between the partners. ST-Ericsson SA entered into liquidation on April 15, 2014.

3.6.8. Property, plant and equipment and intangible assets

Changes in the net carrying amount of property, plant and equipment and intangible assets are detailed as follows:

In millions of USD	Property, plant and equipment	Intangible assets
Net book value as at January 1, 2019	3,715	1,220
Lease right-of-use assets upon IFRS 16 adoption	222	-
Additions	656	182
Impairment / Write-Offs	(4)	(64)
Amortization / Depreciation expense	(438)	(161)
Business combination	11	86
Foreign currency translation	(11)	-
Net book value as at June 29, 2019 (unaudited)	4,151	1,263

The Group has commitments to purchase property, plant and equipment after the end of the interim period in the amount of \$555 million.

The impairment and write-offs for the first half of 2019 amounted to \$68 million (first half 2018: \$8 million), recorded in cost of sales, and are resulting from the write-offs of the capitalized development costs related to certain businesses and related projects that were cancelled.

Refer to notes 3.6.9 for more details on business combination and note 3.6.12 for more details on right-of-use assets.

3.6.9. Business Combination

On February 6, 2019, the Group acquired a majority stake in the Swedish silicon carbide (SiC) wafer manufacturer Norstel AB ("Norstel"). The Group acquired 55% of Norstel's common stock, obtaining control over the entity. The fair value of the business as a whole was estimated at \$138 million, of which \$77 million was paid by the Group for its majority stake, with an option to acquire the remaining 45% at a later date, subject to certain conditions. The amount paid, net of \$1 million of cash acquired, was funded with available cash. An amount of \$60 million is held in an escrow account and reported as current restricted cash in the consolidated statement of financial position as at June 29, 2019, should the Group exercise its purchase option.

This acquisition will extend the Group's silicon carbide ecosystem and strengthen the Group's flexibility to serve fast growing automotive and industrial applications.

This transaction has been accounted for as a business combination. The activities of this business are included in the Automotive and Discrete Group (ADG) reportable segment. The fair value of the identifiable assets and assumed liabilities acquired from Norstel at acquisition date were as follows:

	Fair value recognized at acquisition date
Property, plant and equipment	11
Technology in process	86
Net working capital	(2)
Goodwill ⁽¹⁾	43
Total net assets at fair value	138
Noncontrolling Interest	(61)
Purchase consideration	77

⁽¹⁾ The primary item that generated goodwill is the value of the future synergies between Norstel technology in silicon carbide and the Group which do not qualify as an amortizable intangible asset.

3.6.10. Goodwill

Goodwill allocated to reportable segments and changes in the carrying amount of goodwill were as follows:

In millions of USD	ADG	MDG	AMS	Total
As at January 1, 2019	-	101	2	103
Business combination	43			43
Foreign currency translation	-	(1)	-	(1)
As at June 29, 2019 (unaudited)	43	100	2	145

As described in Note 3.6.9, the acquisition of Norstel resulted in the recognition of \$43 million in goodwill which has been included in the ADG segment to align the goodwill of the acquired company with the segment for which the related activities will be reported.

3.6.11. Other financial assets and financial liabilities

3.6.11.1. Other financial assets

In millions of USD	(unaudited) June 29, 2019	December 31, 2018
Other financial assets (including derivatives)		
Other financial assets		
Quoted debt securities at FVOCI	333	330
Unquoted equity securities at FVOCI	11	12
Quoted equity securities at FVPL	11	10
Other trading financial assets at FVPL	10	9
Total other financial assets	365	361
Current	333	330
Non-current	32	31
Derivative financial instruments		
Cash flow hedges		
Foreign exchange forward contracts	2	1
Currency collars	1	-
Derivatives not designated as hedges		
Foreign exchange forward contracts	2	4
Embedded call option	27	12
Total derivatives financial instruments	32	17
Current	5	5
Non-current	27	12
Total other financial assets (including derivatives)	397	378
Total current	338	335
Total non-current	59	43

Movements in other financial assets (excluding derivatives) recorded in the first half of 2019 are summarized as follows:

In millions of USD	Jan 1, 2019	Change in fair value included in OCI*	Change in fair value included in income statement	Increase	Sale / Settlement	Foreign exchange result recognized in OCI*	(unaudited) June 29, 2019
Government bonds issued by the U.S. Treasury	330	3	-	-	-	-	333
Quoted equity instruments at FVPL	10	-	1	-	-	-	11
Sub-total Quoted debt and equity securities	340	3	1	-	-	-	344
Unquoted equity securities at FVOCI	12	(1)	-	-	-	-	11
Other trading financial assets at FVPL	9	1	-	-	-	-	10
Total other financial assets (excluding derivatives)	361	3	1	-	-	-	365

*OCI: Other comprehensive income

Investments held in debt securities

As at June 29, 2019, the Group held \$333 million of U.S. Treasury Bonds, all transferred to financial institutions with high credit quality. These transactions were concluded in compliance with the Group's policy to optimize the return on its short-term interest rate investments, always placed with institutions with high credit rating. The Group, acting as the securities lender, does not hold any collateral on the unsecured securities lending transactions. The Group retains effective control on the transferred securities.

The debt securities have an average rating of Aaa/AA+/AAA from Moody's, S&P and Fitch, respectively. Out of the \$333 million bond portfolio, \$200 million matured early July 2019. The outstanding \$133 million U.S. Treasury bonds have an average maturity of 2.01 years. The debt securities were reported as current assets on the line "Other current financial assets" on the consolidated statement of financial position as at June 29, 2019, since they represented investments of funds available for current operations. The bonds were measured at FVOCI as at June 29, 2019. This fair value measurement corresponds to a Level 1 fair value hierarchy measurement.

The Group applies a forward-looking expected credit loss (ECL) approach on all debt financial assets not held at FVPL. For debt securities at FVOCI, the ECL is based on a 12-month expected credit loss basis. The 12-month ECL is the portion of lifetime ECLs that results from default events on a financial instrument that are possible within 12 months after the reporting date. Since the Group's quoted debt instruments at FVOCI comprise solely U.S. Treasury debt securities, the Group has considered that the ECLs on these investments are insignificant.

3.6.11.2. Other financial liabilities

In millions of USD	(unaudited) June 29, 2019	December 31, 2018
Lease financial liabilities	219	-
Derivative financial instruments		
Cash flow hedges		
Foreign exchange forward contracts	6	14
Currency collars	3	6
Derivatives not designated as hedges		
Foreign exchange forward contracts	3	9
Currency collars	2	5
Embedded conversion option	295	166
Total other financial liabilities (including derivatives)	528	200
Total current	75	34
Total non-current	453	166

Refer to notes 3.6.11.3 and 3.6.11.5 for further explanations on other types of financial liabilities. Refer to notes 3.6.3 and 3.6.12 for further explanations on lease liabilities.

3.6.11.3. Interest-bearing loans and borrowings

In millions of USD	(unaudited) June 29, 2019	December 31, 2018
Funding program loans with European Investment Bank:		
3.69% due 2020, floating interest rate at Libor + 1.099%	25	25
3.43% due 2020, floating interest rate at Libor + 0.956%	55	55
0.51% due 2020, floating interest rate at Euribor + 0.817%	29	29
3.14% due 2021, floating interest rate at Libor + 0.525%	90	90
3.13% due 2021, floating interest rate at Libor + 0.572%	86	86
0.36% due 2028, floating interest rate at Euribor + 0.589%	290	292
0.33% due 2029, floating interest rate at Euribor + 0.564%	279	-

Dual tranche senior unsecured convertible bonds:		
Zero-coupon, due 2022 (Tranche A)	685	674
0.25% due 2024 (Tranche B)	645	636
Other funding program loans:		
0.31% (weighted average), due 2019-2023, fixed interest rate	14	16
Other long-term loans:		
0.87% (weighted average), due 2020, fixed interest rate	1	1
Total interest-bearing loans and borrowings	2,199	1,904
Total current	174	146
Total non-current	2,025	1,758

3.6.11.4. Hedging activities and derivatives

Derivative instruments not designated as hedges

The Group conducts its business on a global basis in various major international currencies. As a result, the Group is exposed to adverse movements in foreign currency exchange rates, primarily with respect to the Euro. Foreign exchange risk mainly arises from future commercial transactions and recognized assets and liabilities at the Group's subsidiaries. The Group enters into currency forward contracts to reduce its exposure to changes in exchange rates and the associated risk arising from the denomination of certain assets and liabilities in foreign currencies at the Group's subsidiaries. These instruments do not qualify as hedging instruments and are marked-to-market at each period-end with the associated changes in fair value recognized in "Other income" or "Other expenses" in the consolidated income statement.

To reduce its exposure to U.S. dollar exchange rate fluctuations, the Group also hedges certain Euro-denominated forecasted transactions that cover at reporting date a large part of its research and development, selling, general and administrative expenses through the use of currency forward contracts and currency options, including collars. These instruments do not qualify as hedging instruments and are marked-to-market at each period-end with the associated changes in fair value recognized in "Other income" or "Other expenses" in the consolidated income statement.

The principal currencies covered at the end of the six-month period ended June 29, 2019 are the Euro, the Singapore dollar, the Swiss Franc, the Japanese yen, the China Yuan Renminbi, the Malaysian ringgit, the Indian rupee, the South Korean won and the Philippine peso.

Derivative instruments designated as cash flow hedges

To reduce its exposure to U.S. dollar exchange rate fluctuations, the Group hedges certain Euro-denominated forecasted transactions that cover at reporting date a portion of its front-end manufacturing costs of semi-finished goods through the use of currency forward contracts and currency options, including collars. The Group also hedges certain manufacturing transactions denominated in Singapore dollars.

The principles regulating the hedging strategy for derivatives designated as cash flow hedge is to hedge up to 70% of the total forecasted transactions of the following quarter for these manufacturing costs. In order to follow a dynamic hedge strategy, the Group may change the percentage of the designated hedged item within the limit of 100% of the forecasted transaction. The maximum length of time over which the Group could hedge its exposure to the variability of cash flows for forecasted transactions is 24 months.

These derivative instruments are designated and qualified as cash flow hedges. They are reflected at fair value in the consolidated statement of financial position. The unrealized gain or loss from the effective portion of the hedge is reported in other comprehensive income and is recognized in earnings in the same period in which the hedged transaction affects earnings, and within the same consolidated income statement line item as the impact of the hedged transaction.

As at June 29, 2019, the Group had the following outstanding derivative instruments that were entered into to hedge Euro-denominated and Singapore-Dollar-denominated forecasted transactions:

	Notional amount for hedge on forecasted manufacturing costs transactions	
	In millions of Euros	In millions of Singapore Dollars
Forward contracts	320	160
Currency collars	430	-

As at June 30, 2018, the Group had the following outstanding derivative instruments that were entered into to hedge Euro-denominated and Singapore-Dollar-denominated forecasted transactions:

	Notional amount for hedge on forecasted manufacturing costs transactions	
	In millions of Euros	In millions of Singapore Dollars
Forward contracts	386	139
Currency collars	417	-

Cash flow and fair value interest rate risk

The Group's interest rate risk arises from long-term borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk. Borrowings issued at fixed rates expose the Group to fair value interest rate risk.

The Group analyzes its interest rate exposure on a dynamic basis. Various scenarios are simulated taking into consideration refinancing, renewal of existing positions, alternative financing and hedging. The Group invests primarily on a short-term basis and as such its liquidity is invested in floating interest rate instruments. As a consequence, the Group is exposed to interest rate risk due to potential mismatch between the return on its short term floating interest rate investments and the portion of its long term debt issued at fixed rate.

Offsetting financial assets and financial liabilities

The Group entered into currency collars as combinations of two options, which are reported, for accounting purposes, on a net basis. The fair value of these collars represented liabilities for a net amount of \$5 million (composed of \$1 million asset with a \$6 million liability) as at June 29, 2019. The fair value of these collars represented assets for a net amount of \$1 million (composed of \$1 million asset with an immaterial amount liability) as at June 29, 2019. In addition, the Group entered into other derivative instruments, primarily forward contracts, which are governed by standard International Swaps and Derivatives Association ("ISDA") agreements, which are not offset in the statement of financial position, and representing total assets of \$4 million and total liabilities of \$9 million as at June 29, 2019.

3.6.11.5. Fair values

Set out below is a comparison by class of the carrying amounts and fair value of the Group's financial instruments that are carried in the financial statements.

In millions of USD	Carrying amount		Fair value	
	(unaudited) June 29, 2019	December 31, 2018	(unaudited) June 29, 2019	December 31, 2018
Financial assets				
Trade accounts receivables	1,162	1,277	1,162	1,277
Other receivables and assets	431	414	431	414
Quoted financial instruments	354	349	354	349
Unquoted equity securities at FVOCI	11	12	11	12
Embedded call option	27	12	27	12
Other current financial assets	5	5	5	5
Restricted cash	60	-	60	-
Cash equivalents ⁽¹⁾	1,325	2,138	1,325	2,138
Financial liabilities				
Interest-bearing loans and borrowings (excluding senior unsecured convertible bonds)	869	594	869	594
Senior unsecured convertible bonds ⁽²⁾	1,330	1,310	1,698	1,501
Embedded conversion option	295	166		
Lease liabilities ⁽³⁾	219	-	219	-
Trade accounts payable	895	981	895	981
Other payables and accrued liabilities	476	328	476	328
Other current financial liabilities	14	34	14	34

(1) Cash equivalents primarily correspond to deposits at call with banks.

(2) The carrying amount of the senior unsecured convertible bonds issued on July 3, 2017 and outstanding at June 29, 2019 and December 31, 2018 corresponds to the liability component only, since, at initial recognition, an amount of \$248 million was separately recognized as an embedded derivative financial instruments.

(3) Refer to notes 3.6.3 and 3.6.12 for further details on lease liabilities, pursuant to the adoption of IFRS 16. No significant amount of liabilities relating to finance leases according to IAS 17 were reported as at December 31, 2018. Current lease liabilities totaled \$61 million and were reported on the line "Other current financial liabilities" of the consolidated statement of financial position as at June 29, 2019. Non-current lease liabilities totaled \$158 million and were reported on the line "Other non-current financial liabilities" of the consolidated statement of financial position as at June 29, 2019.

The fair value of financial assets and liabilities are included at the price at which the instrument could be sold in an orderly transaction between market participants at the measurement date. The following methods and assumptions were used to estimate fair value:

- For trade accounts receivable, cash equivalents, trade accounts payable, other payables and accrued liabilities, the carrying amounts reflected in the consolidated financial statements are reasonable estimates of fair value due to the relatively short period of time between the origination of the instruments and their expected realization.
- Other receivables and assets approximate their carrying amounts due either to their short-term maturities or to the fact that they are recorded at their net present value.
- Financial investments (debt and equity securities):
 - The fair value of quoted debt and equity securities is determined based upon quoted market prices for identical instruments.
 - The fair value of unquoted equity securities is based on the valuation of the underlying instruments on a new round of third party financing or upon liquidation.
- The fair value of interest-bearing loans and borrowings, excluding senior unsecured convertible bonds, is determined by estimating future cash flows on a borrowing-by-borrowing basis and discounting these future cash flows using the Group's incremental borrowing rates for similar types of borrowing arrangements.
- The fair value of lease liabilities is determined by estimating future cash flows on a borrowing-by-borrowing basis and discounting these future cash flows using the Group's incremental borrowing rates for similar types of borrowing arrangements.

- The senior unsecured convertible bonds issued on July 3, 2017 and outstanding as at June 29, 2019 and December 31, 2018 have been trading on the open market segment on the Frankfurt Stock Exchange since issuance. The fair value of these instruments is the observable price of the bonds on that market.
- The fair value of derivatives instruments is determined based upon quoted market prices for similar instruments.
- The bondholders' conversion option embedded in the senior unsecured convertible bonds issued on July 3, 2017 amounted to \$295 million and \$166 million as at June 29, 2019 and December 31, 2018, respectively. The issuer's call option of the senior unsecured convertible bonds issued on July 3, 2017 amounted to \$27 million and \$12 million as at June 29, 2019 and December 31, 2018, respectively, while nil at inception. These embedded derivative instruments were measured at fair value based on an income approach using Bloomberg's option pricing model, which can be assimilated to a Black & Scholes model for pricing stock options. This model was elected as the best indication of fair value since it maximized the use of observable market-based inputs.

Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities.
- Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly.
- Level 3: techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data.

As at June 29, 2019, the Group held the following financial instruments measured at fair value:

In millions of USD	(unaudited) June 29, 2019	Level 1	Level 2	Level 3
Assets measured at fair value				
Trading derivatives:				
Foreign exchange forward contracts	2	-	2	-
Trading securities	21	21	-	-
Embedded call option	27	-	-	27
Cash flow hedges				
Foreign exchange forward contracts	2	-	2	-
Currency collars	1	-	1	-
Debt securities at FVOCI				
Government bonds issued by the U.S. Treasury	333	333	-	-
Unquoted equity securities at FVOCI	11	-	-	11
Total assets	397	354	5	38
Trading derivatives				
Foreign exchange forward contracts	3	-	3	-
Currency collars	2	-	2	-
Cash flow hedges				
Foreign exchange forward contracts	6	-	6	-
Currency collars	3	-	3	-
Embedded conversion option	295	-	-	295
Total liabilities	309	-	14	295

During the reporting period ending June 29, 2019, there was no transfer between Level 1 and Level 2 fair value measurements, and no transfer into and out of Level 3 fair value measurements.

Financial instruments in Level 1

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in Level 1.

Financial instruments in Level 2

The fair value of financial instruments that are not traded in active markets (for example over the counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data when available and rely as little as possible on entity's specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2. If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer's quotes for similar instruments;
- The fair value of foreign exchange forward contracts when determined using forward exchange rates at the balance sheet date, with the resulting value discounted back to present value.

Financial instruments in Level 3

For financial assets (liabilities) measured at fair value using significant unobservable inputs (Level 3), the reconciliation between January 1, 2019 and June 29, 2019 is presented as follows:

In millions of USD	Fair value measurements using significant unobservable inputs (Level 3)
As at January 1, 2019	(142)
Change in fair value of the embedded conversion option	(129)
Change in fair value of the embedded call option	15
Change in fair value of unquoted equity securities at FVOCI	(1)
As at June 29, 2019 (unaudited)	(257)
Amount of total unrealized losses included in income statement attributable to assets (liabilities) still held at the reporting date for the half of 2019	(129)

The change in fair value amounting to \$15 million on the embedded call option was reported as "Finance income" in the consolidated income statement for the six months ended June 29, 2019. The change in fair value amounting to \$129 million on the embedded conversion option was reported as "Finance costs" in the consolidated income statement for the six months ended June 29, 2019.

The model used to price the derivative instruments embedded in the senior unsecured convertible bonds issued on July 3, 2017 included the following inputs:

- The risk-free interest rate for comparable maturities;
- The reference price for the Company's ordinary shares as traded on the New York Stock Exchange;
- The exercise price;
- The dividend expected to be paid on the Company's ordinary shares over the life of the option;
- The volatility of the Company's ordinary shares; and
- The duration of the option.

Volatility should be considered an unobservable input due to the lack of market data (stock exchange listing of the bond option) for a time horizon equal to the duration of the option. The figure is, therefore, an assumption based on the volatility implied by the price of the financial instrument, as negotiated at the issue stage, and market volatility for the nearest time horizon.

The prices of the bondholders' conversion option are sensitive to implied volatility. The table below shows a sensitivity analysis of the net carrying amount of the embedded conversion option in relation to a series of changes expressed in percentage point terms of volatility.

Change in volatility of the Company's ordinary shares	-10 p.p.	- 8 p.p.	-5 p.p.	+5 p.p.	+8 p.p.	+10 p.p.
Change in the net carrying amount of the bondholders' conversion option	(97)	(77)	(48)	48	76	95
Net carrying amount of the embedded conversion option	198	218	247	343	371	390

3.6.12. Leases

A lease contract is a contract, or part of a contract, that conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration. The Group determines if an arrangement is a lease at inception. Leases are included in right-of-use assets within plant, property and equipment. Current lease liabilities are included in current financial liabilities, while non-current lease liabilities are included in non-current financial liabilities in the Group's consolidated statement of financial position.

Right-of-use assets represent the Group's rights to use an underlying asset for the lease term and lease liabilities represent the Group's obligations to make lease payments arising from the lease. Right-of-use assets and liabilities are recognized at the lease commencement date based on the estimated present value of lease payments over the lease term.

The right-of-use asset is a nonmonetary asset while the lease liability is a monetary liability. When accounting for a lease that is denominated in a foreign currency, the lease liability is re-measured using the current exchange rate, while the right-of-use asset is re-measured using the exchange rate as of the commencement date.

The Group leases land, buildings, cars and certain equipment (including IT equipment) which have remaining lease terms between less than one year and 38 years. Certain lease contracts contain options to extend the leases by up to 30 years, which the Group has included in the lease term when it is reasonably certain for the Group to exercise that option. In addition, the Group made an accounting policy election for all the asset classes to not account for short-term and low-value leases. A short-term lease is defined as a lease that, at the commencement date, has a lease term of 12 months or less and does not include an option to purchase the underlying asset that the lessee is reasonably certain to exercise. The short-term lease election can only be made at the commencement date.

Variable lease payments that depend on an index or a rate are included in the lease payments and are measured using the prevailing index or rate at the measurement date (January 1, 2019 for initial measurement of the leases existing at that date and commencement date for subsequent lease contracts). Changes to index and rate-based variable lease payments are recognized in income statement in the period of the change.

Undiscounted cash flows of operating lease liabilities are as follows:

In millions of USD	(unaudited)
	June 29, 2019
2019	32
2020	55
2021	39
2022	28
2023	21
Thereafter	97
Total future undiscounted cash outflows	272
Effect of discounting	(53)

Total operating lease liabilities	219
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A reconciliation of opening and closing rights-of-use assets is provided below:

In millions of USD	(unaudited) June 29, 2019
Right-of-use assets as of January 1, 2019	222
Depreciation for the period	(30)
Additions	25
Right-of-use assets as of June 29, 2019	217

3.6.13. Inventories

Inventories consisted of the following:

In millions of USD	(unaudited) June 29, 2019	December 31, 2018
Raw materials	160	132
Work-in-process	1,284	1,010
Finished products	449	425
Total	1,893	1,567

3.6.14. Cash and cash equivalents

Cash and cash equivalents consisted of the following:

In millions of USD	(unaudited) June 29, 2019	December 31, 2018
Cash at bank and in hand	794	128
Money market deposits with banks	1,325	2,138
Total	2,119	2,266

3.6.15. Equity

3.6.15.1. Outstanding shares

The authorized share capital of the Company is €1,810 million consisting of 1,200,000,000 common shares and 540,000,000 preference shares, each with a nominal value of €1.04. The 540,000,000 preference shares, when issued, will entitle a holder to full voting rights and to a preferential right to dividends and distributions upon liquidation.

The Company is a party to an option agreement regarding the preference shares with Stichting Continuïteit ST (the "Stichting"), entered into on January 22, 2007, with a duration of ten years, which agreement was extended for another ten years in October 2016. The Managing Board and the Supervisory Board, along with the board of the Stichting, have declared that they are jointly of the opinion that the Stichting is independent of the Group. The option agreement provides for the issuance of up to a maximum 540,000,000 preference shares. Any such shares would be issued to the Stichting upon its request and in its sole discretion and upon payment of at least 25% of the par value of the preference shares to be issued. The shares would be issuable in the event of actions which the board of the Stichting determines would be contrary to the Group's interests, shareholders and other stakeholders and which in the event of a creeping acquisition or offer for the Company's common shares are not supported by the Managing Board and Supervisory

Board. The preference shares may remain outstanding for no longer than two years. No preference shares have been issued to date. The effect of the preference shares may be to deter potential acquirers from effecting an unsolicited acquisition resulting in a change of control as well as to create a level-playing field in the event actions which are considered to be hostile by the Managing Board and the Supervisory Board, as described above, occur and which the board of the Stichting determines to be contrary to Group's interests, shareholders and other stakeholders.

There were no preference shares issued as at June 29, 2019 and December 31, 2018.

3.6.15.2. Treasury shares

The treasury shares have been designated for allocation under the Company's share based remuneration programs of unvested shares. Through June 29, 2019, 51,650,321 of these treasury shares were transferred to employees under the Company's share based remuneration programs, of which 5,440,779 were transferred in the first half of 2019.

On November 5, 2018, the Company announced a three years buy-back program of up to \$750 million. During the first half of 2019, the Company also repurchased 7.7 million shares of its common stock for a total of \$125 million, under the share buy-back program, reflected at cost, as a reduction of the parent company stockholders' equity.

As of June 29, 2019, the Company held 15,153,257 treasury shares compared to 12,851,840 as of December 31, 2018.

3.6.15.3. Other reserves

Other reserves include the following components as at June 29, 2019 and June 30, 2018:

In millions of USD	Share-based compensation reserve	Fair value reserve of financial assets at FVOCI	Cash Flow Hedge (CFH) reserve	Employee benefit plan reserve	Foreign currency translation reserve	Total other reserves
As at January 1, 2018	713	(2)	29	(156)	685	1,269
Share-based compensation expense for the period	51	-	-	-	-	51
Net movement recognized in the statement of comprehensive income	-	(4)	(62)	-	(56)	(122)
Transfer of cash flow hedge reserve to inventories	-	-	4	-	-	4
As at June 30, 2018 (unaudited)	764	(6)	(29)	(156)	629	1,202
As at January 1, 2019	838	(3)	(22)	(191)	599	1,221
Share-based compensation expense for the period	72	-	-	-	-	72
Net movement recognized in the statement of comprehensive income	-	3	9	(30)	(14)	(32)
Transfer of cash flow hedge reserve to inventories	-	-	3	-	-	3
As at June 29, 2019 (unaudited)	910	-	(10)	(221)	585	1,264

Share-based compensation reserve: The share-based compensation reserve is used to recognize the value of equity-settled share-based payment transactions provided to employees, including key management personnel, as part of their remuneration.

Fair value reserve of financial assets at FVOCI: This reserve records fair value changes on debt instruments measured at FVOCI. Changes in fair value of equity instruments measured at FVOCI are not material.

Cash Flow hedge reserve: The cash flow hedge reserve contains the effective portion of the cash flow hedge relationship outstanding as at the reporting date.

Foreign currency translation reserve: The foreign currency translation reserve is used to record exchange differences arising from the translation of the financial statements of foreign subsidiaries.

Employee benefit plan reserve: The employee benefit plan reserve is used to recognize the actuarial gains and losses and past service cost of post-employment pension plans.

3.6.15.4. Dividends

The 2019 Annual General Meeting of Shareholders (“AGM”) held on May 23, 2019 authorized the distribution of a cash dividend of \$0.24 per outstanding share of the Company’s common stock, to be distributed in quarterly installments of \$0.06 in each of the second, third and fourth quarters of 2019 and first quarter of 2020. The amount of \$48 million related to the first installment was paid during the first half of 2019. The remaining portion of the first installment and the \$0.18 per share cash dividend corresponding to the last three installments totaled \$166 million and is presented in the line “Other payables and accrued liabilities” in the consolidated statement of financial position as of June 29, 2019.

The 2018 AGM held on May 31, 2018 authorized the distribution of a cash dividend of \$0.24 per outstanding share of the Company’s common stock, to be distributed in quarterly installments of \$0.06 in each of the second, third and fourth quarters of 2018 and first quarter of 2019. The amount of \$54 million corresponding to the first installment, \$54 million corresponding to the second installment and \$48 million corresponding to the third installment were paid as of December 31, 2018. The remaining portion of the third installment amounting to \$6 million and the fourth installment of \$54 million were paid in the first half of 2019.

The 2017 AGM held on June 20, 2017 authorized the distribution of a cash dividend of \$0.24 per outstanding share of the Company’s common stock, to be distributed in quarterly installments of \$0.06 in each of the second, third and fourth quarters of 2017 and first quarter of 2018. The amount of \$53 million corresponding to the first installment, \$53 million corresponding to the second installment and \$47 million corresponding to the third installment were paid as of December 31, 2017. The remaining portion of the third installment amounting to \$7 million and the fourth installment of \$53 million were paid in the first half of 2018.

3.6.16. Provisions for restructuring

As at June 29, 2019, provisions for restructuring amounted to \$20 million, of which \$15 million was included in “Current provisions” in the consolidated statement of financial position. Movements during the first half of 2019 were as follows:

In millions of USD	Set-top Box restructuring plan
As at January 1, 2019	34
Adjustment on unused provisions	(1)
Amounts paid	(12)
Currency translation effect	(1)
As at June 29, 2019 (unaudited)	20

- Set-top Box restructuring plan

In 2016, the Group announced its decision to cease the development of new platforms and standard products for set-top-box and home gateway products. This decision implied a global workforce review of approximately 1,400 employees worldwide, which included about 430 employees in France through a voluntary departure plan, about 670 employees in Asia and about 120 employees in the United States of America.

3.6.17. Expenses by nature

Expenses recorded as cost of sales, research and development and selling, general and administrative are detailed as follows:

In millions of USD	(unaudited)	
	June 29, 2019	June 30, 2018
Depreciation and amortization	569	510
Depreciation of right-of-use assets (IFRS 16 Leases)	30	-
Operating lease expense (IAS 17 Leases)	-	32
Employee benefit expenses	1,486	1,529
Purchase of materials and subcontracting services	1,752	1,808
Changes in inventories	(331)	(242)
Transportation	44	43
Royalties and patents	35	39
Advertising costs	9	8
Other expenses	362	259
Total cost of sales, research and development, and selling, general and administrative	3,956	3,986

Employee benefit expenses are detailed as follows:

In millions of USD	(unaudited)	
	June 29, 2019	June 30, 2018
Wages and salaries	1,097	1,130
Payroll taxes and other social contribution charges	255	287
Share-based compensation expense	72	48
Pensions and other long-term benefits expense	62	64
Total employee benefit expenses	1,486	1,529
Of which included in:		
Cost of sales	676	695
Selling, general and administrative	378	396
Research and development	432	438

3.6.18. Other income / expenses

Other income consisted of the following:

In millions of USD	(unaudited)	
	June 29, 2019	June 30, 2018
Research and development funding	50	21
Net foreign exchange gain	-	3
Gain on sale of businesses and non-current assets	6	7
Other income	2	1
Total other income	58	32

Other expenses consisted of the following:

In millions of USD	(unaudited)	
	June 29, 2019	June 30, 2018
Foreign exchange forward contracts and other currency derivatives	(8)	(18)
Phase-out and start-up costs	(7)	-
Patent litigation costs	-	(5)
Other expense	-	(1)
Total other expenses	(15)	(24)

The Group receives significant public funding from governmental agencies in several jurisdictions. Public funding for research and development is recognized ratably as the related costs are incurred once the agreement with the respective governmental agency has been signed and all applicable conditions have been met.

Phase-out costs are costs incurred during the closing stage of a Group's manufacturing facility. They are treated in the same manner as start-up costs. Start-up costs represent costs incurred in the start-up and testing of the Group's new manufacturing facilities, before reaching the earlier of a minimum level of production or six months after the fabrication line's quality certification.

Exchange gains and losses, net represent the portion of exchange rate changes on transactions denominated in currencies other than an entity's functional currency and the changes in fair value of trading derivative instruments which are not designated as hedge and which have a cash flow effect related to operating transactions, as described in Note 3.6.11.4.

Patent costs include legal and attorney fees and payment for claims, patent pre-litigation consultancy and legal fees. They are reported net of settlements, if any, which primarily include reimbursements of prior patent litigation costs.

Gain on sale of businesses and non-current assets for the first half of 2019 was related to the sale of one of our non-strategic assets.

3.6.19. Earnings per share

For the six-month period ended June 29, 2019 and June 30, 2018, earnings per share ("EPS") were calculated as follows:

In millions of USD	(unaudited)	
	June 29, 2019	June 30, 2018
Basic EPS		
Net result attributable to the equity holder of the parent	180	446
Weighted average shares outstanding	894,981,090	897,253,192
Basic EPS	0.20	0.50
Diluted EPS		
Net result attributable to the equity holder of the parent	180	446
Weighted average shares outstanding	894,981,090	897,253,192
Dilutive effect of stock awards	7,331,270	9,410,658
Number of shares used for diluted EPS	902,312,360	906,663,850
Diluted EPS	0.20	0.49

The convertible bonds issued on July 3, 2017, as detailed in Note 3.6.11.3, had no impact on the diluted EPS computation in the first half of 2019 and 2018 since they were non-dilutive as of June 29, 2019 and June 30, 2018.

3.6.20. Related-party transactions

Transactions with significant shareholders, their affiliates and other related parties were as follows:

In millions of USD	(unaudited)	
	June 29, 2019	June 30, 2018
Sales and other services	1	-
Purchases	9	6
Accounts receivable	1	7
Accounts payable	51	50

For the six-month period ended June 29, 2019 and June 30, 2018, the related party transactions were primarily with significant indirect shareholders of the Company, or their subsidiaries and companies in which management of the Group perform similar policymaking functions. These include, but are not limited to: Orange, Telecom Italia, MicroOLED and Bureau Veritas. The related party transactions presented in the table above also include transactions between the Group and its investments in joint ventures as listed in Note 3.6.7. Each of the aforementioned arrangements and transactions is negotiated without the personal involvement of the Supervisory Board members and are made in line with market practices and conditions.

3.6.21. Contingencies, claims and legal proceedings

The Group is subject to possible loss contingencies arising in the ordinary course of business. These include but are not limited to: warranty cost on the products of the Group, breach of contract claims, claims for unauthorized use of third-party intellectual property, tax claims beyond assessed uncertain tax positions as well as claims for environmental damages. In determining loss contingencies, the Group considers the likelihood of impairing an asset or the incurrence of a liability at the date of the financial statements as well as the ability to reasonably estimate the amount of such loss. The Group records a provision for a loss contingency when information available before the financial statements are issued or are available to be issued indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements and when the amount of loss can be reasonably estimated. The Group regularly re-evaluates claims to determine whether provisions need to be readjusted based on the most current information available to the Group. Changes in these evaluations could result in an adverse material impact on the Group's results of operations, cash flows or its financial position for the period in which they occur.

The Group has received and may in the future receive communications alleging possible infringements of third party patents or other third party intellectual property rights. Furthermore, the Group from time to time enters into discussions regarding a broad patent cross license arrangement with other industry participants. There is no assurance that such discussions may be brought to a successful conclusion and result in the intended agreement. The Group may become involved in costly litigation brought against the Group regarding patents, mask works, copyrights, trademarks or trade secrets. In the event that the outcome of any litigation would be unfavorable to the Group, the Group may be required to take a license to third party patents and/or other intellectual property rights at economically unfavorable terms and conditions, and possibly pay damages for prior use and/or face an injunction, all of which individually or in the aggregate could have a material adverse effect on the Group's results of operations, cash flows, financial position and/or ability to compete.

The Group is otherwise also involved in various lawsuits, claims, investigations and proceedings incidental to its business and operations.

The Group regularly evaluates claims and legal proceedings together with their related probable losses to determine whether they need to be adjusted based on the current information available to the Group. There can be no assurance that its recorded reserves will be sufficient to cover the extent of its potential liabilities. Legal costs associated with claims are expensed as incurred. In the event of litigation which is adversely determined with respect to the Group's interests, or in the event the Group needs to change its evaluation of a potential third-party claim, based on new evidence or communications, a material adverse effect could impact its operations or financial condition at the time it were to materialize.

As of June 29, 2019, provisions for estimated probable losses with respect to claims and legal proceedings were not considered material.

4. Sole Member of the Managing Board's statement

The Sole member of the Managing Board hereby declares that, to the best of his knowledge, the Semi Annual Financial Statements, which have been prepared in accordance with IAS 34 Interim Financial Reporting, give a true and fair view of the assets, liabilities, financial position and profit or loss of STMicroelectronics N.V. and the undertakings included in the consolidation as a whole, and the Semi Annual Management Report of the Managing Board gives a true and fair overview of the information required pursuant to section 5:25d, subsection 8 and subsection 9 of the Dutch Financial Markets Supervision Act (Wet op het Financieel toezicht).

Date: August 21, 2019

By: /s/ Jean-Marc Chery

Name: Jean-Marc Chery

Title: President and Chief Executive Officer and
Sole Member of the Managing Board

5. About STMicroelectronics

ST is a global semiconductor leader delivering intelligent and energy-efficient products and solutions that power the electronics at the heart of everyday life. ST's products are found everywhere today, and together with our customers, we are enabling smarter driving and smarter factories, cities and homes, along with the next generation of mobile and Internet of Things devices.

By getting more from technology to get more from life, ST stands for life.augmented.

In 2018, the Group's net revenues were \$9.66 billion, serving more than 100,000 customers worldwide.

Further information can be found at www.st.com.

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